Revised Final

Inner Fence Report
HWMU, Parcel 3

Fort Wingate Depot Activity
McKinley County, New Mexico

December 2025

Contract No. W912BV-16-C-0033

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MCKINLEY COUNTY, NEW MEXICO

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List of Acronyms

ALM	Adult Lead Exposure Model
AUF	Area Use Factor
BD	Base Detonating
bgs	Below Ground Surface
BIP	Blown in Place
BISON-M	Biota Information System of New Mexico
BLU	Bomb Live Unit
BRAC	Base Realignment and Closure
CAMU	Corrective Action Management Unit
CE	Conditional Exemption
COC	Chain of Custody
COPC	Chemical of Potential Concern
COPEC	Contaminant of Potential Ecological Concern
CSEM	Conceptual Site Exposure Model
CSM	Conceptual Site Model
DDESB	Department of Defense Explosives Safety Board
DL	detection limit
DoD	Department of Defense
DOI	Department of the Interior
ECM	Earth Covered Magazine
ECO-SSL	Ecological Soil Screening Level
EEA	Ecological Exposure Area
EM	Engineer Manual
EPC	Exposure Point Concentration
ESL	Ecological Screening Level
ESS	Explosive Safety Submission
FWDA	Fort Wingate Depot Activity
ft	Foot/Feet
GPS	Global Positioning System
HE	High-Explosive
HI	Hazard Index
HWMU	Hazardous Waste Management Unit

IAW	In Accordance With
ICM	Improved Conventional Munitions
ID	Identification
IEUBK	Integrated Exposure Uptake Biokinetic
IF	Inner Fence
IPaC	Information for Planning and Consultation
ISM	Incremental Sample Method
ISO	Industry Standard Object
ITRC	Interstate Technology and Regulatory Council
ITS	Instrument Test Strip
kg	Kilogram
Km^2	Square Kilometer
KOA	Kickout Area
LOAEL	Lowest Observed Adverse Effects Level
LOD	limit of detection
LOQ	limit of quantitation
MC	Munitions Constituent
MD	Munitions Debris
MDAS	Material Documented as Safe
MDEH	Material Documented as an Explosive Hazard
MEC	Munitions and Explosives of Concern
mg	Milligram
mm	Millimeter
MPPEH	Material Potentially Presenting an Explosive Hazard
MS/MSD	Matrix Spike/Matrix Spike Duplicate
MSD	Minimum Safe Distance
NDMA	N-Nitrosodimethylamine
NEW	Net Explosive Weight
NMACP	New Mexico Avian Conservation Partner
NMDGF	New Mexico Department of Game and Fish
NMED	New Mexico Environment Department
No.	Number
NOAEL	No-Observed-Adverse-Effect Level

OB/OD	Open Burn/Open Detonation
OESS	Ordnance and Explosives Safety Specialist
PCBs	Polychlorinated biphenyls
PD	Point Detonating
QA	Quality Assurance
QC	Quality Control
RA	Removal Action
RCRA	Resource Conservation Recovery Act
RFI	RCRA Facility Investigation
RRD	Range-Related Debris
RSL	Regional Screening Level
RTK	Real-Time Kinetic
SLERA	Screening Level Ecological Risk Assessment
SLHQ	Screening Level Hazard Quotient
SSL	Soil Screening Level
SUXOS	Senior UXO Supervisor
SVOC	Semi-Volatile Organic Compound
TAL	Target Analyte List
TCDD	2,3,7,8-Tetrachlorodibenzo-p-dioxin
TEF	Toxicity Equivalency Factors
TEQ	Toxicity Equivalency
TFU	Thermal Flashing Unit
TM	Technical Manual
TRV	Toxicity Reference Value
UCL	Upper Confidence Limit
U.S.	United States
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
UTL	Upper Tolerance Limit
UXO	Unexploded Ordnance
UXOQCS	UXO Quality Control Specialist

UXOQP	UXO Qualified Person
UXOSO	UXO Safety Officer
UXOTII	UXO Technician II
UXOTIII	UXO Technician III
VOC	Volatile Organic Compound
VSP	Visual Sample Plan
WMM	Waste Military Munitions
WP	Work Plan

1

EXECUTIVE SUMMARY

This Inner Fence (IF) Report presents the field activities and documents the results of a subsurface removal action (RA) of munitions and explosives of concern (MEC) and munitions debris (MD) from the IF area within Parcel 3 at Fort Wingate Depot Activity (FWDA). This Report complies with the FWDA Resource Conservation Recovery Act (RCRA) Permit Number NM6213820974 and the work was completed in accordance with the New Mexico Environment Department (NMED)-approved Final Work Plan (WP), Inner Fence, Parcel 3.

The work included completing a surface and subsurface MEC removal action and soil sampling activities for munitions constituents (MC) from within the IF. During the MEC RA, MEC (regardless of size) and metallic debris 1.5 inches by 3 inches or larger were removed from the subsurface along with any surface MEC or metallic debris. As anomalies were removed, they were inspected to determine if the anomaly was MEC, material documented as explosive hazard (MDEH), or material documented as safe (MDAS). All MEC and MDEH was further inspected to determine if it was acceptable to move. MEC and MDEH that was determined acceptable to move was transported to the earth covered magazines for storage until destruction at a later date at the CAMU. Items that were determined unacceptable to move were destroyed by detonation in place.

The CAMU, located in Parcel 3, SWMU 14, operates under Section IX of the FWDA RCRA Permit for the destruction of MEC. CAMU operations included detonations and burning as determined by the nature of the MEC. MEC and MDEH were disposed. After demolition operations, the remaining debris was inspected to verify that it was MDAS. MDAS that was removed from the IF and from demolition activities was flashed and stored in locked and sealed roll-offs for recycling.

The subsurface RA of the IF began on August 28, 2017, and ceased in December 2020 due to concerns for personnel safety. The anomaly densities encountered were determined to be too high to safely identify and manually resolve as single point anomalies. It was concluded that the anomaly densities would continue to increase as the RA moved closer to the HWMU and the remainder of the IF subsurface RA, therefore, required alternative methods to complete.

Before the work ceased, over 1.4 million anomalies were investigated and over 338,8000 pounds of MD was recovered from the IF. A total of 16,578 MEC items were identified and recovered from the IF. The majority of MEC items recovered were point detonating (PD) and base detonating (BD) fuzes, 37 mm, and 40 mm projectiles. These four items accounted for nearly 85 percent of the MEC recovered from the IF.

Soil sampling of low-density MEC areas within the IF was added to the work to address an NMED request that either historical data be provided to show that residual contamination associated with lower density clusters and individual items are insignificant with respect to risk or sample a percentage of low-density grids. Soil sampling of the “buffer areas” immediately bounding the HWMU/high-density grids was also added to the work to address a NMED Notice of Disapproval Letter (dated July 1, 2020).

EXECUTIVE SUMMARY

IF soils were characterized using a combination of incremental and discrete sampling. Incremental Sampling Method (ISM) samples were collected from grids within the low-density area and grids within the buffer area and analyzed for explosives and metals. Additionally, discrete samples were collected from each buffer area grid where an ISM was collected and analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), N-Nitrosodimethylamine (NDMA), polychlorinated biphenyls (PCBs), nitrate, cyanide, dioxins/furans, and perchlorate (Method 6850).

ISM soil samples were collected from 94 low-density area grids and ISM and discrete samples were collected from 76 buffer area grids. The analytical results for these samples were evaluated for human health and ecological risks. None of the low density grids posed unacceptable cancer risks or adverse health effects for the industrial worker scenario. Several grids showed potentially unacceptable cancer risks (>1.0E-05) or adverse health effects (HQ/HI greater than 1.0) for residents and/or construction workers. The primary contributors for all these grids were metals, specifically aluminum, arsenic, barium, chromium, cobalt, iron, manganese, and/or thallium. The target organ assessments for these grids showed that no target organ/system had a hazard index greater than 1.0. Therefore, these grids were considered to pose no unacceptable adverse health effects to residents or construction workers for non-cancer risks. Several grids had target organ assessments where the additive effects on the nervous system by aluminum and manganese resulted in hazards greater than 1.0 for the construction worker scenario. Manganese concentrations in these low density grids may be naturally-occurring and not related to site activities and grid risk/hazards may been over estimated. Arsenic was detected in one low density area sample at a concentration that exceeded its cancer risk for residents, however the concentration was within the background range for FWDA and was considered naturally occurring. All other samples had cancer risks less than the NMED target cancer risk of 1.0E-05 and non-cancer risk less than the NMED target HI of 1.0.

Excess cancer risks for all 76 buffer grids were below the NMED target cancer risk of 1.0E-05. All industrial worker hazard indices were below 1.0. Several buffer area grids showed the potential for adverse health effects (HQ/HI greater than 1.0) for residents and/or construction workers. The primary contributors for all these grids were metals, specifically aluminum, arsenic, barium, chromium, cobalt, iron, manganese, and/or thallium. The target organ assessments for these grids showed that no target organ/system had a hazard index greater than 1.0. Therefore, these buffer area grids were considered to pose no unacceptable adverse health effects to residents or construction workers. Several buffer area grids had target organ assessments where the additive effects on the nervous system by aluminum and manganese or manganese individually resulted in hazard greater than 1.0 for the construction worker scenario. The aluminum and manganese concentrations in these buffer area grids may be naturally-occurring and not related to site activities and grid risk/hazards may been over estimated.

All detected lead concentrations in the low density and buffer area grids were below the NMED residential SSL (200 mg/kg); therefore, no further evaluation of lead concentrations was necessary.

The soil-to-groundwater migration pathway evaluation showed detected concentrations of some VOCs and explosives have the potential to impact groundwater depending on the depth to groundwater in the vicinity of the grids.

An ecological risk assessment was completed and determined that the IF contains terrestrial ecological habitat and potentially complete pathways for ecological receptors. Metals were identified as posing the greatest ecological risk potential within the IF following a Tier 1 evaluation. As a result, a Tier 2 SLERA was also completed and concluded that there are no unacceptable ecological risks to the viabilities and functions of the omnivorous mammal populations or carnivorous bird populations within the IF Area. The HI for terrestrial plants and the horned lark exceeded 1.0 in the Tier 2 evaluation. The HI values were driven by metals. Calculation of background metal concentrations also exceeded 1.0. Therefore, the potential for adverse effects for the terrestrial plant community and omnivorous bird populations may be due to non-site related naturally-occurring concentrations of metals.

1.1 INTRODUCTION

This Inner Fence (IF) Report has been prepared to present the field activities and document the results of a subsurface removal action (RA) of munitions and explosives of concern (MEC) and munitions debris (MD) from the IF of Parcel 3 at Fort Wingate Depot Activity (FWDA).

This Report was prepared to comply with the FWDA Resource Conservation Recovery Act (RCRA) Permit Number NM6213820974. The work was completed in accordance with the New Mexico Environment Department (NMED)-approved Final Work Plan (WP), Inner Fence, Parcel 3 (AECOM 2021). This work was completed under the direction of the United States (U.S.) Army Corps of Engineers (USACE) to implement the United States Army's Base Realignment and Closure (BRAC) mission to close the FWDA and return to the withdrawn public lands.

1.2 PROJECT PURPOSE AND SCOPE

The objective of this RA was to complete a subsurface MEC removal over approximately 319 acres of the IF in accordance with the RCRA Permit Sections IV.C and IV.F, and to locate, identify, and remove MEC and material potentially presenting an explosive hazard (MPPEH), including MD and range-related debris (RRD) from the IF. The cleanup criteria for the IF were to remove all MEC (regardless of size) and metallic debris 1.5 inches by 3 inches or larger. The primary tasks included in the following:

- IF boundary establishment
- Subsurface removal of MEC and MD to depth of detection
- MPPEH inspection
- MEC disposal operations
- MD flashing
- Material documented as safe (MDAS) disposal
- Characterization soil sampling
- Reporting, including human health and ecological risk assessment

1.3 PROJECT LOCATION

FWDA is located in northwestern New Mexico in McKinley County, approximately 8 miles east of Gallup, New Mexico (**Figure 1-1**). FWDA currently occupies approximately 24 square miles (15,273 acres) of land with facilities formerly used to operate a reserve storage facility that provided for the care, preservation, minor maintenance, and disposal of primarily conventional military munitions.

The IF is located within Parcel 3 and includes approximately 319 acres of land immediately adjacent to the Hazardous Waste Management Unit (HWMU). The location of the IF is shown on **Figure 1-2** along with other Site details.

1.4 FORT WINGATE DEPOT ACTIVITY HISTORY

The FWDA was originally established by the Army in 1862. In 1918, the mission of the FWDA changed from tribal activities to World War I related activities. Beginning in 1940, the FWDA's primary mission was to receive, store, maintain, and ship explosives and military munitions, as well as disassemble and dispose of unserviceable or obsolete explosives and other military munitions. In January 1993, the active mission of the FWDA ceased, and the installation closed as a result of the Defense BRAC Act of 1990. In 2005, environmental activities began under the United States Environmental Protection Agency (USEPA) Permit identification (ID) Number (No.) New Mexico (NM) 6213820974 (FWDA RCRA Permit), which was finalized in December 2005 (NMED 2005). In February 2015, Permit NM6213820974 was modified for activities in the Corrective Action Management Unit (CAMU) located in Parcel 3. FWDA is currently undergoing final environmental characterization and restoration activities prior to final property transfer/return and reuse.

1.5 PREVIOUS INVESTIGATIONS AT FORT WINGATE DEPOT ACTIVITY

In 1995, UXB International, Inc. (under contract to USACE Huntsville District) conducted a MEC clearance to a depth of 1 foot in 512 grids, each measuring 100 feet x 200 feet along 6,600 feet of the western boundary (a portion of the proposed fence corridor) of Parcel 3. Sixty-nine live items were recovered and disposed of ranging from tracers to 90-millimeter (mm) high-explosive (HE) projectiles (models unknown). Eleven items found required blow in place (BIP) procedures. These MEC items included five M83 fragmentation "Butterfly" bomblets, one 40mm HE projectile, two 75mm projectiles, one M66A1 base fuze, one 3.5-inch rocket fuze, and one base fuze/booster (model unknown).

From November 1998 to May 1999, Environmental Hazards Specialists International, Inc. performed MEC location and removal actions at FWDA. They conducted a surface removal action of 82, 200 foot x 200 foot grids, and a subsurface removal action to a depth of four feet below ground surface (bgs) of 88 grids (typically 200 foot x 200 foot grids but some had irregular shapes and sizes). Of the 337 items recovered, 32 were MEC. The 32 MEC items included seven 60mm mortars, one M404 fuze, three 57mm armor piercing HE, five 40mm projectiles, two 75mm projectiles, four 37mm projectiles, two M83 fragmentation "Butterfly" bomblets, one M1 burster, one miscellaneous fuze component, two M66 base detonating fuzes, and four M148 fuzes.

In 2001, USA Environmental, Inc., performed MEC fence line construction support at FWDA, which included locating, identifying, and disposing of items.

In 2009, in accordance with the RCRA Permit Section IV.A, Confirmation of the Kickout Area (KOA) was completed and the KOA outer boundary was delineated. This delineation estimated outer boundary by conducting radial transect investigations and adding 275 feet from the furthest detected waste military munition (WMM) or WMM scrap. The Army provided NMED a Site-Specific Final Report (PIKA 2009) to document this delineation. This Report was accepted by the USACE and approved by NMED. The present estimated KOA boundary included Parcel 3, portions of Parcel 1 to the south, Parcel 2 to the north, and Parcel 20 to the east, as well as a segment of Trust Lands bordering the western side of the FWDA Facility.

In 2015 a surface removal action of MEC and MD was initiated within designated areas of the KOA (PIKA Pirnie 2015), including the IF. The work was suspended in 2018 before the surface RA of the IF was completed.

1.6 SUMMARY OF MUNITIONS AND EXPLOSIVES OF CONCERN RISK

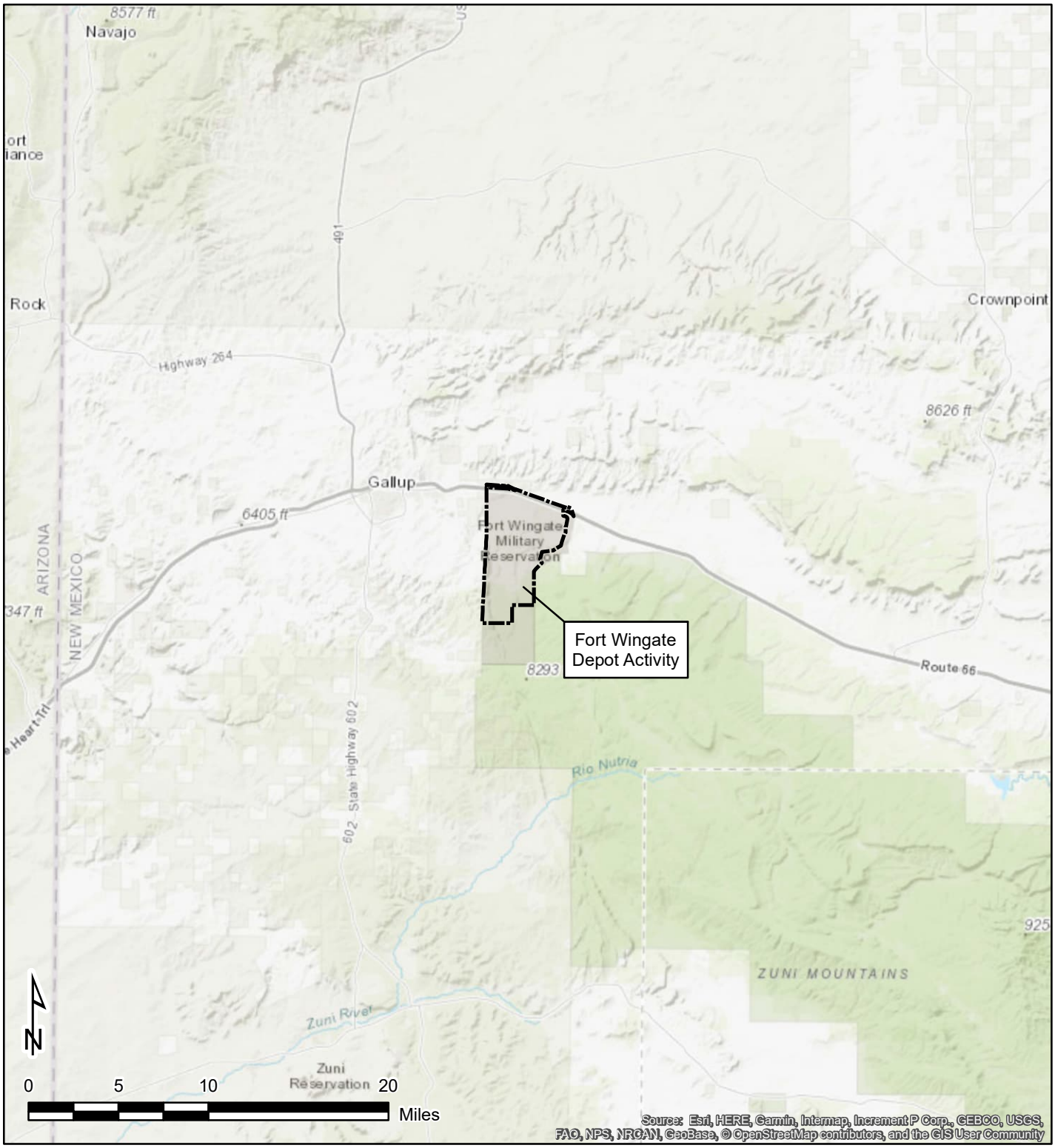
Parcel 3 is confirmed to contain Improved Conventional Munitions (ICMs). MEC and MPPEH items identified at the Parcel 3 project site (including the IF as shown on **Figure 1-2**) have included a wide range of ICMs (e.g., Bomb Live Unit (BLU)-3 and BLU-4 bomblets). Other munitions reportedly demolished in Parcel 3 have included M83(s); projectiles ranging from 20mm to 240mm; bombs ranging from 3 to 10,000 pounds; and assorted rockets, mortars, missiles, land mines, grenades, flares, and bulk explosives.

1.7 REPORT ORGANIZATION

This Report consists of seven sections and associated appendices summarized as follows:

- **Section 1:** Presents the project scope, location and summarizes historical investigation and remedial activities.
- **Section 2:** Describes the IF RA activities, including MEC removal procedures, MPPEH procedures, MEC disposal procedures and soil characterization sampling activities.
- **Section 3:** Summarizes the quantities of MEC and MD recovered during the RA and the soil sampling analytical results.
- **Section 4:** Presents the methodology and results of the human health risk analysis.
- **Section 5:** Present the methodology and results of the ecological risk analysis.
- **Section 6:** Summarizes the work completed within the IF, the results of the soil analytical results and the human health and ecological risk analyses.
- **Section 7:** References
- **Appendix A**: Field Documentation.
- **Appendix B**: Soil Analytical Results.
- **Appendix C**: Laboratory Reports and Data Validation.

- **Appendix D**: Risk Assessment



Legend

Installation Boundary

FWDA Location Map
Fort Wingate Depot Activity
McKinley County, New Mexico

Drawn By:	Date:	
JZ	5/28/2024	**Figure 1-1**
Checked By:	Project No.	
JC	60517380	

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Corrective Action Management Unit

Hazardous Waste Management Unit

Coal Mine Rd

16

Fort Wingate Military Reservation

0 750 1,500 3,000

Feet

Source: Esri, HERE, Garmin, Intermap, Increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, © OpenStreetMap contributors, and the GIS User Community

Locator Map

Sources: Esri, HERE, Garmin, USGS, Intermap, Increment P Corp, © OpenStreetMap contributors, and the GIS User Community

Legend

- Installation Boundary
- HWMU/CAMU Boundary
- Parcel 3 Boundary
- Inner Fence Area
- AOC 92
- Kickout Area
- Inaccessible Area (30% grade or more)
- Arroyo
- Fence

Inner Fence Area Detail Map
Fort Wingate Depot Activity
McKinley County, New Mexico

Drawn By:	Date:	
JZ	5/28/2024	**Figure 1-2**
Checked By:	Project No.	
JC	60517380	

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This section presents a summary of the IF MEC removal and surface soil sampling activities, including descriptions of the removal methods, removal areas, and surface soil sampling procedures and locations.

2.1 INSTRUMENT TEST STRIP

An instrument test strip (ITS) was established to verify detector equipment functionality and to simulate the techniques required to detect MEC in the IF. Each unexploded ordnance (UXO) technician swept the ITS at the beginning of fieldwork activities each day using his/her assigned analog geophysical instrument. Whites XLT or equivalent all-metals detectors were typically used for subsurface removal operations along with Schonstedt magnetometers.

The ITS was a Quality Control (QC) measure that demonstrated the functionality of the detection equipment used during the RA and the ability of the equipment operator to detect items encountered in the IF. The ITS was approximately 50 feet long and 5 feet wide and was cleared of all anomalies prior to installation. The Unexploded Ordnance Quality Control Specialist (UXOQCS) placed small, medium, and large Industry Standard Objects (ISOs) at various depths and orientations within the ITS. The ISOs were schedule 40 pipe nipples made from black welded steel, manufactured to American Society for Testing and Materials specification. The ITS included six industry standard objects (ISOs) buried along a linear path as follows:

- Three small ISOs (i.e., 4-inch X 1-inch) were buried at approximate depths of 2 inches, 4 inches, and 6 inches, respectively. Two were buried in an orientation that was horizontal to the ground surface and the third was buried vertically.

- Two medium ISOs (i.e., 8-inch X 2-inch) were buried at approximate depths of 6 inches and 10 inches. Both were buried horizontal to the ground surface.

- One large ISO (i.e., 12-inch X 4-inch) was buried at an approximate depth of 18 inches with an orientation that was horizontal to the ground surface.

If an instrument was not functioning properly during the daily function test, it was removed from service for repair and replaced with a properly functioning instrument.

2.2 LOCATION SURVEYS

The existing boundary and grid system that was established for the KOA RA was used for the IF RA (PIKA Pirnie 2015). No additional permanent monuments or markers were established.

2.2.1 Munitions and Explosives of Concern Safety Provisions

During all surveying operations, the survey crew was accompanied by a UXO escort implementing MEC and anomaly avoidance procedures in accordance with EM 385-1-97,

Change 1. The UXO technician perform a visual survey for surface MEC before the survey crew enters the area.

2.2.2 Control Points

Inner fence control points were established within Parcel 3 using real-time kinematic (RTK) survey and the Online Positioning User Service (OPUS) to support centimeter-level GPS positioning and data collection. They were used to set inner fence grid corners and for daily QC checks of GPS equipment.

2.3 VEGETATION REMOVAL

Areas containing low-lying or sparse vegetation did not require vegetation removal. UXO technicians removed vegetation from areas as required for safe performance of an activity, access to MEC, demolition of UXO, or fire prevention prior to demolition efforts.

Prior to, and during vegetation removal, UXO technicians visually inspected the area where the vegetation removal was needed to verify the area was free of surface MEC items or other items that may present a physical hazard. During vegetation removal, site personnel utilized the safety and health personal protective equipment (PPE) specified in the Accident Prevention Plan (APP) and required by EM 385-1-1. Vegetation was cut no closer than six inches from the ground surface and attention was paid so as not to remove any root ball of the vegetation being cut. Cut vegetation was removed from the immediate work area and placed outside of the area to decompose naturally. All vegetation removal activities were completed in accordance with EM-385-1-1, Section 31.

2.4 INNER FENCE MEC REMOVAL ACTIVITIES

A MEC surface clearance within the IF was previously initiated under a separate contract (PIKA Pirnie 2015) prior to the execution of this subsurface MEC RA. The MEC surface clearance was suspended in 2018 before it was completed; therefore, the subsurface RA was limited to those areas where the surface clearance had been completed. For the safety of site personnel, the RA was not completed in areas with slopes greater than 30 percent. The IF grid layout, grid ID numbers, and locations of slopes greater than 30 percent (i.e., inaccessible areas) are shown on **Figure 2-1**. During subsurface removal operations, UXO technicians used all-metals detectors to locate metallic anomalies in the subsurface as described in the following subsections.

2.4.1 Subsurface MEC, MPPEH and MD Removal

The UXO clearance teams completed a manual MEC subsurface clearance to depth of detection within the IF, excluding the HWMU and AOC 92. As is further detailed in **Section 3.1**, the IF grids/areas shown in white on **Figure 2-2** were not cleared by the manual excavation methods employed during this RA. The anomaly densities within these grids/areas were too high to be able to safely identify and manually resolve single point anomalies. Some of these IF grids

(especially grids west of the HWMU boundary up to the western boundary of the inner fence area) were added to the scope of the mechanical excavation and soil processing activities completed as part of the mechanized RA at the adjacent HWMU.

During the IF MEC RA, MEC (regardless of size) and metallic debris 1.5 inches by 3 inches or larger were removed from the subsurface along with any surface MEC or metallic debris that was missed during the previous surface clearance activities. Upon arrival at an assigned grid, the UXO dig team leader verified the location and reinstalled any missing grid stakes, as needed. Team members marked control lanes with rope. Control lanes ran north to south and were approximately 4 feet in width, with some variations based on terrain and vegetation hazards. During grid clearance operations, the UXO Technicians swept the instruments through their respective lanes in a tight forward pattern, following the contours of the terrain and ensuring complete area coverage.

Subsurface target anomalies that met the NMED approved clearance criteria (MEC [regardless of size] and metallic debris measuring 1.5 inches by 3 inches or larger) were removed. Identified subsurface anomalies were manually excavated in accordance with EM 385-1-97 (USACE 2008) to determine the anomaly source. At no time did UXO technicians dig directly over an anomaly until its depth had been determined by digging to the side of the anomaly. Once the anomaly was located, it was visually inspected, identified, and assessed for hazards by two qualified UXO technicians, one of whom was a UXO technician III (UXOTIII). Target anomaly locations were rechecked after the removal of the anomaly to verify the anomaly was completely removed and was not masking anything beneath it. Once the target anomaly location was resolved, any excavated soil was backfilled. If MEC was discovered, it was marked and managed in accordance with the procedures described in EM 385-1-97, Change 1.

2.4.1.1 Munitions and Explosives of Concern Items Encountered

The MEC identification process started when the anomaly was located. When the UXO technician that located the item identified it as MEC, a UXOTIII confirmed the item was MEC. Once the item was confirmed as MEC, it was marked with a pin flag, and the Senior UXO Supervisor (SUXOS) and Unexploded Safety Officer (UXOSO) were notified and requested to determine if the MEC item was acceptable to move. If the MEC item was determined acceptable to move, it was transported to the earth-covered magazines (ECMs) for storage until later destruction at the CAMU. If the item was determined unacceptable to move, it was BIP. The USACE Ordnance and Explosives Safety Specialist (OESS) was notified and assistance requested if personnel could not make a positive identification.

Prior to removal or disposal, the location of each MEC item and all relevant information related to the item was recorded with GPS equipment. Data associated with MEC locations included:

- The grid number where the item was found.
- Item number assigned.
- Type of item.

- Location of item in coordinates.
- Depth below ground surface.
- Digital photograph and disposition.

Post-MEC disposal actions included the implementation of the MPPEH inspection process on any remaining material at the shot location. If the MPPEH had an explosive hazard it was designated as MDEH, if not, it was designated as MDAS. Items designated as MDEH underwent explosives demolition operations as described in **Section 2.6**.

2.4.1.2 Material Potentially Presenting an Explosive Hazard Inspection and Munitions Debris and Range Related Debris Storage

All suspected MPPEH was 100 percent inspected by the UXO Field Team. Two separate UXO Qualified Person (UXOQP) conducted the inspections prior to removing any material from the grid. At a minimum, a UXOTII completed a 100 percent inspection and a UXOTIII completed a 100 percent re-inspection to determine if the item was MDEH, or MDAS (including MD or RRD) and verified it did not contain an explosive hazard. Items designated as MDEH underwent explosive demolition operations as described **Section 2.6**. MDAS segregated as MD and RRD were kept in sealed and locked roll-off containers until final disposition.

The SUXOS performed random spot checks to verify the inspection procedures were being implemented, that all MD and RRD were free of explosive hazards, were properly segregated from other material to prevent comingling, and were secured in the secured roll-off containers. The UXOQCS conducted daily audits of the above procedures for processing MPPEH, MD, and RRD to verify compliance with the WP. The UXOQCS performed random inspections of designated MDAS, MD, or RRD, to verify no items containing explosive hazards were being comingled with the inspected MDAS, MD, or RRD.

Inspected and certified MDAS, including MD and RRD were secured in locked roll-off containers until final disposition to prevent comingling MD or RRD with material that had not been inspected. The containers were lockable, clearly labeled on the outside with the following information: Unique identification that included the USACE/Installation Name/Contractor's Name/0001/Seals unique identification and continue sequentially for each additional container used for the same project site. The seal was attached to the container in such a manner that the container could not be opened without damaging the seal.

2.4.1.3 MDAS Final Disposition

The SUXOS certified the MDAS was free of explosive hazards and the OESS verified the MPPEH inspection process had been followed. Form 1348-1A was used to document the description of each container and was also used as the certification/verification documentation for each container of MDAS. Form 1348-1A included typed or printed names of the SUXOS and UXOQCS, organization, signature, contractor's home office, and the field office phone

number(s) of the persons certifying and verifying the debris as free of explosive hazards. The Forms also included:

- Basic material content (e.g., steel or mixed metal).
- Estimated weight.
- Unique identification of each of the containers and seals stated as being turned over.
- Location where MDAS was obtained.
- Seal identification, if different from the unique identification of the sealed container.

The following certification/verification was entered on each Form 1348-1A for turnover of MD or RRD and was signed by the SUXOS and the OESS. The statement below was used when RRD was processed along with MD:

- "This certifies that the material listed has been 100 percent properly inspected and, to the best of our knowledge and belief, is free of explosive hazards, engine fluids, illuminating dials and other visible liquid hazardous, toxic, and radioactive waste (HTRW) materials."

The following certification/verification was entered on each Form 1348-1A for turnover of MDAS and was signed by the OESS. This statement was used when only MD was processed:

- "This certifies that the material listed has been 100 percent inspected and, to the best of our knowledge and belief, are inert and/or free of explosives or related materials."

The chain of custody (COC) was maintained and final disposition of the certified and verified materials was documented. The certified and verified material was released to a recycler that would:

- Receive a secured labeled container, with its unique identified and unbroken seal (ensuring continuity in the COC), review and concur with the supporting documentation, sign for having received and concurred with the documentation that the secured container contained no explosive hazards upon receipt. Concurrence was provided on the recycler's company letterhead and clearly stated that the contents of the sealed container were not sold, traded, or otherwise given to another party until the contents were smelted and were only identifiable by their basic content.
- Provide documentation that the contents of the sealed container had been smelted and were only identifiable by their basic content.

2.4.1.4 Quality Control and Quality Assurance Activities

Blind seeds were placed within each grid by the UXOQCS. The blind seeding was a QC measure to verify the functionality of the detection equipment and ability of the UXO technicians to detect and remove subsurface anomalies. The UXOQCS placed up to 2 large blind seeds and 3 small seeds per operator per Lot (10 contiguous grids). Each seed was given a unique ID so the UXOQCS could verify that all seeds from within a grid were recovered. Upon completion

the subsurface removal within a grid, it was turned over to the UXOQCS for follow-up inspection. The UXOQCS verified that all blind seeds had been removed from the grid and inspected a minimum of 10 percent of the grid to verify that the work met the project performance objectives.

Upon completion of QC inspection, grids were turned over to the OESS, in Lots of 10, for Quality Assurance (QA) inspection. The OESS placed additional QA blinds seeds, randomly inspected each Lot, and verified all QC and QA seeds had been recovered. Upon verifying the Lot met the project performance requirements, the OESS provided a Form 6048 documenting government acceptance of the work.

2.5 MINIMUM SEPARATION DISTANCES

2.5.1 Minimum Separation Distances for Intentional Detonations

The applicable minimum safe distances (MSDs) for intentional detonations for the IF are presented in the Department of Defense Explosives Safety Board (DDESB) approved Explosive Safety Submission (ESS). During MEC operations, the SUXOS, UXOSO, and UXO team leaders established and maintained applicable MSDs, based on the nature of the activity, in accordance with the ESS. All MSD restrictions were established and enforced for all personnel during all operations.

2.5.2 Minimum Separation Distances for Unintentional Detonations

The applicable MSDs for unintentional detonations (i.e., accidental explosions) for the IF are presented in the DDESB-approved ESS. Preliminary site work such as surveying did not require an MSD. The MSD restrictions during MEC operations applied to all non-essential personnel. Essential personnel are defined as those Army and subcontractor personnel essential to the safe and effective performance of the MEC removal activities along with those approved and authorized visitors; all others are designated as non-essential.

2.6 DISPOSAL TECHNIQUES

2.6.1 Munitions and Explosives of Concern Disposal

All MEC encountered during the RA was properly disposed. MEC disposal operations were supervised by the SUXOS and coordinated with the OESS. MEC disposal operations were conducted in accordance with USACE EM 385-1-97, Change 1, Explosives Safety and Health Requirements Manual.

MEC demolition procedures are presented **Section 2.6.4**. Physical control of the on-site disposal operations was accomplished by blocking access roads to the disposal location at the point of the exclusion zone (EZ). Control of disposal operations were maintained to prevent unauthorized access by non-essential personnel. During disposal preparation, all non-essential personnel

evacuated outside the applicable MSD and all essential personnel were evacuated to a designated safe location prior to the initiation of the disposal shot.

The number of essential personnel used during disposal operations was kept to the minimum required to safely accomplish the disposal task.

2.6.2 Munitions and Explosives of Concern Transportation

For MEC encountered that was determined unacceptable to move, BIP operations were conducted. When MEC was determined acceptable to move, transportation of MEC was done in a vehicle equipped and placarded to transport explosives. MEC determined acceptable to move was relocated to the secured ECMs until later disposal at the CAMU.

2.6.3 Established Demolition Areas and Consolidated Shots

The CAMU is the only established demolition area at FWDA and was used for destruction of MEC by denotation or burning. For consolidated MEC disposal shots at the CAMU, the USAESCH publication "Procedures for Demolition of Multiple Rounds (Consolidated Shots) on Ordnance and Explosives (OE) Sites," dated March 2000 was followed. The maximum net explosive weight (NEW) for a consolidated shot was limited such that the K328 overpressure distance for the total NEW (including donor charges) did not exceed the MSD for the intentional detonation.

2.6.4 MEC Demolition Procedures

Prior to beginning disposal operations, an exclusion zone was established around the demolition activity. Exclusion zones were based on MSD calculations for the specific item requiring disposal or the MSD established in the ESS. For consolidated shots, the MSD was selected based upon either the cumulative NEW overpressure distance or the appropriate fragment range, whichever was greater.

Electric demolition, remote firing device, and shock tube/nonelectric (NONEL) are the three methods that were used for demolition operations. The operations were completed in accordance with Technical Manual (TM) A-1-1-31 and are generally described below:

- Once the demolition charges were primed and set, and after all personnel had returned to the firing point, a head count was taken. The team verified that all notifications had been made and all site personnel were outside of the MSD.
- Safety signals were used in accordance with EM 385-1-1.
- If there was no response from the verbal notification, the charge was initiated.
- After the detonation, a 5-minute wait time was observed.
- After the 5-minute wait time, the Demolition Team Leader and one other UXOQP proceeded to the shot location. One person inspected the shot location, and the second remained at a

safe distance to render assistance or aid, if required. The team completed a thorough search of the shot location immediate area with a magnetometer to verify that complete demolition was accomplished.

- The SUXOS notified all personnel with an audible "all clear" that the shot was complete and personnel may open access roads as applicable.

The following was observed during demolition activities:

- The number of persons involved in MEC disposal operations was kept to a minimum, consistent with safe performance of the work. Personnel were not allowed to work alone.
- Only the Demolition Team, OESS, SUXOS, UXOSO, and UXOQCS were permitted in the area where charges were assembled and demolition operations were conducted.
- MEC disposal operations did not commence without functioning communications between all disposal team members. The audible signals described in EM 385-1-1, Paragraph 29.H.04 were sounded before any demolition shot.
- All access roads to the demolition location were secured and the area visually checked for any unauthorized personnel.
- All demolition shots complied with the authorized explosive limits and safe separation distances.
- Explosive demolition operations were discontinued when an unforeseen hazardous condition developed and did not resume until the condition was corrected.
- Smoking, matches, electronic cigarettes, or other flame-producing materials were not permitted within 100 feet of an area in which explosives were handled.
- In addition to the demolition team vehicle, an assigned emergency vehicle was staged in the area during demolition operations.
- Demolition operations were conducted during daylight hours only.
- Donor explosives and MEC were protected from the elements and static electricity.
- Only authorized spark-resistant tools were used within 15 feet of exposed energetic materials.
- MEC was not used for donor charges in demolition operations.

2.7 CORRECTIVE ACTION MANAGEMENT UNIT OPERATION

The CAMU, located in Parcel 3, SWMU 14, operates under Section IX of the FWDA RCRA Permit for the destruction of MEC. CAMU operations included detonations and burning as determined by the nature of the MEC. MEC, explosive components, and other associated components such as propellants, bulk explosives, metal powders, detonators, and miscellaneous munitions constituents (MC) were disposed.

During periods of CAMU operation, dry grass, leaves, and other flammable vegetation were removed for a distance of at least 200 feet from the CAMU cells. Live vegetation was maintained at a height of six inches or less within 200 feet of the CAMU cells. The CAMU was cleared at conclusion of each disposal event by removing the ash after each burn, and all scrap and MD after each detonation.

The amount of MEC treated at the CAMU did not exceed 200 pounds NEW per event or 1,000 pounds NEW in any seven-day period. A log was maintained detailing NEW consumption of donor charges and MEC per event/day/week by type, location, and methodology. It is important to note that, at the same time that MEC items recovered from the IF were being treated, disposed, and logged at the CAMU, MEC items recovered from the HWMU RA and found on other FWDA Parcels (i.e., by USACE and other contractors) were also being treated, disposed, and logged at the CAMU. A log specific to the items recovered from the IF area was not maintained.

2.8 SOIL CHARACTERIZATION SAMPLING ACTIVITIES

The soil sampling of low-density MEC areas within the IF was added to the Work Plan in response to the NMED Approval with Modifications Letter (dated September 18, 2018). NMED requested that either historical data be provided to show that residual contamination associated with lower density clusters and individual items are insignificant with respect to risk or complete additional sampling of a percentage of low-density grids. In response to the NMED Notice of Disapproval Letter (dated July 1, 2020), soil sampling of the "buffer areas" immediately bounding the HWMU/high-density grids was also added to the Work Plan.

IF soils were characterized using a combination of incremental and discrete sampling. Incremental Sampling Method (ISM) samples were collected from grids within the low-density area and grids within the buffer area. Additionally, discrete samples were collected from each buffer area grid where a ISM was collected.

The purpose of soil sampling was to determine if MC concentrations in soil exceeded Soil Screening Levels (SSLs) and if residual soil contamination poses a risk to human and ecological receptors. The low-density grids and the buffer area grids are shown on **Figure 2-2**.

Risk screening used to evaluate soil sampling results follows the 2022 NMED Risk Assessment Guidance (NMED 2022) and NMED Ecological Risk Assessment Guidance (2017). The sample risk screening methodology and results are presented in **Sections 4** and **5**.

2.8.1 Soil Sampling Design for Low-Density MEC Areas and Buffer Areas

2.8.1.1 Low-Density MEC Area

Visual Sample Plan (VSP) software was used to determine the quantity of samples required to statistically demonstrate if residual contamination poses a risk to receptors. VSP software

supports the development of a defensible sampling plan based on statistical sampling theory and the statistical analysis of sample results to support confident decision making.

Based on the release mechanism and conditions within the IF (i.e., dispersion of MEC from open burn/open detonation (OB/OD) activities at the HWMU resulting in surface area releases), incremental soil sampling was performed. The "*Show That At Least Some High % of The Sampling Area Is Acceptable, Presence/Absence Sampling*" Module was used to develop the number of incremental soil samples needed to characterize the low-density MEC areas. This VSP module inputs included the number of potential sampling grids (e.g., 100-foot by 100-foot MEC removal grids) within a decision unit (e.g., low-density MEC area of the IF) and calculated the quantity of samples needed to achieve a specified level of confidence that the condition of the decision unit was acceptable (e.g., below SSLs).

The VSP assumptions and inputs included:

- The IF is approximately 319 acres; however, approximately 68 acres were expected to be classified as unsafe to complete a manual MEC RA based on preliminary inspection of site conditions by the contractor in consultation with the onsite OESS. Therefore, 251 acres of low-density MEC areas (approximately **1,004 grids**) were used in VSP model.
- The 100-foot by 100-foot sampling unit size was selected so that sampling units would correspond to the subsurface MEC removal grids, which was the basis for identifying and documenting low-density MEC areas from high-density MEC areas (i.e., the decision to classify areas as low-MEC density or high-MEC density areas was made on a grid-by grid basis). Additionally, a 100-foot by 100-foot grid is approximately 0.25-acre in size, which is smaller than a typical residential lot used in the NMED risk guidance (i.e., a conservative approach).
- VSP confidence inputs were as follows: 1) **95 percent confidence** that at least **97 percent** of the grids in the decision unit were acceptable (i.e., below SSLs).

To provide a 95 percent confidence that 97 percent of all low-density MEC areas/grids are acceptable (i.e., below SSLs), about 94 low-density MEC grids within the IF required sampling.

When the MEC RA ceased in December 2020, the size of the low density MEC area was revised to 170 acres, based on actual site conditions. Running the same VSP module with a low density MEC area of 170 acres and all other VSP inputs from above unchanged, to provide a 95 percent confidence that 97 percent of all low-density MEC area grids were acceptable (i.e., below SSLs), an estimated 93 low-density MEC grids within the IF required sampling.

A total of 94 sampling locations were, therefore, selected from the IF using a random number generator. The low-density area grids were sampled for target analyte (TAL) metals by Method 6010B/6020A/7471B, and explosives by Method 8330B. The locations of the low-density area grids are shown on **Figure 2-2**.

2.8.1.2 Buffer Area

In response to the NMED Notice of Disapproval Letter (dated July 1, 2020), to the Inner Fence Work Plan, soil sampling of the buffer area was added to the Work Plan. The NMED stated to revise the sampling approach to include "buffer area" grid sampling. The buffer area was defined as grids immediately adjacent to the HWMU or high MEC density areas (i.e., the grids immediately adjacent to the area determined unsafe to excavate MEC manually).

A total of 76 buffer area grids were sampled and are shown on **Figure 2-2**. ISM samples were collected from the buffer area grids and analyzed for TAL metals (Method 6010B/6020A/7471B) and explosives (Method 8330B). Additionally, a discrete soil sample was collected from the approximate center of each buffer area grid and analyzed for volatile organic compounds (VOCs) (Method 8260B), semi-volatile organic compounds (SVOCs) (Method 8270D), N-Nitrosodimethylamine (NDMA) (Method 8270 SIM), polychlorinated biphenyls (PCBs) (Method 8082A), nitrate (Method 9056A), cyanide (Method 9014), dioxins/furans (Method 8290), and perchlorate (Method 6850).

During execution of the buffer area sampling, samples were not collected from the southern half and much of the western boundary of the IF. Buffer area samples were not collected from these grids because they were determined to be high-density grids and had not been cleared of MEC and debris.

2.8.2 Low Density MEC Area Incremental Soil Sampling Procedures

Incremental sampling was completed using a systematic random sampling approach as described in the Interstate Technology and Regulatory Council (ITRC) incremental soil sampling guidance (ITRC 2012, including January 2020 Clarifications). The grids that were established for the MEC removal work were also used as incremental sampling units (i.e., typically 100 feet by 100 feet). Once the boundaries of the sampling units were established, sampling personnel laid out the systematic random sampling pattern within each grid cell. After a location was cleared for sampling by a UXO technician, that soil increment was collected. This process was repeated until all increments within a sampling unit were collected.

2.8.2.1 Sampling Equipment

Soil was collected using disposable tools, including plastic disposable hand trowels, ziptop bags, and disposable scoops and glass jars for analytical samples. Sample volumes, container types, and preservation requirements were followed per specific method requirements in accordance with USEPA SW-846.

2.8.2.2 Sample Identification

Each sample was identified by a unique ID number that included the parcel number, site identifier, matrix, sample location identifier, and grid number. The sample parcel number was P3 and the site identifier was "IF" for Inner Fence. The source of the sample was "SS" for

surface soil. The type of sample was "IS" for incremental sample. The matrix was "SO" for soil.

An example of the sample ID for an incremental sample collected from grid U532 from within Inner Fence is P3IF-SS-IS-SO-U532. Matrix Spike/Matrix Spike Duplicate (MS/MSD) samples were given the same sample ID as the analytical sample but had "MS/MSD" written on their respective labels. Field replicate samples were blind samples to the laboratory and were given a unique sample ID. "500" and "600" were added to sample ID numbers to signify them as a first replicate and second replicate sample, respectively.

2.8.2.3 Soil Sample Collection

Incremental soil samples were collected from the 0 to 0.5-foot interval using the following procedure:

- A UXO Technician cleared each sampling location/grid immediately prior to sampling and offset the sample location as necessary to avoid any metallic anomalies in accordance with EM 385-1-97.
- The soil sampler donned a clean pair of nitrile gloves.
- Collected 30 to 50 grams of soil from the 0 to 0.5-foot interval at each sample increment location. using a plastic disposable scoop such that an equal volume of soil could be collected from each ISM increment location. Each increment was added to a plastic bag carried in a one-gallon plastic bucket to protect the plastic bag from damage. The same trowel and scoop were used to collect all the increments for each ISM sample.
- Moved to the next increment location and continued until all increments in that sampling unit were collected. Once all increments had been collected, the soil was composited and thoroughly mixed in the plastic bag.
- Soil was placed into the appropriate glass jars.
- Labeled the sample containers and placed them on ice, completed the sample collection field sheet and a sample COC.
- Packed the cooler(s) for shipment to the analytical laboratory.

2.8.2.4 Sample Preservation and Storage

In the field, each sample container was marked with the sample identification number, date, time of sample collection and the sampler's initials. Sample containers for chemical analysis were placed in ice-filled coolers immediately following collection and stored at 4° Celsius prior to and during shipment. Sample containers were packaged to avoid breakage during transportation.

For each sample submitted to the analytical laboratory for analysis, an entry was made on a COC form. One COC form was completed for each cooler on each day of sampling. The information

recorded on the COC form included the sampling date and time, sample identification number, requested analyses and methods, and sampler's name(s).

COC forms were placed in a sealed plastic bag inside of the cooler with the samples. Upon receipt of the sample coolers, the laboratory verified the custody and condition of the samples.

2.8.2.5 Soil Sample Analyses

Each ISM soil sample collected from the low-density MEC and buffer area grids were submitted to Agricultural Priority Pollutants Laboratory, Inc. for chemical analysis for explosives (Method 8330B) and TAL metals (USEPA Method 6010B/6020A/7471B). A list of samples collected and analyses completed is presented in **Table 3-6**.

2.8.2.6 Quality Assurance/Quality Control (QA/QC)

Field QA/QC samples were collected to help identify potential sources of external sample contamination and to evaluate potential error introduced by sample collection and handling. Field QC can also provide insights into matrix homogeneity and uncertainty. All QA/QC samples were labeled with identification numbers and sent to the laboratory with the investigative samples for analyses.

Replicate Samples

Replicate samples (a minimum of two replicates per primary incremental sample) were collected at the same time as the initial sample and from the same sampling unit. The replicate soil containers were handled in the same manner as the primary samples. The replicate samples were assigned QA/QC identification numbers, stored in an iced cooler, and shipped to the laboratory on the day they were collected. Replicate samples were analyzed for the same parameters as the primary samples. Replicate samples were blind to the laboratory.

Matrix Spike and Matrix Spike Duplicates (MS/MSD)

The matrix sample, MS, and MSD data were used to evaluate the recovery of the analyte from the matrix (i.e., bias) and evaluate the reproducibility of the analyte in the MS/MSD (i.e., precision). Samples designated for MS/MSD analyses were identified on the COC form and on the sample containers. The laboratory used soil from the processed incremental samples for the MS/MSD. MS/MSD samples were collected from five percent of the total sample locations.

2.8.3 Buffer Area Grid Incremental and Discrete Soil Sampling Procedures

The Buffer Area grids that were sampled are shown on **Figure 2-2**. ISM and collocated discrete samples collected from the Buffer Area grids were obtained in the same manner as the sampling completed within the low-density area grids described in **Section 2.8.2**. In accordance with the Final Work Plan, the ISM samples were analyzed for explosives and metals, and the collocated discrete samples (centrally located within each sampled grid) were analyzed for VOCs; SVOCs;

NDMA; PCBs; and nitrate, cyanide, dioxins/furans, and perchlorate. Discrete soil sampling procedures are described in the following subsections.

2.8.3.1 Sampling Equipment

Soil was collected using disposable tools, including plastic disposable hand trowels, plastic bags, disposable plastic scoops, Terra Core® Samplers (for VOCs) and glass jars for analytical samples. Sample volumes, container types, and preservation requirements were followed per specific method requirements in accordance with USEPA SW-846.

2.8.3.2 Sample Identification

Samples collected during site activities were assigned discrete sample identification numbers. Each sample is identified by a unique code that indicates the parcel number, site identifier, matrix, and sample location identifier. The sample parcel number is P3 and the site identifier is "IF" for Inner Fence. The source of the sample IDs will incorporate the grid type of "BA" for buffer area and the grid ID.

An example of the sample ID code for the first soil sample collected from within Inner Fence, buffer area grid F10 would be P3IF-BA-GRID-F10. MS/MSD samples are given the same sample ID as the analytical sample but have "MS/MSD" written on the label. Field replicates samples are blind samples to the laboratory and are given a unique sample ID. Field duplicate samples had "500" added to the sample number to signify it is a duplicate sample.

2.8.3.3 Soil Sample Analyses

Each discrete soil sample collected from the buffer area grids were submitted to Agricultural Priority Pollutants Laboratory, Inc. for chemical analysis for VOCs (Method 8260B), semi-volatile organic compounds (SVOCs) (Method 8270D), NDMA (Method 8270 SIM), polychlorinated biphenyls (PCBs) (Method 8082A), nitrate (Method 9056A), cyanide (Method 9014), dioxins/furans (Method 8290), and perchlorate (Method 6850).

2.8.3.4 Soil Sample Collection

The following procedures were used to collect discrete soil samples:

- The UXO Technician cleared each sampling location immediately prior to sampling and offset the sample location as necessary to avoid any metallic anomalies in accordance with EM 385-1-97.
- Removed soil from the sampling location with a disposable plastic hand trowel until the sampling depth of 0.5 feet was reached.
- Collected the discrete soil for VOCs using the Terra Core® sampler from the ground. Filled 40 milliliter volatile organic analysis vials approximately with 5-grams of soil.

- Collected a discrete soil sample for all other parameters with a disposable plastic hand trowel and placed the soil in a disposable plastic bag.
- Composited the soil by mixing the soil in the plastic bag and then filled the jars for the specified analyses (**Table 3-6**).
- Labeled the sample containers and placed on ice, completed the sample collection field sheet and the sample COC, and packed the cooler(s) for shipment.

2.8.3.5 Sample Preservation and Storage

Sample preservation and storage for discrete samples followed the same procedure described for incremental samples (**Section 2.8.2.5**).

2.8.3.6 Quality Assurance/Quality Control

Field QA/QC samples are designed to help identify potential sources of external sample contamination and to evaluate potential error introduced by sample collection and handling. QA/QC samples for VOCs were collected using Terra Core® samplers. After VOC samples were collected, soil for the remaining analytes were mixed in a plastic bag and the appropriate jars were filled. A list of analytes can be found in **Table 3-6**. All QA/QC samples were labeled with QA/QC identification numbers and sent to the laboratory with the other samples for analyses.

Duplicate Samples

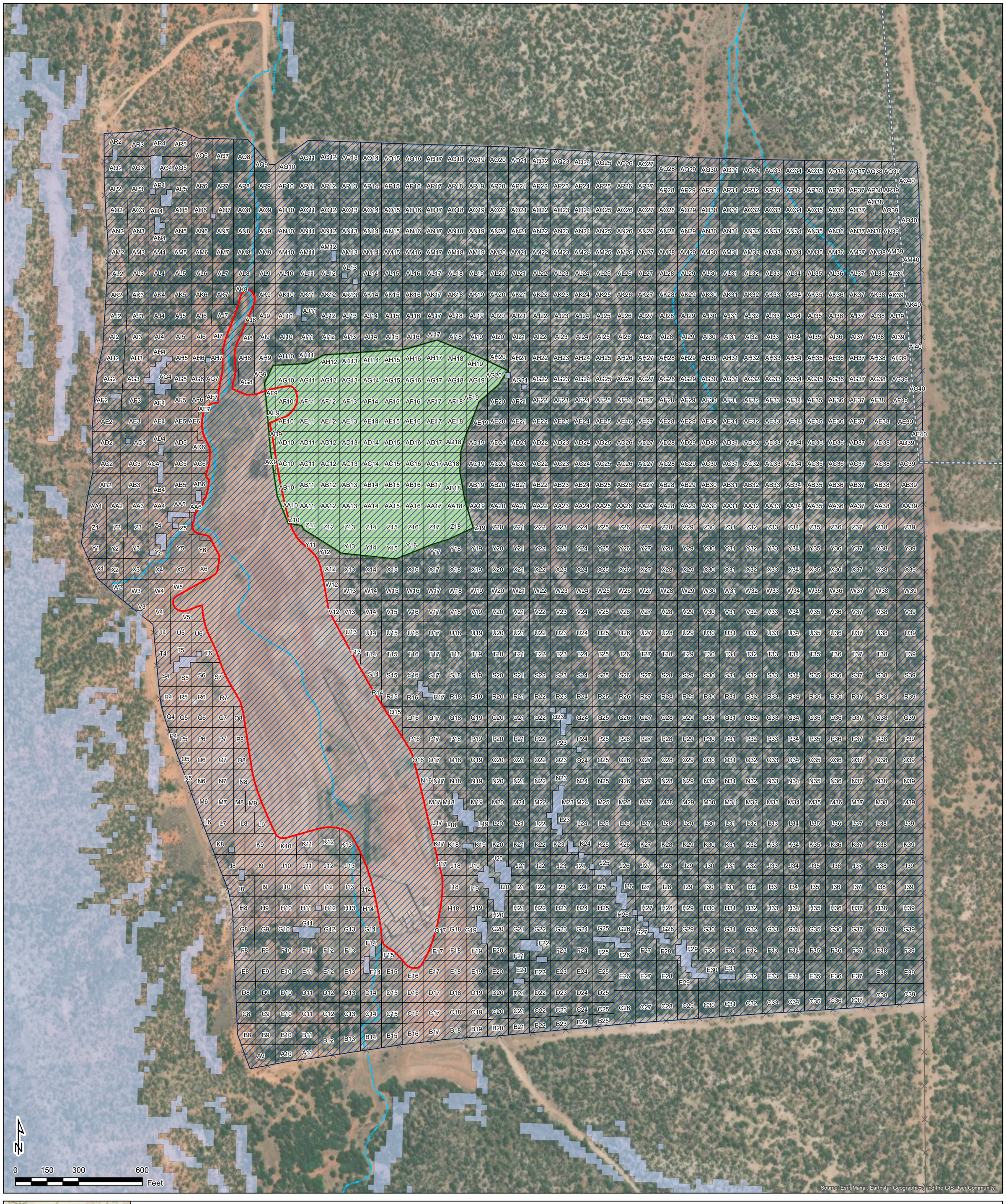
Duplicate samples were samples collected to assess precision of sampling and analysis. A duplicate sample was collected at the same time as the initial sample from ten percent of the total sample locations. The duplicate soil containers were handled in the same manner as the primary sample. The duplicate sample was assigned a QA/QC identification number, stored in an iced cooler, and shipped to the laboratory on the day it was collected. Duplicate samples were collected for all parameters. With the exception of duplicate samples collected using Terra Core® samplers (i.e., for VOC analyses), discrete soil samples were divided evenly, mixed in a plastic bag, and the appropriate jars were filled and submitted to the analytical laboratory. The Terra Core® VOC samples were not mixed. Duplicate samples were blind to the laboratory.

Matrix Spike and Matrix Spike Duplicates

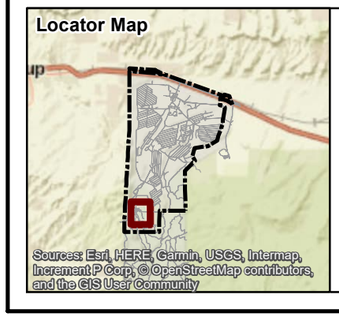
MS/MSDs are used to assess the potential for matrix effects. Samples were designated for MS/MSD analysis on the COC form and on the bottles. MS/MSD samples were collected from five percent of the total sample locations.

2.9 FIELDWORK DOCUMENTATION

Fieldwork documentation including Daily Site Reports, Daily Quality Control Reports, and Forms 6048 is included in **Appendix A**.



Locator Map



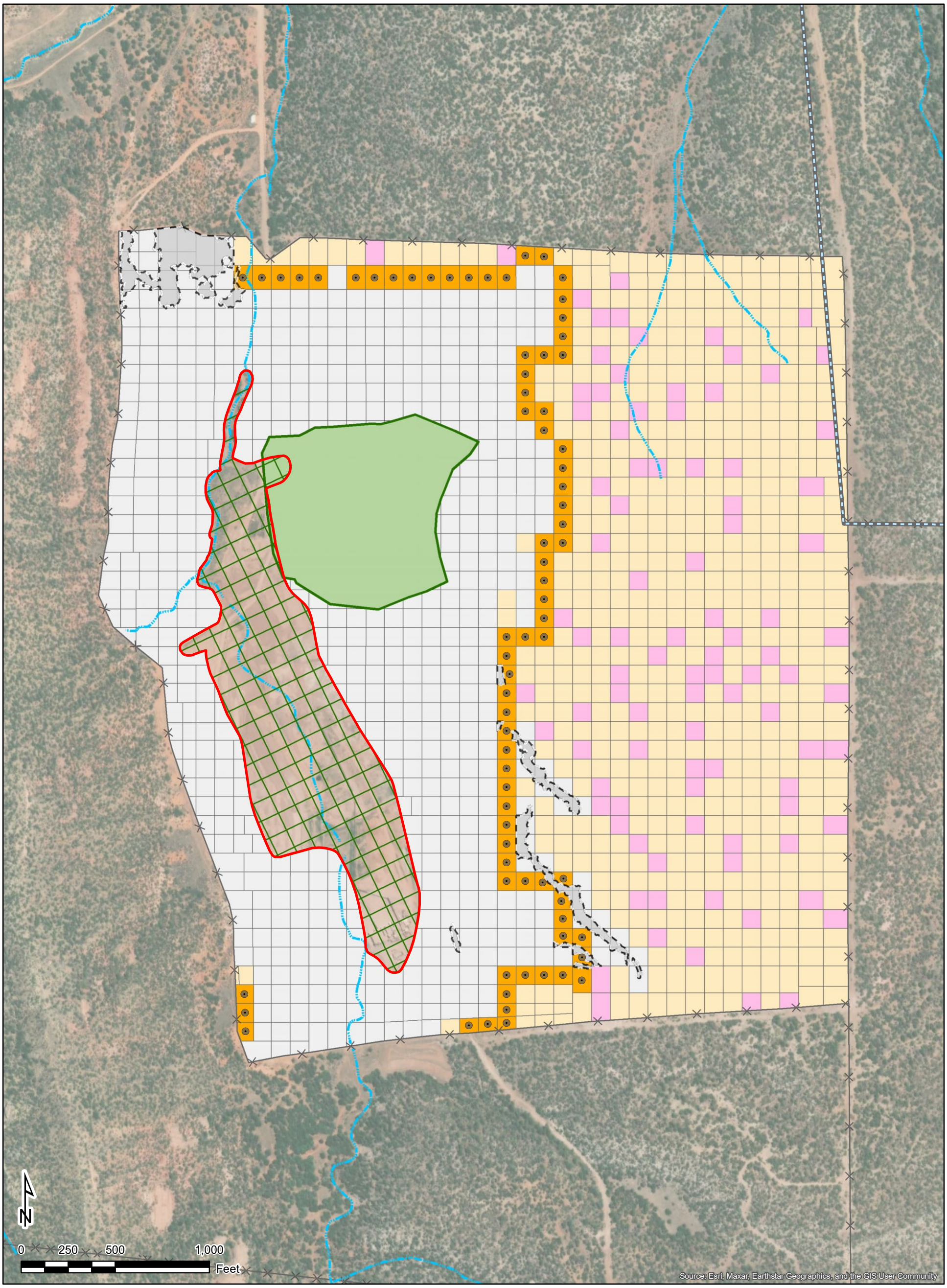
Legend

- Installation Boundary
- HWMU Boundary
- Parcel 3 Boundary
- Inner Fence Area
- AOC 92
- Inner Fence Area Grid
- Inaccessible Area
- Arroyo
- Fence

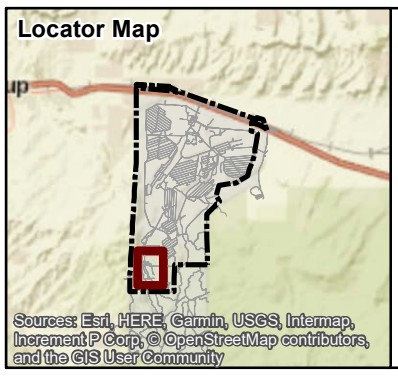
Inner Fence Area Grid Map
Fort Wingate Depot Activity
McKinley County, New Mexico

Drawn By:	Date:	
JZ	5/6/2025	**Figure 2-1**
Checked By:	Project No.	
JC	60517380	

O:\DCS\Projects\ENV\GIS\Fort_Wingate\Parcel_3\Figures\Inner_Fence_rpt\Fig2-1_inner_grid.mxd



Locator Map



Legend

- Installation Boundary
- HWMU Boundary
- Parcel 3 Boundary
- AOC 92
- Arroyo
- Fence
- HWMU Grid
- Inaccessible Area

Inner Fence Sampling Grids

- Buffer Area Incremental Samples (76)
- Low Density Area Randomized Incremental Samples (94)
- Low Density Area Not Sampled
- Excluded - Not Cleared or Contains Inaccessible Area
- Buffer Area Discrete Samples

Low Density Area and Buffer Area Sample Locations
Fort Wingate Depot Activity
McKinley County, New Mexico

Drawn By:	Date:	
JZ	5/31/2024	**Figure 2-2**
Checked By:	Project No.	
JC	60517380	

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3.1 MEC REMOVAL ACTION RESULTS

The subsurface RA of the IF began on August 28, 2017, and ceased in December 2020 due to concerns for personnel safety. The anomaly densities encountered were determined to be too high to safely identify and manually resolve as single point anomalies. It was concluded that the anomaly densities would continue to increase as the RA moved closer to the HWMU and the remainder of the IF subsurface RA, therefore, required alternative methods to complete.

The subsurface RA and subsurface removal operations were completed within 721 total grids within the IF. The removal grid locations and ID numbers are presented on **Figure 2-1** and listed in **Table 3-1** along with grid numbers and sizes. Over 1.4 million anomalies were investigated and over 338,8000 pounds of MD was recovered from these grids. **Table 3-2** presents the number of anomalies investigated and the weights of MD recovered by grid. **Figure 3-1** presents a color-coded anomaly density map and **Figure 3-2** presents a color-coded weight of MD map by grid. The figures demonstrate how anomaly densities and MD weights were increasing as the work progressed toward the HWMU.

A total of 16,578 MEC items were identified and recovered from the IF grids where manual RA activities were successfully completed as discussed in **Sections 2.4.1** and **6**. **Table 3-3** presents a summary of the MEC types recovered, including nomenclature and quantity. **Figure 3-3** shows the overall distribution of the MEC items recovered. The majority of MEC items recovered were point detonating (PD) and base detonating (BD) fuzes and 37 mm and 40 mm projectiles recovered from shallow depths of less than 12 inches. These four item types accounted for nearly 85 percent of the MEC recovered from the IF. The deepest MEC item recovered during IF subsurface removal operations (i.e., maximum depth of detection) was a 75mm HE projectile recovered from 22 inches bgs.

Table 3-4 presents a more comprehensive summary of the MEC items recovered by date and includes MEC item descriptions, munition types, quantities, depths of recovery, fuzing conditions, grid identifications (i.e., where the items were recovered), status of disposal, and the dates that the items were destroyed.

MEC items that were identified as unacceptable to move during the MPPEH inspection process were detonated in place as described in **Section 2.6**. **Table 3-5** lists the MEC items that were detonated in place, including dates of destruction, the NEWs of the demolition events (including the NEW of the donor explosives), and the destruction location coordinates. **Figure 3-4** shows each BIP MEC disposal location.

3.2 CHARACTERIZATION SOIL SAMPLING RESULTS

Following completion of the MEC removal and disposal activities summarized in **Section 3.1**, ISM soil samples were collected from 94 low-density area grids and ISM and discrete samples were collected from 76 buffer area grids. As detailed in **Section 2.8.2**, incremental samples were collected from both the low-density and buffer area grids and were analyzed for explosives and

metals. Additional discrete samples were also collected from the buffer area grids and analyzed for VOCs, SVOCs, NDMA, PCBs, perchlorate, dioxins/furans, cyanide, and nitrate. **Table 3-6** presents a sample summary for the low density and buffer area grids, including sample IDs, sampling dates and the laboratory analyses completed for each sample.

The analytical results are presented in **Appendix B** and the laboratory data and associated validation reports are presented in **Appendix C**. **Table 3-7** includes a summary of detected analyte concentrations (i.e., only one analytical result for arsenic) that exceeded the applicable human health SSLs detailed in **Section 4.1.3** (i.e., Residential SSL Cancer Endpoints and Residential Noncancer Endpoints). **Table 3-7** also shows multiple analytical results, specific to Dibenz[a,h]anthracene and n-Nitrosodimethylamine, where the limit of detection (LOD) exceeded the SSL for nondetect results as discussed in **Section 4.1.8**. The IF soil analytical results were not initially compared to preliminary Ecological SSLs, because the ecological SSLs were established as part of the tiered/phased Ecological Risk Assessment approach completed for the analytical data in accordance with NMED's *Risk Assessment Guidance for Site Investigations and Remediation, Volume 2, Soil Screening Guidance for Ecological Risk Assessments* (NMED 2017) as detailed throughout **Section 5** of the Report. The detailed evaluation of human health risks are detailed in **Section 4**.

3.3 CHEMICAL DATA USABILITY

Prior to use in the human health and ecological risk assessment, all site data were validated and qualified following the Quality Assurance/Quality Control (QA/QC) procedures described in the work plan (AECOM 2021). Data of insufficient quality based on QA/QC criteria were rejected at this point and not used. Sample results were assigned appropriate qualifiers at this stage:

- Data were considered usable for risk assessment purposes if 1) they were not qualified or 2) were estimated (J qualified).
- Data were not used if rejected (R qualified) or if nondetect (U qualified) in the field sample based on their presence in corresponding laboratory or field blanks. Other nondetect data for chemicals detected at least once in a media of concern were considered useable in the risk assessments for the calculation of exposure concentrations (ECs).
- Additionally, samples collected for QA/QC purposes (e.g., matrix spike/matrix spike duplicate) were used in the risk assessments.
- Nondetect results for dioxins and furans were not included in the calculation of the TEQs.
- For duplicates, the higher of the parent or duplicate results was used in the risk assessments.

Sample analytical results were also evaluated and screened for usability in the risk assessments using the USEPA guidance in the Risk Assessment Guidance for Superfund, Volume I: Human Health Evaluation Manual (USEPA 1989) and in the Guidance for Data Usability in Risk Assessment (USEPA 1990a).

TABLE 3-1
INNER FENCE AREA GRIDS COMPLETED
FORT WINGATE DEPOT ACTIVITY
MCKINLEY COUNTY, NEW MEXICO

Grids Cleared	Acreage	QC Status	Notes
AA24	0.22957	QA accepted	
AA25	0.229568	QA accepted	
AA26	0.22957	QA accepted	
AA27	0.229568	QA accepted	
AA28	0.22957	QA accepted	
AA29	0.229568	QA accepted	
AA30	0.229569	QA accepted	
AA31	0.229568	QA accepted	
AA32	0.229569	QA accepted	
AA33	0.229568	QA accepted	
AA34	0.229568	QA accepted	
AA35	0.229569	QA accepted	
AA36	0.229569	QA accepted	
AA37	0.229568	QA accepted	
AA38	0.307118	QA accepted	
AA39	0.296218	QA accepted	
AB23	0.229569	QA accepted	
AB24	0.22957	QA accepted	
AB25	0.229569	QA accepted	
AB26	0.22957	QA accepted	
AB27	0.229569	QA accepted	
AB28	0.22957	QA accepted	
AB29	0.229569	QA accepted	
AB30	0.22957	QA accepted	
AB31	0.229569	QA accepted	
AB32	0.22957	QA accepted	
AB33	0.229569	QA accepted	
AB34	0.229569	QA accepted	
AB35	0.22957	QA accepted	
AB36	0.22957	QA accepted	
AB37	0.229569	QA accepted	
AB38	0.307119	QA accepted	
AB39	0.292415	QA accepted	
AC25	0.229568	QA accepted	
AC26	0.22957	QA accepted	
AC27	0.229568	QA accepted	
AC28	0.22957	QA accepted	
AC29	0.229568	QA accepted	
AC30	0.229569	QA accepted	
AC31	0.229568	QA accepted	
AC32	0.229569	QA accepted	
AC33	0.229568	QA accepted	

TABLE 3-1
INNER FENCE AREA GRIDS COMPLETED
FORT WINGATE DEPOT ACTIVITY
MCKINLEY COUNTY, NEW MEXICO

Grids Cleared	Acreage	QC Status	Notes
AC34	0.229568	QA accepted	
AC35	0.229569	QA accepted	
AC36	0.229569	QA accepted	
AC37	0.229568	QA accepted	
AC38	0.307118	QA accepted	
AC39	0.266552	QA accepted	
AD25	0.229569	QA accepted	
AD26	0.22957	QA accepted	
AD27	0.229569	QA accepted	
AD28	0.22957	QA accepted	
AD29	0.229569	QA accepted	
AD30	0.22957	QA accepted	
AD31	0.229569	QA accepted	
AD32	0.22957	QA accepted	
AD33	0.229569	QA accepted	
AD34	0.229569	QA accepted	
AD35	0.22957	QA accepted	
AD36	0.22957	QA accepted	
AD37	0.229569	QA accepted	
AD38	0.307119	QA accepted	
AD39	0.22673	QA accepted	
AE25	0.229568	QA accepted	
AE26	0.22957	QA accepted	
AE27	0.229568	QA accepted	
AE28	0.22957	QA accepted	
AE29	0.229568	QA accepted	
AE30	0.229569	QA accepted	
AE31	0.229568	QA accepted	
AE32	0.229569	QA accepted	
AE33	0.229568	QA accepted	
AE34	0.229568	QA accepted	
AE35	0.229569	QA accepted	
AE36	0.229569	QA accepted	
AE37	0.229568	QA accepted	
AE38	0.307118	QA accepted	
AE39	0.208178	QA accepted	
AE40	0.158525	QA accepted	
AF25	0.229569	QA accepted	
AF26	0.22957	QA accepted	
AF27	0.229569	QA accepted	
AF28	0.22957	QA accepted	
AF29	0.229569	QA accepted	

TABLE 3-1
INNER FENCE AREA GRIDS COMPLETED
FORT WINGATE DEPOT ACTIVITY
MCKINLEY COUNTY, NEW MEXICO

Grids Cleared	Acreage	QC Status	Notes
AF30	0.22957	QA accepted	
AF31	0.229569	QA accepted	
AF32	0.22957	QA accepted	
AF33	0.229569	QA accepted	
AF34	0.229569	QA accepted	
AF35	0.22957	QA accepted	
AF36	0.22957	QA accepted	
AF37	0.229569	QA accepted	
AF38	0.215909	QA accepted	
AF39	0.280837	QA accepted	
AG25	0.229569	QA accepted	
AG26	0.22957	QA accepted	
AG27	0.229569	QA accepted	
AG28	0.22957	QA accepted	
AG29	0.229569	QA accepted	
AG30	0.22957	QA accepted	
AG31	0.229569	QA accepted	
AG32	0.22957	QA accepted	
AG33	0.229569	QA accepted	
AG34	0.229569	QA accepted	
AG35	0.22957	QA accepted	
AG36	0.22957	QA accepted	
AG37	0.229569	QA accepted	
AG38	0.215909	QA accepted	
AG39	0.262286	QA accepted	
AG40	0.199224	QA accepted	
AH24	0.22957	QA accepted	
AH25	0.229569	QA accepted	
AH26	0.22957	QA accepted	
AH27	0.229569	QA accepted	
AH28	0.22957	QA accepted	
AH29	0.229569	QA accepted	
AH30	0.22957	QA accepted	
AH31	0.229569	QA accepted	
AH32	0.22957	QA accepted	
AH33	0.229569	QA accepted	
AH34	0.229569	QA accepted	
AH35	0.22957	QA accepted	
AH36	0.22957	QA accepted	
AH37	0.229569	QA accepted	
AH38	0.215909	QA accepted	
AH39	0.243735	QA accepted	

TABLE 3-1
INNER FENCE AREA GRIDS COMPLETED
FORT WINGATE DEPOT ACTIVITY
MCKINLEY COUNTY, NEW MEXICO

Grids Cleared	Acreage	QC Status	Notes
AI23	0.229568	QA accepted	
AI24	0.22957	QA accepted	
AI25	0.229568	QA accepted	
AI26	0.22957	QA accepted	
AI27	0.229568	QA accepted	
AI28	0.22957	QA accepted	
AI29	0.229568	QA accepted	
AI30	0.229569	QA accepted	
AI31	0.229568	QA accepted	
AI32	0.229569	QA accepted	
AI33	0.229568	QA accepted	
AI34	0.229568	QA accepted	
AI35	0.229569	QA accepted	
AI36	0.229569	QA accepted	
AI37	0.229568	QA accepted	
AI38	0.215908	QA accepted	
AI39	0.225183	QA accepted	
AI40	0.264679	QA accepted	
AJ23	0.229569	QA accepted	
AJ24	0.22957	QA accepted	
AJ25	0.229569	QA accepted	
AJ26	0.22957	QA accepted	
AJ27	0.229569	QA accepted	
AJ28	0.22957	QA accepted	
AJ29	0.229569	QA accepted	
AJ30	0.22957	QA accepted	
AJ31	0.229569	QA accepted	
AJ32	0.22957	QA accepted	
AJ33	0.229569	QA accepted	
AJ34	0.229569	QA accepted	
AJ35	0.22957	QA accepted	
AJ36	0.22957	QA accepted	
AJ37	0.229569	QA accepted	
AJ38	0.215909	QA accepted	
AJ39	0.206633	QA accepted	
AK23	0.229568	QA accepted	
AK24	0.22957	QA accepted	
AK25	0.229568	QA accepted	
AK26	0.22957	QA accepted	
AK27	0.229568	QA accepted	
AK28	0.22957	QA accepted	
AK29	0.229568	QA accepted	

TABLE 3-1
INNER FENCE AREA GRIDS COMPLETED
FORT WINGATE DEPOT ACTIVITY
MCKINLEY COUNTY, NEW MEXICO

Grids Cleared	Acreage	QC Status	Notes
AK30	0.229569	QA accepted	
AK31	0.229568	QA accepted	
AK32	0.229569	QA accepted	
AK33	0.229568	QA accepted	
AK34	0.229568	QA accepted	
AK35	0.229569	QA accepted	
AK36	0.229569	QA accepted	
AK37	0.229568	QA accepted	
AK38	0.215908	QA accepted	
AK39	0.188081	QA accepted	
AK40	0.329849	QA accepted	
AL23	0.229569	QA accepted	
AL24	0.22957	QA accepted	
AL25	0.229569	QA accepted	
AL26	0.22957	QA accepted	
AL27	0.229569	QA accepted	
AL28	0.22957	QA accepted	
AL29	0.229569	QA accepted	
AL30	0.22957	QA accepted	
AL31	0.229569	QA accepted	
AL32	0.22957	QA accepted	
AL33	0.229569	QA accepted	
AL34	0.229569	QA accepted	
AL35	0.22957	QA accepted	
AL36	0.22957	QA accepted	
AL37	0.229569	QA accepted	
AL38	0.215909	QA accepted	
AL39	0.169531	QA accepted	
AM14	0.229569	QA accepted	
AM15	0.229568	QA accepted	
AM25	0.229568	QA accepted	
AM26	0.22957	QA accepted	
AM27	0.229568	QA accepted	
AM28	0.22957	QA accepted	
AM29	0.229568	QA accepted	
AM30	0.229569	QA accepted	
AM31	0.229568	QA accepted	
AM32	0.229569	QA accepted	
AM33	0.229568	QA accepted	
AM34	0.229568	QA accepted	
AM35	0.229569	QA accepted	
AM36	0.229569	QA accepted	

TABLE 3-1
INNER FENCE AREA GRIDS COMPLETED
FORT WINGATE DEPOT ACTIVITY
MCKINLEY COUNTY, NEW MEXICO

Grids Cleared	Acreage	QC Status	Notes
AM37	0.229568	QA accepted	
AM38	0.215908	QA accepted	
AM39	0.150979	QA accepted	
AM40	0.387857	QA accepted	
AN14	0.22957	QA accepted	
AN15	0.229569	QA accepted	
AN25	0.229569	QA accepted	
AN26	0.22957	QA accepted	
AN27	0.229569	QA accepted	
AN28	0.22957	QA accepted	
AN29	0.229569	QA accepted	
AN30	0.22957	QA accepted	
AN31	0.229569	QA accepted	
AN32	0.22957	QA accepted	
AN33	0.229569	QA accepted	
AN34	0.229569	QA accepted	
AN35	0.22957	QA accepted	
AN36	0.22957	QA accepted	
AN37	0.229569	QA accepted	
AN38	0.160256	QA accepted	
AN39	0.188082	QA accepted	
AO14	0.22957	QA accepted	
AO15	0.229569	QA accepted	
AO25	0.229569	QA accepted	
AO26	0.22957	QA accepted	
AO27	0.229569	QA accepted	
AO28	0.22957	QA accepted	
AO29	0.229569	QA accepted	
AO30	0.22957	QA accepted	
AO31	0.229569	QA accepted	
AO32	0.22957	QA accepted	
AO33	0.229569	QA accepted	
AO34	0.229569	QA accepted	
AO35	0.22957	QA accepted	
AO36	0.22957	QA accepted	
AO37	0.229569	QA accepted	
AO38	0.160256	QA accepted	
AO39	0.169531	QA accepted	
AO40	0.439759	QA accepted	
AP10	0.292516	QA accepted	
AP11	0.292514	QA accepted	
AP12	0.292516	QA accepted	

TABLE 3-1
INNER FENCE AREA GRIDS COMPLETED
FORT WINGATE DEPOT ACTIVITY
MCKINLEY COUNTY, NEW MEXICO

Grids Cleared	Acreage	QC Status	Notes
AP14	0.292507	QA accepted	
AP15	0.292523	QA accepted	
AP16	0.292514	QA accepted	
AP17	0.292515	QA accepted	
AP18	0.292515	QA accepted	
AP19	0.292514	QA accepted	
AP20	0.292515	QA accepted	
AP21	0.292515	QA accepted	
AP22	0.292516	QA accepted	
AP25	0.292513	QA accepted	
AP26	0.292515	QA accepted	
AP27	0.292515	QA accepted	
AP28	0.202463	QA accepted	
AP29	0.20247	QA accepted	
AP30	0.202467	QA accepted	
AP31	0.202466	QA accepted	
AP32	0.202466	QA accepted	
AP33	0.202467	QA accepted	
AP34	0.202463	QA accepted	
AP35	0.20247	QA accepted	
AP36	0.202467	QA accepted	
AP37	0.202466	QA accepted	
AP38	0.137743	QA accepted	
AP39	0.137713	QA accepted	
AP8	0.292515	QA accepted	
AP9	0.292514	QA accepted	
AQ10	0.17074	QA accepted	
AQ11	0.316687	QA accepted	
AQ12	0.335198	QA accepted	
AQ14	0.317884	QA accepted	
AQ15	0.309144	QA accepted	
AQ16	0.302434	QA accepted	
AQ17	0.295821	QA accepted	
AQ18	0.289142	QA accepted	
AQ19	0.281862	QA accepted	
AQ20	0.274458	QA accepted	
AQ21	0.265863	QA accepted	
AQ22	0.252922	QA accepted	
AQ23	0.239576	QA accepted	
AQ24	0.226184	QA accepted	
AQ25	0.212574	QA accepted	
AQ26	0.198944	QA accepted	

TABLE 3-1
INNER FENCE AREA GRIDS COMPLETED
FORT WINGATE DEPOT ACTIVITY
MCKINLEY COUNTY, NEW MEXICO

Grids Cleared	Acreage	QC Status	Notes
AQ27	0.185328	QA accepted	
AQ28	0.26228	QA accepted	
AQ29	0.249641	QA accepted	
AQ30	0.240848	QA accepted	
AQ31	0.23405	QA accepted	
AQ32	0.227565	QA accepted	
AQ33	0.221779	QA accepted	
AQ34	0.216001	QA accepted	
AQ35	0.211408	QA accepted	
AQ36	0.209278	QA accepted	
AQ37	0.206973	QA accepted	
AQ38	0.132071	QA accepted	
AQ39	0.130974	QA accepted	
AQ40	0.420225	QA accepted	
AQ8	0.34013	QA accepted	
AQ9	0.147183	QA accepted	
B19	0.186002	QA accepted	
B20	0.181388	QA accepted	
B21	0.170463	QA accepted	
B22	0.159174	QA accepted	
B23	0.148085	QA accepted	
B24	0.136973	QA accepted	
B25	0.126043	QA accepted	
B8	0.192414	QA accepted	
C22	0.15907	QA accepted	
C23	0.148045	QA accepted	
C24	0.137052	QA accepted	
C25	0.126085	QA accepted	
C26	0.357923	QA accepted	
C27	0.339488	QA accepted	
C28	0.323389	QA accepted	
C29	0.307292	QA accepted	
C30	0.290321	QA accepted	
C31	0.273058	QA accepted	
C32	0.25588	QA accepted	
C33	0.240887	QA accepted	
C34	0.226523	QA accepted	
C35	0.212199	QA accepted	
C36	0.197916	QA accepted	
C37	0.182183	QA accepted	
C38	0.316996	QA accepted	
C39	0.289356	QA accepted	

TABLE 3-1
INNER FENCE AREA GRIDS COMPLETED
FORT WINGATE DEPOT ACTIVITY
MCKINLEY COUNTY, NEW MEXICO

Grids Cleared	Acreage	QC Status	Notes
C8	0.210241	QA accepted	
D22	0.22957	QA accepted	
D23	0.229569	QA accepted	
D24	0.22957	QA accepted	
D25	0.229568	QA accepted	
D8	0.216033	QA accepted	
E22	0.22957	QA accepted	
E23	0.229569	QA accepted	
E24	0.22957	QA accepted	
E25	0.229568	QA accepted	
E26	0.312312	QA accepted	
E27	0.331405	QA accepted	
E28	0.331383	QA accepted	
E29	0.304834	QA accepted	contains inaccessible area
E30	0.331364	QA accepted	
E31	0.331363	QA accepted	
E32	0.331345	QA accepted	
E33	0.331382	QA accepted	
E34	0.331363	QA accepted	
E35	0.331364	QA accepted	
E36	0.331392	QA accepted	
E37	0.331336	QA accepted	
E38	0.329316	QA accepted	
E39	0.330691	QA accepted	
E8	0.045613	QA accepted	western slice of grid accepted
F26	0.120715	QA accepted	
F27	0.206017	QA accepted	contains inaccessible area
F28	0.167018	QA accepted	contains inaccessible area
F29	0.216049	QA accepted	contains inaccessible area
F30	0.22957	QA accepted	
F31	0.229569	QA accepted	
F32	0.22957	QA accepted	
F33	0.229569	QA accepted	
F34	0.229569	QA accepted	
F35	0.22957	QA accepted	
F36	0.22957	QA accepted	
F37	0.229569	QA accepted	
F38	0.300443	QA accepted	
F39	0.300444	QA accepted	
G25	0.188667	QA accepted	
G26	0.214573	QA accepted	
G27	0.137215	QA accepted	contains inaccessible area

TABLE 3-1
INNER FENCE AREA GRIDS COMPLETED
FORT WINGATE DEPOT ACTIVITY
MCKINLEY COUNTY, NEW MEXICO

Grids Cleared	Acreage	QC Status	Notes
G28	0.183671	QA accepted	contains inaccessible area
G29	0.229565	QA accepted	
G30	0.229569	QA accepted	
G31	0.229568	QA accepted	
G32	0.229569	QA accepted	
G33	0.229568	QA accepted	
G34	0.229568	QA accepted	
G35	0.229569	QA accepted	
G36	0.229569	QA accepted	
G37	0.229568	QA accepted	
G38	0.299293	QA accepted	
G39	0.299295	QA accepted	
H25	0.229568	QA accepted	
H26	0.080614	QA accepted	contains inaccessible area
H27	0.200755	QA accepted	contains inaccessible area
H28	0.22957	QA accepted	
H29	0.229569	QA accepted	
H30	0.22957	QA accepted	
H31	0.229569	QA accepted	
H32	0.22957	QA accepted	
H33	0.229569	QA accepted	
H34	0.229569	QA accepted	
H35	0.22957	QA accepted	
H36	0.22957	QA accepted	
H37	0.229569	QA accepted	
H38	0.29856	QA accepted	
H39	0.297811	QA accepted	
I25	0.178629	QA accepted	
I26	0.125017	QA accepted	contains inaccessible area
I27	0.229568	QA accepted	
I28	0.22957	QA accepted	
I29	0.229568	QA accepted	
I30	0.229569	QA accepted	
I31	0.229568	QA accepted	
I32	0.229569	QA accepted	
I33	0.229568	QA accepted	
I34	0.229568	QA accepted	
I35	0.229569	QA accepted	
I36	0.229569	QA accepted	
I37	0.229568	QA accepted	
I38	0.298243	QA accepted	
I39	0.297745	QA accepted	

TABLE 3-1
INNER FENCE AREA GRIDS COMPLETED
FORT WINGATE DEPOT ACTIVITY
MCKINLEY COUNTY, NEW MEXICO

Grids Cleared	Acreage	QC Status	Notes
J22	0.22957	QA accepted	
J23	0.229578	QA accepted	
J24	0.170544	QA accepted	
J25	0.154809	QA accepted	
J26	0.207178	QA accepted	contains inaccessible area
J27	0.229569	QA accepted	
J28	0.22957	QA accepted	
J29	0.229569	QA accepted	
J30	0.22957	QA accepted	
J31	0.229569	QA accepted	
J32	0.22957	QA accepted	
J33	0.229569	QA accepted	
J34	0.229569	QA accepted	
J35	0.22957	QA accepted	
J36	0.22957	QA accepted	
J37	0.229569	QA accepted	
J38	0.298174	QA accepted	
J39	0.298172	QA accepted	
K22	0.22957	QA accepted	
K23	0.168516	QA accepted	contains inaccessible area
K24	0.16421	QA accepted	contains inaccessible area
K25	0.229568	QA accepted	
K26	0.22957	QA accepted	
K27	0.229568	QA accepted	
K28	0.22957	QA accepted	
K29	0.229568	QA accepted	
K30	0.229569	QA accepted	
K31	0.229568	QA accepted	
K32	0.229569	QA accepted	
K33	0.229568	QA accepted	
K34	0.229568	QA accepted	
K35	0.229569	QA accepted	
K36	0.229569	QA accepted	
K37	0.229568	QA accepted	
K38	0.298352	QA accepted	
K39	0.29835	QA accepted	
L22	0.22957	QA accepted	
L23	0.096364	QA accepted	contains inaccessible area
L24	0.22957	QA accepted	
L25	0.229569	QA accepted	
L26	0.22957	QA accepted	
L27	0.229569	QA accepted	

TABLE 3-1
INNER FENCE AREA GRIDS COMPLETED
FORT WINGATE DEPOT ACTIVITY
MCKINLEY COUNTY, NEW MEXICO

Grids Cleared	Acreage	QC Status	Notes
L28	0.22957	QA accepted	
L29	0.229569	QA accepted	
L30	0.22957	QA accepted	
L31	0.229569	QA accepted	
L32	0.22957	QA accepted	
L33	0.229569	QA accepted	
L34	0.229569	QA accepted	
L35	0.22957	QA accepted	
L36	0.22957	QA accepted	
L37	0.229569	QA accepted	
L38	0.298533	QA accepted	
L39	0.298531	QA accepted	
M22	0.22957	QA accepted	
M23	0.082865	QA accepted	contains inaccessible area
M24	0.22957	QA accepted	
M25	0.229568	QA accepted	
M26	0.22957	QA accepted	
M27	0.229568	QA accepted	
M28	0.22957	QA accepted	
M29	0.229568	QA accepted	
M30	0.229569	QA accepted	
M31	0.229568	QA accepted	
M32	0.229569	QA accepted	
M33	0.229568	QA accepted	
M34	0.229568	QA accepted	
M35	0.229569	QA accepted	
M36	0.229569	QA accepted	
M37	0.229568	QA accepted	
M38	0.29871	QA accepted	
M39	0.29871	QA accepted	
N22	0.22957	QA accepted	
N23	0.197972	QA accepted	contains inaccessible area
N24	0.22957	QA accepted	
N25	0.166509	QA accepted	contains inaccessible area
N26	0.16693	QA accepted	contains inaccessible area
N27	0.229569	QA accepted	
N28	0.22957	QA accepted	
N29	0.229569	QA accepted	
N30	0.22957	QA accepted	
N31	0.229569	QA accepted	
N32	0.22957	QA accepted	
N33	0.229569	QA accepted	

TABLE 3-1
INNER FENCE AREA GRIDS COMPLETED
FORT WINGATE DEPOT ACTIVITY
MCKINLEY COUNTY, NEW MEXICO

Grids Cleared	Acreage	QC Status	Notes
N34	0.229569	QA accepted	
N35	0.22957	QA accepted	
N36	0.22957	QA accepted	
N37	0.229569	QA accepted	
N38	0.299246	QA accepted	
N39	0.298559	QA accepted	
O22	0.22957	QA accepted	
O23	0.225261	QA accepted	
O24	0.139431	QA accepted	contains inaccessible area
O25	0.157089	QA accepted	contains inaccessible area
O26	0.229484	QA accepted	
O27	0.229569	QA accepted	
O28	0.22957	QA accepted	
O29	0.229569	QA accepted	
O30	0.22957	QA accepted	
O31	0.229569	QA accepted	
O32	0.22957	QA accepted	
O33	0.229569	QA accepted	
O34	0.229569	QA accepted	
O35	0.22957	QA accepted	
O36	0.22957	QA accepted	
O37	0.229569	QA accepted	
O38	0.30013	QA accepted	
O39	0.299566	QA accepted	
P22	0.22957	QA accepted	
P23	0.141667	QA accepted	contains inaccessible area
P24	0.1598	QA accepted	contains inaccessible area
P25	0.229569	QA accepted	
P26	0.22957	QA accepted	
P27	0.229569	QA accepted	
P28	0.22957	QA accepted	
P29	0.229569	QA accepted	
P30	0.22957	QA accepted	
P31	0.229569	QA accepted	
P32	0.22957	QA accepted	
P33	0.229569	QA accepted	
P34	0.229569	QA accepted	
P35	0.22957	QA accepted	
P36	0.22957	QA accepted	
P37	0.229569	QA accepted	
P38	0.3013	QA accepted	
P39	0.3013	QA accepted	

TABLE 3-1
INNER FENCE AREA GRIDS COMPLETED
FORT WINGATE DEPOT ACTIVITY
MCKINLEY COUNTY, NEW MEXICO

Grids Cleared	Acreage	QC Status	Notes
Q22	0.22957	QA accepted	
Q24	0.2287	QA accepted	
Q25	0.229568	QA accepted	
Q26	0.22957	QA accepted	
Q27	0.229568	QA accepted	
Q28	0.22957	QA accepted	
Q29	0.229568	QA accepted	
Q30	0.229569	QA accepted	
Q31	0.229568	QA accepted	
Q32	0.229569	QA accepted	
Q33	0.229568	QA accepted	
Q34	0.229568	QA accepted	
Q35	0.229569	QA accepted	
Q36	0.229569	QA accepted	
Q37	0.229568	QA accepted	
Q38	0.302748	QA accepted	
Q39	0.302748	QA accepted	
R22	0.183641	QA accepted	
R23	0.212933	QA accepted	contains inaccessible area
R24	0.22957	QA accepted	
R25	0.229569	QA accepted	
R26	0.22957	QA accepted	
R27	0.229569	QA accepted	
R28	0.22957	QA accepted	
R29	0.229569	QA accepted	
R30	0.22957	QA accepted	
R31	0.229569	QA accepted	
R32	0.22957	QA accepted	
R33	0.229569	QA accepted	
R34	0.229569	QA accepted	
R35	0.22957	QA accepted	
R36	0.22957	QA accepted	
R37	0.229569	QA accepted	
R38	0.304198	QA accepted	
R39	0.304198	QA accepted	
S22	0.22957	QA accepted	
S23	0.229568	QA accepted	
S24	0.22957	QA accepted	
S25	0.229568	QA accepted	
S26	0.22957	QA accepted	
S27	0.229568	QA accepted	
S28	0.22957	QA accepted	

TABLE 3-1
INNER FENCE AREA GRIDS COMPLETED
FORT WINGATE DEPOT ACTIVITY
MCKINLEY COUNTY, NEW MEXICO

Grids Cleared	Acreage	QC Status	Notes
S29	0.229568	QA accepted	
S30	0.229569	QA accepted	
S31	0.229568	QA accepted	
S32	0.229569	QA accepted	
S33	0.229568	QA accepted	
S34	0.229568	QA accepted	
S35	0.229569	QA accepted	
S36	0.229569	QA accepted	
S37	0.229568	QA accepted	
S38	0.305646	QA accepted	
S39	0.305646	QA accepted	
T22	0.227741	QA accepted	
T23	0.229569	QA accepted	
T24	0.22957	QA accepted	
T25	0.229569	QA accepted	
T26	0.22957	QA accepted	
T27	0.229569	QA accepted	
T28	0.22957	QA accepted	
T29	0.229569	QA accepted	
T30	0.22957	QA accepted	
T31	0.229569	QA accepted	
T32	0.22957	QA accepted	
T33	0.229569	QA accepted	
T34	0.229569	QA accepted	
T35	0.22957	QA accepted	
T36	0.22957	QA accepted	
T37	0.229569	QA accepted	
T38	0.306709	QA accepted	
T39	0.307168	QA accepted	
U22	0.155237	QA accepted	
U23	0.229568	QA accepted	
U24	0.22957	QA accepted	
U25	0.229568	QA accepted	
U26	0.22957	QA accepted	
U27	0.229568	QA accepted	
U28	0.22957	QA accepted	
U29	0.229568	QA accepted	
U30	0.229569	QA accepted	
U31	0.229568	QA accepted	
U32	0.229569	QA accepted	
U33	0.229568	QA accepted	
U34	0.229568	QA accepted	

TABLE 3-1
INNER FENCE AREA GRIDS COMPLETED
FORT WINGATE DEPOT ACTIVITY
MCKINLEY COUNTY, NEW MEXICO

Grids Cleared	Acreage	QC Status	Notes
U35	0.229569	QA accepted	
U36	0.229569	QA accepted	
U37	0.229568	QA accepted	
U38	0.307387	QA accepted	
U39	0.307607	QA accepted	
V22	0.22957	QA accepted	
V23	0.229569	QA accepted	
V24	0.22957	QA accepted	
V25	0.229569	QA accepted	
V26	0.22957	QA accepted	
V27	0.229569	QA accepted	
V28	0.22957	QA accepted	
V29	0.229569	QA accepted	
V30	0.22957	QA accepted	
V31	0.229569	QA accepted	
V32	0.22957	QA accepted	
V33	0.229569	QA accepted	
V34	0.229569	QA accepted	
V35	0.22957	QA accepted	
V36	0.22957	QA accepted	
V37	0.229569	QA accepted	
V38	0.307574	QA accepted	
V39	0.308134	QA accepted	
W22	0.22957	QA accepted	
W23	0.229569	QA accepted	
W24	0.22957	QA accepted	
W25	0.229569	QA accepted	
W26	0.22957	QA accepted	
W27	0.229569	QA accepted	
W28	0.22957	QA accepted	
W29	0.229569	QA accepted	
W30	0.22957	QA accepted	
W31	0.229569	QA accepted	
W32	0.22957	QA accepted	
W33	0.229569	QA accepted	
W34	0.229569	QA accepted	
W35	0.22957	QA accepted	
W36	0.22957	QA accepted	
W37	0.229569	QA accepted	
W38	0.307271	QA accepted	
W39	0.307569	QA accepted	
X22	0.22957	QA accepted	

TABLE 3-1
INNER FENCE AREA GRIDS COMPLETED
FORT WINGATE DEPOT ACTIVITY
MCKINLEY COUNTY, NEW MEXICO

Grids Cleared	Acreage	QC Status	Notes
X24	0.22957	QA accepted	
X25	0.229569	QA accepted	
X26	0.22957	QA accepted	
X27	0.229569	QA accepted	
X28	0.22957	QA accepted	
X29	0.229569	QA accepted	
X30	0.22957	QA accepted	
X31	0.229569	QA accepted	
X32	0.22957	QA accepted	
X33	0.229569	QA accepted	
X34	0.229569	QA accepted	
X35	0.22957	QA accepted	
X36	0.22957	QA accepted	
X37	0.229569	QA accepted	
X38	0.307121	QA accepted	
X39	0.306521	QA accepted	
Y22	0.22957	QA accepted	
Y24	0.22957	QA accepted	
Y25	0.229568	QA accepted	
Y26	0.22957	QA accepted	
Y27	0.229568	QA accepted	
Y28	0.22957	QA accepted	
Y29	0.229568	QA accepted	
Y30	0.229569	QA accepted	
Y31	0.229568	QA accepted	
Y32	0.229569	QA accepted	
Y33	0.229568	QA accepted	
Y34	0.229568	QA accepted	
Y35	0.229569	QA accepted	
Y36	0.229569	QA accepted	
Y37	0.229568	QA accepted	
Y38	0.307115	QA accepted	
Y39	0.304006	QA accepted	
Z24	0.22957	QA accepted	
Z25	0.229569	QA accepted	
Z26	0.22957	QA accepted	
Z27	0.229569	QA accepted	
Z28	0.22957	QA accepted	
Z29	0.229569	QA accepted	
Z30	0.22957	QA accepted	
Z31	0.229569	QA accepted	
Z32	0.22957	QA accepted	

TABLE 3-1
INNER FENCE AREA GRIDS COMPLETED
FORT WINGATE DEPOT ACTIVITY
MCKINLEY COUNTY, NEW MEXICO

Grids Cleared	Acreage	QC Status	Notes
Z33	0.229569	QA accepted	
Z34	0.229569	QA accepted	
Z35	0.22957	QA accepted	
Z36	0.22957	QA accepted	
Z37	0.229569	QA accepted	
Z38	0.307119	QA accepted	
Z39	0.300117	QA accepted	

TABLE 3-2
NUMBER OF ANOMALIES AND WEIGHT OF MD RECOVERED
FORT WINGAGTE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Grid	Number of Anomalies Investigated	Weight of MD Recovered (lbs)
AQ-36	220	104
AP-36	278	211
AO-36	385	110
AN-36	249	111
AM-36	317	114
AM-35	229	111
AN-35	216	122
AO-35	215	164
AP-35	251	129
AQ-35	235	106
AL-35	364	162
AL-36	269	145
AK-36	225	120
AK-35	225	199
AJ-35	473	170
AJ-36	370	150
AI-35	522	172
AI-36	349	144
AH-35	511	150
AH-36	363	156
AQ-38	52	25
AO-38	128	88
AP-38	60	26
AN-38	113	33
AM-38	93	31
AM-37	272	63
AN-37	138	55
AO-37	158	46
AP-37	147	48
AQ-37	22	51
AQ-39	36	20
AP-39	42	23
AO-39	79	25
AN-39	88	33
AM-39	113	40
AQ-40	164	74
AO-40	189	88
AM-40	210	138
AG-40	121	51
AE-40	156	81
AQ-9	79	52
AP-9	72	56
AQ-10	148	45
AP-8	1175	342

TABLE 3-2
NUMBER OF ANOMALIES AND WEIGHT OF MD RECOVERED
FORT WINGAGTE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Grid	Number of Anomalies Investigated	Weight of MD Recovered (lbs)
AK-40	213	120
AI-40	205	92
AE-39	104	38
AF-39	182	54
AL-39	78	25
AK-39	87	65
AJ-39	135	64
AG-39	162	37
AH-39	148	75
AQ-33	126	64
AQ-34	207	107
AI-39	118	71
AP-34	217	92
AP-33	258	87
AN-33	433	161
AO-33	354	132
AO-34	211	96
AN-34	321	109
AM-34	340	154
AG-33	609	305
AM-33	402	151
AL-33	433	136
AG-34	503	211
AF-34	738	272
AK-33	619	208
AJ-33	450	225
AF-33	651	276
AI-33	393	181
AH-33	657	288
AE-33	548	210
AH-34	475	178
AI-34	464	194
AJ-34	410	146
AK-34	436	150
AA-39	216	117
Z-39	205	88
AL-34	408	154
AC-34	624	147
Z-38	267	129
AD-34	266	93
AE-34	365	67
AA-38	125	48
Y-38	453	249
AD-33	1036	298

TABLE 3-2
NUMBER OF ANOMALIES AND WEIGHT OF MD RECOVERED
FORT WINGAGTE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Grid	Number of Anomalies Investigated	Weight of MD Recovered (lbs)
AC-33	1137	316
Y-39	234	128
AQ-31	238	120
AC-39	178	113
AD-39	123	53
AB-39	191	99
AP-31	534	160
AO-31	542	199
AB-38	138	78
AC-31	788	309
AN-31	672	232
AM-31	621	199
AD-31	846	331
AM-32	627	242
AN-32	497	154
AE-31	743	242
AF-31	776	342
AO-32	396	135
AP-32	295	115
AQ-32	283	85
AG-31	809	300
AG-32	707	342
AJ-32	763	260
AF-32	800	305
AK-32	554	212
AL-32	491	192
AE-32	542	215
AD-32	993	330
AL-31	559	227
AC-32	814	318
AK-31	786	233
AJ-31	808	295
AI-31	825	300
AB-32	576	184
AH-31	877	259
AA-32	794	265
AH-32	638	208
AF-31	564	74
AI-32	953	250
Z-32	768	265
Y-32	1181	395
AA-30	1366	419
X-32	928	339
AB-30	1318	319

TABLE 3-2
NUMBER OF ANOMALIES AND WEIGHT OF MD RECOVERED
FORT WINGAGTE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Grid	Number of Anomalies Investigated	Weight of MD Recovered (lbs)
X-33	858	406
AB-31	1052	246
AA-31	1079	342
Y-33	843	318
Z-33	593	194
Z-31	1011	319
AA-33	712	212
Y-31	1101	432
X-31	1363	450
AB-33	722	192
W-33	899	324
X-30	1559	608
V-33	709	247
U-33	758	281
Y-30	1434	505
Z-30	810	327
T-33	707	254
S-33	784	289
S-32	858	349
W-28	2177	733
T-32	798	303
V-28	3470	516
U-32	891	248
U-28	1799	516
V-32	961	315
W-32	961	65
T-28	1924	277
X-34	513	174
S-28	1265	436
Y-34	537	210
S-29	1647	537
Z-34	345	123
T-29	1597	314
AA-34	403	134
AB-34	254	92
U-29	1561	100
AA-35	311	115
AB-35	209	69
V-29	1365	499
Z-35	315	105
Y-35	538	238
W-29	1523	459
X-35	566	228
R-29	1601	542

TABLE 3-2
NUMBER OF ANOMALIES AND WEIGHT OF MD RECOVERED
FORT WINGAGTE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Grid	Number of Anomalies Investigated	Weight of MD Recovered (lbs)
X-36	468	204
Y-36	463	235
Z-36	264	87
Q-29	1217	465
AA-36	175	69
AB-36	180	45
P-29	1604	472
AB-37	215	87
AA-37	240	75
O-29	1470	482
Z-37	280	104
N-29	1229	428
Y-37	375	151
X-37	389	171
AK-38	95	31
AL-38	108	35
AJ-38	76	24
AL-37	124	42
AK-37	102	32
W-35	572	236
V-35	616	254
U-35	510	248
AJ-37	136	45
AI-37	240	123
AH-38	128	84
AI-38	154	94
2017 TOTALS	**111,859**	**38,672**
T-35	532	241
AH-37	152	92
S-35	445	210
AG-38	202	121
S-34	553	282
AF-38	154	113
T-34	580	258
AE-38	107	81
U-34	584	253
AD-38	165	141
AC-38	193	80
V-34	609	283
AC-37	164	26
W-34	504	211
AD-37	214	63
AE-37	206	62
W-36	423	142

TABLE 3-2
NUMBER OF ANOMALIES AND WEIGHT OF MD RECOVERED
FORT WINGAGTE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Grid	Number of Anomalies Investigated	Weight of MD Recovered (lbs)
AF-37	290	113
AG-37	308	107
V-36	503	192
AG-36	325	111
AF-36	366	179
AF-38	45	20
S-35	40	19
U-36	455	182
AE-36	300	117
T-36	543	220
S-36	467	207
AD-36	211	54
S-37	453	174
AC-36	142	58
AC-35	381	101
T-37	516	182
AD-35	264	72
AE-35	484	110
U-37	565	207
AF-35	515	168
V-37	566	208
AG-35	525	101
W-37	593	208
AA-29	2274	483
R-33	1412	1412
AB-29	2353	449
Q-33	1229	386
P-33	1236	369
AB-28	2409	457
O-33	1919	399
AA-28	3558	551
N-33	1037	320
N-32	1300	301
Z-28	2630	621
O-32	1089	376
J-39	357	160
K-39	376	150
X-39	377	191
L-39	488	199
W-39	409	231
M-39	554	186
V-39	522	247
N-39	506	186
N-38	584	253

TABLE 3-2
NUMBER OF ANOMALIES AND WEIGHT OF MD RECOVERED
FORT WINGAGTE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Grid	Number of Anomalies Investigated	Weight of MD Recovered (lbs)
U-39	397	198
M-38	499	178
T-39	662	213
Y-28	3010	419
H-34	883	225
L-38	621	194
K-38	755	245
T-38	608	253
J-38	466	164
U-38	624	160
I-38	519	222
V-38	526	193
G-34	677	228
H-38	526	266
W-38	398	183
X-28	2394	642
X-38	488	201
G-38	500	174
S-39	476	224
F-34	673	229
F-38	435	204
R-39	453	189
E-38	395	171
Q-39	434	184
X-29	2167	718
E-34	881	306
E-39	395	182
F-39	386	157
P-39	441	257
G-39	384	167
O-39	457	196
H-39	375	216
I-39	370	167
O-38	482	217
P-38	661	218
Y-29	2661	776
R-28	2835	639
Q-38	552	240
R-38	452	208
N-37	584	207
S-38	489	207
E-35	825	155
Z-29	2396	554
Q-28	2976	699

TABLE 3-2
NUMBER OF ANOMALIES AND WEIGHT OF MD RECOVERED
FORT WINGAGTE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Grid	Number of Anomalies Investigated	Weight of MD Recovered (lbs)
O-37	497	57
F-35	392	144
G-35	498	194
H-35	609	199
P-37	478	182
P-28	2696	633
H-36	683	229
M-36	572	262
L-36	538	182
O-28	3004	640
H-37	372	163
C-39	369	129
K-36	539	177
Q-37	507	164
C-38	506	179
J-36	574	183
I-36	556	210
N-28	2554	581
C-37	126	361
C-36	330	164
I-37	367	128
J-37	586	249
R-37	602	226
E-36	663	219
R-36	759	259
K-37	380	113
F-36	502	154
L-37	499	168
G-36	564	162
M-37	501	146
G-37	312	122
AQ-29	1027	326
F-37	454	123
AC-29	2692	551
E-37	474	184
W-30	2050	513
AD-29	3629	638
AP-29	1257	305
Q-36	676	239
AO-29	876	321
V-30	2098	445
P-36	698	204
AE-29	3458	481
AN-29	1129	330

TABLE 3-2
NUMBER OF ANOMALIES AND WEIGHT OF MD RECOVERED
FORT WINGAGTE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Grid	Number of Anomalies Investigated	Weight of MD Recovered (lbs)
U-30	1610	468
AM-29	876	244
O-36	609	185
T-30	1604	451
AF-29	3086	588
AM-30	949	315
AN-30	970	183
S-30	2329	518
N-36	651	163
G-33	838	203
AG-29	3325	555
AO-30	672	163
AP-30	638	116
S-31	2127	518
AG-30	3767	672
AQ-30	938	185
F-33	796	203
AQ-28	1130	213
E-33	1034	330
T-31	1481	268
AP-28	1360	231
AO-28	1154	311
AF-30	2605	479
U-31	2206	455
AN-28	1591	376
C-33	610	275
AE-30	2581	495
V-31	1989	485
C-34	457	201
AM-28	1213	297
W-31	2608	552
AM-27	2398	528
AD-30	3401	532
C-35	363	193
C-32	777	303
AN-27	2021	364
N-30	2285	426
AC-30	2728	385
E-32	919	299
AO-27	1831	302
O-30	2033	477
F-32	898	236
I-28	3108	484
AP-27	2036	411

TABLE 3-2
NUMBER OF ANOMALIES AND WEIGHT OF MD RECOVERED
FORT WINGAGTE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Grid	Number of Anomalies Investigated	Weight of MD Recovered (lbs)
P-30	2659	511
G-32	912	280
AQ-27	814	196
H-32	939	263
J-28	3851	574
AQ-26	1004	220
H-33	789	206
Q-30	3142	540
AP-26	2185	454
K-28	3608	580
R-30	2783	417
H-31	1217	292
AO-26	2185	447
L-28	3609	656
R-31	2442	438
AN-26	2440	435
G-31	1148	299
AM-26	2656	532
M-28	4232	696
Q-31	2875	600
AM-25	2843	679
P-31	1997	425
M-29	2930	504
O-31	2266	430
AN-25	2005	423
L-29	2569	417
N-31	1915	323
K-29	2905	490
AO-25	1959	500
P-32	2340	422
J-29	2626	450
Q-32	1627	366
AP-25	2781	650
I-29	2754	459
R-32	2091	334
F-31	1018	266
M-33	1348	228
R-35	1383	204
AQ-25	1528	273
Q-35	1786	349
L-33	1383	295
K-33	1348	285
X-26	7550	1350
P-35	1380	265

TABLE 3-2
NUMBER OF ANOMALIES AND WEIGHT OF MD RECOVERED
FORT WINGAGTE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Grid	Number of Anomalies Investigated	Weight of MD Recovered (lbs)
J-33	1424	268
O-35	1173	321
I-33	1174	283
N-35	1267	254
I-32	1543	235
N-34	1518	259
J-32	1877	435
O-34	1374	254
AL-30	1453	304
K-32	1685	148
P-34	1632	324
L-32	1682	209
Q-34	1297	283
AK-30	1096	353
M-32	1584	348
R-34	1533	330
M-31	2589	575
AJ-30	2341	408
M-34	1695	277
L-31	2081	361
L-34	1479	252
K-31	1771	469
AI-30	2191	396
K-34	1362	219
E-31	2642	446
J-34	1346	247
J-31	1921	325
I-34	1318	348
I-31	1508	232
I-35	1111	256
AH-30	2293	443
I-30	2313	399
J-35	1374	283
K-35	1376	370
AH-29	2842	585
J-30	2063	334
L-35	1477	320
K-30	2982	501
AI-29	2357	516
M-35	1028	214
L-30	2191	386
AJ-29	1965	405
M-30	2942	453
AG-28	7311	889

TABLE 3-2
NUMBER OF ANOMALIES AND WEIGHT OF MD RECOVERED
FORT WINGAGTE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Grid	Number of Anomalies Investigated	Weight of MD Recovered (lbs)
E-30	2866	670
AK-29	1734	422
F-30	2009	315
AF-28	5953	1093
AL-29	1618	394
G-30	1556	277
H-30	2350	478
AL-28	1724	380
AE-28	6659	940
G-29	2686	563
AK-28	2029	530
G-28	2656	539
AJ-28	2535	478
F-28	2703	868
AD-28	5587	836
AI-28	2338	562
F-29	1883	351
AC-28	5567	735
AH-28	2043	471
E-29	2206	623
AH-27	2847	643
AC-27	6265	1097
AI-27	2586	654
E-28	2470	485
C-26	2585	643
AJ-27	2198	578
C-27	2067	563
C-31	956	266
C-30	1789	545
AK-27	1500	495
AL-27	1749	425
C-29	1966	544
AH-26	3451	899
AD-27	5617	1120
H-29	1573	350
C-28	2134	496
AI-26	2933	527
AE-27	4842	860
2018 TOTALS	**485,939**	**110,273**
B-21	952	516
H-28	969	345
B-20	943	292
X-25	5599	1444
H-27	1405	451

TABLE 3-2
NUMBER OF ANOMALIES AND WEIGHT OF MD RECOVERED
FORT WINGAGTE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Grid	Number of Anomalies Investigated	Weight of MD Recovered (lbs)
H-26	1047	479
G-26	2055	722
Y-25	7821	1743
Q-26	2248	814
R-26	2062	771
K-27	2004	470
AF-27	4274	895
L-27	2276	557
R-27	2796	757
M-27	2132	481
AG-27	4604	800
M-26	2385	634
Q-27	1892	593
L-26	2542	556
P-27	2181	813
AG-26	6427	1197
K-26	2188	464
J-26	2775	550
P-26	3039	835
I-26	1211	387
O-26	2659	699
AF-26	7189	1232
I-27	2478	495
J-27	2474	499
N-26	2051	594
AE-26	6747	1021
N-27	2568	504
F-26	1410	496
E-26	3033	648
O-27	3090	635
E-27	3483	736
AD-26	7762	1317
Z-25	8416	1308
F-27	1885	465
AC-26	7775	1289
G-27	1730	431
B-25	1323	423
C-25	1577	411
AC-25	8827	1535
D-25	3347	1005
X-24	12288	1906
E-25	3816	721
AD-25	12924	1976
E-24	5205	1117

TABLE 3-2
NUMBER OF ANOMALIES AND WEIGHT OF MD RECOVERED
FORT WINGAGTE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Grid	Number of Anomalies Investigated	Weight of MD Recovered (lbs)
Y-24	12995	1863
AE-25	10078	1518
D-24	3182	667
C-24	1659	531
AF-25	11129	1608
B-24	1484	373
Z-24	15036	2073
J-25	3072	527
J-24	6017	1002
AG-25	8465	1267
S-25	7814	1333
M-25	4828	782
I-25	3824	821
L-25	4557	880
T-25	7839	1075
K-25	3904	708
H-25	5542	786
U-25	7918	1183
K-24	3229	631
L-24	5883	941
G-25	3045	593
V-25	10112	1609
M-24	5653	807
M-23	2521	318
W-25	11100	1505
L-23	3664	482
M-22	12251	1479
W-24	12443	1917
L-22	12595	1316
V-24	10345	1753
N-22	7013	1339
U-24	8018	1283
R-22	3720	942
J-23	3647	930
T-24	3316	1001
Q-22	3972	1224
S-24	2870	1114
P-22	3524	1053
O-22	4139	1062
AQ-12	5288	1642
N-23	1582	690
S-27	1356	666
K-23	1299	436
T-27	1419	595

TABLE 3-2
NUMBER OF ANOMALIES AND WEIGHT OF MD RECOVERED
FORT WINGAGTE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Grid	Number of Anomalies Investigated	Weight of MD Recovered (lbs)
O-23	1572	879
P-23	1314	454
U-27	1475	658
K-22	1818	581
R-23	2069	795
V-27	1613	646
W-27	1583	658
AJ-26	1884	498
W-26	1546	581
AK-26	1679	543
V-26	1569	718
AL-26	1516	380
U-26	1498	639
AL-25	2646	551
J-22	1989	606
B-23	468	277
T-26	1530	668
AK-25	2675	559
S-26	1435	556
AJ-25	2961	701
X-27	1707	667
AI-25	2685	629
Y-27	1491	618
AH-25	2799	673
Z-27	1728	802
C-23	659	264
D-23	914	397
AA-27	2044	932
AH-24	3525	970
E-23	1496	543
AB-27	2060	798
AI-24	3914	946
AB-26	2777	1153
AJ-24	2664	822
AA-26	2235	953
AK-24	2794	791
Z-26	1600	710
Y-26	2193	801
AL-24	2662	646
AA-25	3133	1129
AL-23	2875	645
AB-25	2982	850
AK-23	3567	921
E-22	2186	852

TABLE 3-2
NUMBER OF ANOMALIES AND WEIGHT OF MD RECOVERED
FORT WINGAGTE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Grid	Number of Anomalies Investigated	Weight of MD Recovered (lbs)
AB-24	3663	1484
D-22	2141	743
AJ-23	4030	985
AA-24	3231	1284
AP-22	2396	605
AI-23	3638	1060
AP-21	2835	883
AB-23	4088	1695
2019 TOTALS	562,783	124,553
AQ-11	3115	922
AP-12	5526	1571
AP-11	7715	1758
AP-10	6373	1662
AQ-10	2200	583
AQ-9	1426	438
AQ-8	4088	1328
AP-9	6395	1819
AM-15	11190	2165
AM-14	12185	2702
AN-14	9473	2028
R-25	1525	526
Q-25	1648	660
P-25	1941	727
AN-15	7136	1682
O-25	1048	377
N-25	1138	462
N-24	2037	708
AO-15	6109	1483
O-24	1520	556
P-24	1902	558
AO-14	6363	1644
Q-24	2526	1005
R-24	2158	801
AP-14	7013	1461
S-23	2989	1090
T-23	3933	1251
AP-15	6403	1622
U-23	4975	1445
V-23	3829	1240
AQ-14	4621	1215
W-23	3674	1297
W-22	6188	1734
AQ-15	3775	1163
V-22	4668	1407

TABLE 3-2
NUMBER OF ANOMALIES AND WEIGHT OF MD RECOVERED
FORT WINGAGTE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Grid	Number of Anomalies Investigated	Weight of MD Recovered (lbs)
AQ-16	3478	1054
U-22	3566	758
AQ-17	2982	872
T-22	5427	1276
AQ-18	2679	863
S-22	6003	1086
AQ-19	2420	727
X-22	9993	1974
AQ-20	1718	549
AP-20	2909	924
AP-19	3622	732
Y-22	11536	2259
AP-18	3702	1065
AP-17	3939	1231
AP-16	4347	1133
AQ-21	1646	587
AQ-22	1497	411
AQ-23	1175	393
AQ-24	765	271
C-22	1024	382
B-22	775	368
B-8	769	275
C-8	1357	554
B-19	848	375
D-8	2065	1111
E-8	1566	706
E-9	627	280
2020 TOTALS	**241,240**	**65,306**

TABLE 3-3
SUMMARY OF MEC TYPES ENCOUNTERED
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Item(s) Description	Munition Type	Quantity
105mm	Projectile	4
2.75" Warhead	Rocket	3
20lb Frag	Bomb	18
20mm	Projectile	261
3.5" Rocket Motor	Rocket	10
37mm	Projectile	1,070
40mm	Projectile	1,290
57mm	Projectile	30
60mm	Projectile	168
75mm	Projectile	62
75mm Smoke	Projectile	7
81mm	Projectile	2
90mm	Projectile	9
AN-M110	Fuze	80
AN-M111	Fuze	12
AN-M120	Fuze	2
BD Fuze	Fuze	1,638
Blu-3	Bomb	242
Blu-4	Bomb	234
Booster	Booster	894
Bulk HE	HE	4
Impact Fuze	Fuze	1
M110	Fuze	2
M111	Fuze	3
M120	Fuze	4
M130	Fuze	1
M131	Fuze	60
M2 Mine	Mine	16
M219	Fuze	8
M404	Fuze	5
M43	Fuze	1
M503	Fuze	22
M52	Fuze	6
M53	Fuze	2
M56	Fuze	2
M58	Fuze	1
M61	Projectile	1
M63	Projectile	7
M83 (Fuze)	Fuze	1
M83 Butterfly	Bomb	308
PD Fuze	Fuze	10,083

TABLE 3-3
SUMMARY OF MEC TYPES ENCOUNTERED
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Rocket Motor	Rocket	2
Rocket Warhead	Rocket	2
		16,578

TABLE 3-4
MEC RECOVERED
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
PD Fuze	Fuze	1	0	No	8/29/2017	Parcel 3/AP36	Destroyed	11/15/2017
75mm	Projectile	1	0	No	8/30/2017	Parcel 3/AO36	Destroyed	8/21/2018
Rocket Warhead	Rocket	2	0	No	8/30/2017	Parcel 3/AN36	Destroyed	3/14/2018
37mm	Projectile	2	0	No	8/31/2017	Parcel 3/AM35	Destroyed	2/14/2018
37mm	Projectile	1	0	No	8/31/2017	Parcel 3/AM36	Destroyed	2/14/2018
40mm	Projectile	1	0	No	8/31/2017	Parcel 3/AN36	Destroyed	2/14/2018
PD Fuze	Fuze	1	0	No	8/31/2017	Parcel 3/AM36	Destroyed	11/15/2017
PD Fuze	Fuze	1	0	No	8/31/2017	Parcel 3/AN36	Destroyed	11/15/2017
37mm	Projectile	1	2	No	9/4/2017	Parcel 3/AN35	Destroyed	2/14/2018
37mm	Projectile	1	3	No	9/4/2017	Parcel 3/AO35	Destroyed	2/14/2018
37mm	Projectile	1	5	Yes	9/4/2017	Parcel 3/AN35	Destroyed	12/8/2017
40mm	Projectile	1	2	No	9/4/2017	Parcel 3/AO35	Destroyed	2/14/2018
Booster	Booster	1	4	No	9/4/2017	Parcel 3/AN35	Destroyed	11/15/2017
Booster	Booster	2	3	No	9/4/2017	Parcel 3/AO35	Destroyed	11/15/2017
37mm	Projectile	1	10	No	9/5/2017	Parcel 3/AQ35	Destroyed	2/14/2018
37mm	Projectile	2	4	Yes	9/5/2017	Parcel 3/AP35	Destroyed	12/8/2017
40mm	Projectile	1	3	No	9/5/2017	Parcel 3/AP35	Destroyed	2/14/2018
37mm	Projectile	1	3	No	9/7/2017	Parcel 3/AL36	Destroyed	2/14/2018
37mm	Projectile	1	2	Yes	9/7/2017	Parcel 3/AL36	Destroyed	12/8/2017
40mm	Projectile	1	2	No	9/7/2017	Parcel 3/AL36	Destroyed	2/14/2018
37mm	Projectile	1	3	Yes	9/11/2017	Parcel 3/AK36	Destroyed	12/8/2017
60mm	Projectile	1	4	No	9/11/2017	Parcel 3/AK36	Destroyed	3/14/2018
PD Fuze	Fuze	1	4	No	9/11/2017	Parcel 3/AK36	Destroyed	11/15/2017
37mm	Projectile	1	2	Yes	9/12/2017	Parcel 3/AJ35	Destroyed	12/8/2017
37mm	Projectile	3	2	No	9/13/2017	Parcel 3/AJ36	Destroyed	2/14/2018
PD Fuze	Fuze	1	3	No	9/13/2017	Parcel 3/AJ36	Destroyed	11/15/2017
37mm	Projectile	1	3	No	9/14/2017	Parcel 3/AI36	Destroyed	2/14/2018
40mm	Projectile	1	2	No	9/14/2017	Parcel 3/AI36	Destroyed	2/14/2018
37mm	Projectile	2	4	No	9/15/2017	Parcel 3/AH35	Destroyed	2/14/2018
37mm	Projectile	1	2	Yes	9/15/2017	Parcel 3/AH35	Destroyed	12/8/2017
BD Fuze	Fuze	1	3	No	9/15/2017	Parcel 3/AH35	Destroyed	11/15/2017
M2 Mine	Mine	1	3	No	9/15/2017	Parcel 3/AH35	Destroyed	3/14/2018
37mm	Projectile	1	1	No	9/18/2017	Parcel 3/AH36	Destroyed	2/14/2018
37mm	Projectile	1	6	Yes	9/18/2017	Parcel 3/AQ38	Destroyed	12/8/2017
37mm	Projectile	2	3	No	9/20/2017	Parcel 3/AN37	Destroyed	2/14/2018
BD Fuze	Fuze	1	2	No	9/20/2017	Parcel 3/AO37	Destroyed	11/15/2017
Booster	Booster	1	3	No	9/20/2017	Parcel 3/AN37	Destroyed	11/15/2017
M2 Mine	Mine	1	8	No	9/20/2017	Parcel 3/AN37	Destroyed	3/14/2018
PD Fuze	Fuze	1	4	No	9/20/2017	Parcel 3/AO37	Destroyed	11/15/2017

TABLE 3-4
MEC RECOVERED
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
PD Fuze	Fuze	1	3	No	9/21/2017	Parcel 3/AP39	Destroyed	11/15/2017
37mm	Projectile	1	3	No	9/25/2017	Parcel 3/AO40	Destroyed	2/14/2018
37mm	Projectile	2	4	Yes	9/25/2017	Parcel 3/AO40	Destroyed	12/8/2017
20lb Frag	Bomb	1	12	No	9/26/2017	Parcel 3/AG40	Destroyed	8/28/2018
PD Fuze	Fuze	1	3	No	9/26/2017	Parcel 3/AE40	Destroyed	11/15/2017
PD Fuze	Fuze	2	4	No	9/26/2017	Parcel 3/AM40	Destroyed	11/15/2017
20lb Frag	Bomb	1	6	No	9/28/2017	Parcel 3/AP09	Destroyed	8/28/2018
20mm	Projectile	1	2	No	9/28/2017	Parcel 3/AQ10	Destroyed	11/15/2017
37mm	Projectile	1	2	No	9/28/2017	Parcel 3/AQ09	Destroyed	2/14/2018
40mm	Projectile	1	1	Yes	9/28/2017	Parcel 3/AQ10	Destroyed	10/27/2017
BD Fuze	Fuze	1	1	No	9/28/2017	Parcel 3/AQ10	Destroyed	11/15/2017
PD Fuze	Fuze	1	2	No	9/28/2017	Parcel 3/AP09	Destroyed	11/15/2017
PD Fuze	Fuze	1	1	No	9/28/2017	Parcel 3/AQ09	Destroyed	11/15/2017
40mm	Projectile	1	6	Yes	9/29/2017	Parcel 3/AP08	Destroyed	10/27/2017
BD Fuze	Fuze	1	0	No	9/29/2017	Parcel 3/AP08	Destroyed	11/15/2017
PD Fuze	Fuze	2	2	No	9/29/2017	Parcel 3/AP08	Destroyed	11/15/2017
75mm	Projectile	1	22	No	10/2/2017	Parcel 3/AI40	Destroyed	8/21/2018
BD Fuze	Fuze	1	2	No	10/2/2017	Parcel 3/AE39	Destroyed	11/15/2017
PD Fuze	Fuze	1	3	No	10/2/2017	Parcel 3/AE39	Destroyed	11/15/2017
BD Fuze	Fuze	1	4	No	10/3/2017	Parcel 3/AF39	Destroyed	11/15/2017
PD Fuze	Fuze	2	4	No	10/3/2017	Parcel 3/AF39	Destroyed	11/15/2017
PD Fuze	Fuze	1	2	No	10/3/2017	Parcel 3/AG39	Destroyed	11/15/2017
37mm	Projectile	1	4	Yes	10/4/2017	Parcel 3/AH39	Destroyed	12/8/2017
37mm	Projectile	1	4	Yes	10/4/2017	Parcel 3/AI39	Destroyed	12/8/2017
BD Fuze	Fuze	1	5	No	10/4/2017	Parcel 3/AQ33	BIP	10/6/2017
BD Fuze	Fuze	1	2	No	10/4/2017	Parcel 3/AH39	Destroyed	11/15/2017
BD Fuze	Fuze	1	2	No	10/4/2017	Parcel 3/AI39	Destroyed	11/15/2017
M83 Butterfly	Bomb	1	1.5	Yes	10/4/2017	Parcel 3/AH39	BIP	10/6/2017
37mm	Projectile	1	5	No	10/6/2017	Parcel 3/AQ34	Destroyed	2/14/2018
37mm	Projectile	1	0	Yes	10/6/2017	Parcel 3/AP34	Destroyed	12/8/2017
BD Fuze	Fuze	1	6	No	10/6/2017	Parcel 3/AQ34	Destroyed	11/15/2017
PD Fuze	Fuze	1	3	No	10/6/2017	Parcel 3/AP34	Destroyed	11/15/2017
PD Fuze	Fuze	1	4	No	10/6/2017	Parcel 3/AQ34	Destroyed	11/15/2017
37mm	Projectile	1	2	No	10/9/2017	Parcel 3/AO33	Destroyed	2/14/2018
37mm	Projectile	2	4	No	10/9/2017	Parcel 3/AP33	Destroyed	2/14/2018
37mm	Projectile	1	3	Yes	10/9/2017	Parcel 3/AN34	Destroyed	12/8/2017
40mm	Projectile	1	2	No	10/9/2017	Parcel 3/AO33	Destroyed	2/14/2018
BD Fuze	Fuze	2	2	No	10/9/2017	Parcel 3/AN34	Destroyed	11/15/2017
Booster	Booster	1	0	No	10/9/2017	Parcel 3/AO33	Destroyed	11/15/2017
PD Fuze	Fuze	1	4	No	10/9/2017	Parcel 3/AM34	Destroyed	11/15/2017
PD Fuze	Fuze	1	3	No	10/9/2017	Parcel 3/AN33	Destroyed	11/15/2017

TABLE 3-4
MEC RECOVERED
FORT WINGATE DEPOT ACTIVITY
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Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
PD Fuze	Fuze	1	2	No	10/9/2017	Parcel 3/AP33	Destroyed	11/15/2017
37mm	Projectile	1	4	No	10/10/2017	Parcel 3/AM33	Destroyed	2/14/2018
37mm	Projectile	1	2	Yes	10/10/2017	Parcel 3/AM33	Destroyed	12/8/2017
Booster	Booster	1	3	No	10/10/2017	Parcel 3/AM33	Destroyed	11/15/2017
PD Fuze	Fuze	2	4	No	10/10/2017	Parcel 3/AM33	Destroyed	11/15/2017
PD Fuze	Fuze	1	4	No	10/10/2017	Parcel 3/AM34	Destroyed	11/15/2017
PD Fuze	Fuze	1	1	No	10/10/2017	Parcel 3/AO34	Destroyed	11/15/2017
37mm	Projectile	1	2	No	10/11/2017	Parcel 3/AG34	Destroyed	2/14/2018
37mm	Projectile	1	6	No	10/11/2017	Parcel 3/AK33	Destroyed	2/14/2018
37mm	Projectile	1	2	No	10/11/2017	Parcel 3/AL33	Destroyed	2/14/2018
37mm	Projectile	1	5	Yes	10/11/2017	Parcel 3/AG33	Destroyed	12/8/2017
37mm	Projectile	1	5	Yes	10/11/2017	Parcel 3/AK33	Destroyed	12/8/2017
40mm	Projectile	2	4	No	10/11/2017	Parcel 3/AG33	Destroyed	2/14/2018
40mm	Projectile	2	6	No	10/11/2017	Parcel 3/AG34	Destroyed	2/14/2018
60mm	Projectile	1	2	No	10/11/2017	Parcel 3/AK33	Destroyed	3/14/2018
M2 Mine	Mine	1	3	No	10/11/2017	Parcel 3/AG33	Destroyed	3/14/2018
M83 Butterfly	Bomb	1	5	Yes	10/11/2017	Parcel 3/AK33	BIP	10/14/2017
PD Fuze	Fuze	3	4	No	10/11/2017	Parcel 3/AG33	Destroyed	11/15/2017
PD Fuze	Fuze	4	6	No	10/11/2017	Parcel 3/AG34	Destroyed	11/15/2017
PD Fuze	Fuze	2	1	No	10/11/2017	Parcel 3/AK33	Destroyed	11/15/2017
37mm	Projectile	1	4	No	10/12/2017	Parcel 3/AF34	Destroyed	2/14/2018
37mm	Projectile	2	2	No	10/12/2017	Parcel 3/AI33	Destroyed	2/14/2018
37mm	Projectile	2	3	Yes	10/12/2017	Parcel 3/AF34	Destroyed	12/8/2017
40mm	Projectile	2	8	No	10/12/2017	Parcel 3/AI33	Destroyed	2/14/2018
BD Fuze	Fuze	1	2	No	10/12/2017	Parcel 3/AF34	Destroyed	11/15/2017
M2 Mine	Mine	1	3	No	10/12/2017	Parcel 3/AF34	Destroyed	3/14/2018
M83 Butterfly	Bomb	1	1	Yes	10/12/2017	Parcel 3/AI33	BIP	10/14/2017
PD Fuze	Fuze	1	6	No	10/12/2017	Parcel 3/AI33	Destroyed	11/15/2017
37mm	Projectile	1	3	No	10/13/2017	Parcel 3/AE33	Destroyed	2/14/2018
37mm	Projectile	1	3	No	10/13/2017	Parcel 3/AF33	Destroyed	2/14/2018
37mm	Projectile	2	1	No	10/13/2017	Parcel 3/AH33	Destroyed	2/14/2018
37mm	Projectile	2	2	No	10/13/2017	Parcel 3/AH34	Destroyed	2/14/2018
37mm	Projectile	1	6	Yes	10/13/2017	Parcel 3/AH34	Destroyed	12/8/2017
40mm	Projectile	1	2	No	10/13/2017	Parcel 3/AH33	Destroyed	2/14/2018
40mm	Projectile	2	2	No	10/13/2017	Parcel 3/AH34	Destroyed	2/14/2018
60mm	Projectile	1	4	No	10/13/2017	Parcel 3/AH33	Destroyed	3/14/2018
M83 Butterfly	Bomb	1	2	No	10/13/2017	Parcel 3/AH33	Destroyed	3/14/2018
PD Fuze	Fuze	7	3	No	10/13/2017	Parcel 3/AF33	Destroyed	11/15/2017
PD Fuze	Fuze	1	6	No	10/13/2017	Parcel 3/AH33	Destroyed	11/15/2017
PD Fuze	Fuze	2	5	No	10/13/2017	Parcel 3/AH34	Destroyed	11/15/2017

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FORT WINGATE DEPOT ACTIVITY
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Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
37mm	Projectile	1	3	Yes	10/16/2017	Parcel 3/AJ34	Destroyed	12/8/2017
40mm	Projectile	1	2	No	10/16/2017	Parcel 3/AI34	Destroyed	2/14/2018
60mm	Projectile	1	4	No	10/16/2017	Parcel 3/AJ34	Destroyed	3/14/2018
75mm	Projectile	1	3	No	10/16/2017	Parcel 3/AI34	Destroyed	8/21/2018
BD Fuze	Fuze	1	2	No	10/16/2017	Parcel 3/AJ34	Destroyed	11/15/2017
PD Fuze	Fuze	2	2	No	10/16/2017	Parcel 3/AI34	Destroyed	11/15/2017
37mm	Projectile	1	2	No	10/17/2017	Parcel 3/AK34	Destroyed	2/14/2018
37mm	Projectile	1	2	No	10/17/2017	Parcel 3/AL34	Destroyed	2/14/2018
Booster	Booster	2	5	No	10/17/2017	Parcel 3/AA39	Destroyed	11/15/2017
Booster	Booster	1	4	No	10/17/2017	Parcel 3/AL34	Destroyed	11/15/2017
PD Fuze	Fuze	1	6	No	10/17/2017	Parcel 3/AK34	Destroyed	11/15/2017
PD Fuze	Fuze	3	4	No	10/17/2017	Parcel 3/AL34	Destroyed	11/15/2017
37mm	Projectile	1	2	No	10/18/2017	Parcel 3/AC34	Destroyed	2/14/2018
40mm	Projectile	1	15	No	10/18/2017	Parcel 3/AC34	Destroyed	2/14/2018
40mm	Projectile	2	3	No	10/18/2017	Parcel 3/AD34	Destroyed	2/14/2018
75mm	Projectile	1	3	No	10/18/2017	Parcel 3/Z39	Destroyed	8/21/2018
PD Fuze	Fuze	3	3	No	10/18/2017	Parcel 3/AC34	Destroyed	11/15/2017
PD Fuze	Fuze	1	4	No	10/18/2017	Parcel 3/AD34	Destroyed	11/15/2017
PD Fuze	Fuze	1	2	No	10/18/2017	Parcel 3/Z39	Destroyed	11/15/2017
20mm	Projectile	1	2	No	10/19/2017	Parcel 3/AE34	Destroyed	11/15/2017
37mm	Projectile	1	2	No	10/19/2017	Parcel 3/AD33	Destroyed	2/14/2018
37mm	Projectile	1	3	No	10/19/2017	Parcel 3/Z38	Destroyed	2/14/2018
40mm	Projectile	1	5	No	10/19/2017	Parcel 3/Z38	Destroyed	2/14/2018
BD Fuze	Fuze	2	4	No	10/19/2017	Parcel 3/AD33	Destroyed	11/15/2017
BD Fuze	Fuze	1	2	No	10/19/2017	Parcel 3/AE34	Destroyed	11/15/2017
PD Fuze	Fuze	2	4	No	10/19/2017	Parcel 3/AD33	Destroyed	11/15/2017
PD Fuze	Fuze	1	3	No	10/19/2017	Parcel 3/AE34	Destroyed	11/15/2017
37mm	Projectile	1	2	Yes	10/20/2017	Parcel 3/Y38	Destroyed	12/8/2017
40mm	Projectile	1	4	No	10/20/2017	Parcel 3/Y38	Destroyed	2/14/2018
60mm	Projectile	1	4	No	10/20/2017	Parcel 3/AC33	Destroyed	3/14/2018
75mm	Projectile	1	2	No	10/20/2017	Parcel 3/Y38	Destroyed	8/21/2018
Booster	Booster	1	3	No	10/20/2017	Parcel 3/Y38	Destroyed	11/15/2017
PD Fuze	Fuze	3	6	No	10/20/2017	Parcel 3/AC33	Destroyed	11/15/2017
PD Fuze	Fuze	1	1	No	10/20/2017	Parcel 3/Y38	Destroyed	11/15/2017
37mm	Projectile	1	5	No	10/23/2017	Parcel 3/AD39	Destroyed	2/14/2018
37mm	Projectile	1	4	No	10/23/2017	Parcel 3/AP31	Destroyed	2/14/2018
37mm	Projectile	1	3	Yes	10/23/2017	Parcel 3/AC39	Destroyed	12/8/2017
BD Fuze	Fuze	2	2	No	10/23/2017	Parcel 3/AP31	Destroyed	11/15/2017
PD Fuze	Fuze	1	4	No	10/23/2017	Parcel 3/AD39	Destroyed	11/15/2017
PD Fuze	Fuze	3	5	No	10/23/2017	Parcel 3/AP31	Destroyed	11/15/2017

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MEC RECOVERED
FORT WINGATE DEPOT ACTIVITY
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Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
37mm	Projectile	5	6	No	10/24/2017	Parcel 3/AN31	Destroyed	2/14/2018
40mm	Projectile	1	5	No	10/24/2017	Parcel 3/AB38	Destroyed	2/14/2018
40mm	Projectile	1	4	No	10/24/2017	Parcel 3/AB39	Destroyed	2/14/2018
40mm	Projectile	3	3	No	10/24/2017	Parcel 3/AN31	Destroyed	2/14/2018
Booster	Booster	1	3	No	10/24/2017	Parcel 3/AN31	Destroyed	11/15/2017
PD Fuze	Fuze	1	3	No	10/24/2017	Parcel 3/AB38	Destroyed	11/15/2017
PD Fuze	Fuze	1	2	No	10/24/2017	Parcel 3/AB39	Destroyed	11/15/2017
PD Fuze	Fuze	5	7	No	10/24/2017	Parcel 3/AN31	Destroyed	11/15/2017
Rocket Motor	Rocket	1	6	No	10/24/2017	Parcel 3/AB39	Destroyed	3/14/2018
37mm	Projectile	1	2	No	10/25/2017	Parcel 3/AC31	Destroyed	2/14/2018
37mm	Projectile	2	3	No	10/25/2017	Parcel 3/AM32	Destroyed	2/14/2018
40mm	Projectile	1	5	No	10/25/2017	Parcel 3/AC31	Destroyed	2/14/2018
40mm	Projectile	2	3	No	10/25/2017	Parcel 3/AM32	Destroyed	2/14/2018
Booster	Booster	1	3	No	10/25/2017	Parcel 3/AM32	Destroyed	11/15/2017
Bulk HE	Bulk HE	1	1	No	10/25/2017	Parcel 3/AM32	Destroyed	2/14/2018
PD Fuze	Fuze	3	6	No	10/25/2017	Parcel 3/AC31	Destroyed	11/15/2017
PD Fuze	Fuze	6	4	No	10/25/2017	Parcel 3/AM32	Destroyed	11/15/2017
37mm	Projectile	1	1	No	10/26/2017	Parcel 3/AE31	Destroyed	2/14/2018
37mm	Projectile	1	4	No	10/26/2017	Parcel 3/AO32	Destroyed	2/14/2018
BD Fuze	Fuze	1	2	No	10/26/2017	Parcel 3/AE31	Destroyed	11/15/2017
Booster	Booster	2	3	No	10/26/2017	Parcel 3/AE31	Destroyed	11/15/2017
M83 Butterfly	Bomb	1	0	Yes	10/26/2017	Parcel 3/AE31	BIP	10/27/2017
PD Fuze	Fuze	4	5	No	10/26/2017	Parcel 3/AE31	Destroyed	11/15/2017
PD Fuze	Fuze	1	4	No	10/26/2017	Parcel 3/AP32	Destroyed	11/15/2017
37mm	Projectile	2	6	No	10/27/2017	Parcel 3/AG31	Destroyed	2/14/2018
37mm	Projectile	3	5	Yes	10/27/2017	Parcel 3/AG31	Destroyed	12/8/2017
40mm	Projectile	2	4	No	10/27/2017	Parcel 3/AG31	Destroyed	2/14/2018
40mm	Projectile	1	1	No	10/27/2017	Parcel 3/AJ32	Destroyed	2/14/2018
75mm	Projectile	1	12	No	10/27/2017	Parcel 3/AQ32	Destroyed	8/21/2018
Booster	Booster	4	2	No	10/27/2017	Parcel 3/AG31	Destroyed	11/15/2017
M2 Mine	Mine	1	7	No	10/27/2017	Parcel 3/AG31	Destroyed	3/14/2018
M83 Butterfly	Bomb	1	3	No	10/27/2017	Parcel 3/AJ32	Destroyed	3/14/2018
PD Fuze	Fuze	6	6	No	10/27/2017	Parcel 3/AG31	Destroyed	11/15/2017
PD Fuze	Fuze	1	4	No	10/27/2017	Parcel 3/AJ32	Destroyed	11/15/2017
105mm	Projectile	1	10	Yes	10/30/2017	Parcel 3/AK32	Destroyed	12/8/2017
37mm	Projectile	2	4	No	10/30/2017	Parcel 3/AK32	Destroyed	2/14/2018

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Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
37mm	Projectile	1	6	Yes	10/30/2017	Parcel 3/AK32	Destroyed	12/8/2017
40mm	Projectile	1	3	No	10/30/2017	Parcel 3/AK32	Destroyed	2/14/2018
BD Fuze	Fuze	1	3	No	10/30/2017	Parcel 3/AG32	Destroyed	11/15/2017
Booster	Booster	1	3	No	10/30/2017	Parcel 3/AK32	Destroyed	11/15/2017
PD Fuze	Fuze	2	3	No	10/30/2017	Parcel 3/AK32	Destroyed	11/15/2017
37mm	Projectile	1	3	No	10/31/2017	Parcel 3/AL31	Destroyed	2/14/2018
40mm	Projectile	1	4	No	10/31/2017	Parcel 3/AL31	Destroyed	2/14/2018
BD Fuze	Fuze	2	5	No	10/31/2017	Parcel 3/AE32	Destroyed	11/15/2017
BD Fuze	Fuze	1	2	No	10/31/2017	Parcel 3/AF32	Destroyed	11/15/2017
Booster	Booster	1	2	No	10/31/2017	Parcel 3/AF32	Destroyed	11/15/2017
Booster	Booster	1	4	No	10/31/2017	Parcel 3/AL31	Destroyed	11/15/2017
M2 Mine	Mine	1	6	No	10/31/2017	Parcel 3/AF32	Destroyed	3/14/2018
M83 Butterfly	Bomb	1	2	Yes	10/31/2017	Parcel 3/AL31	BIP	11/2/2017
M83 Butterfly	Bomb	2	3	Yes	10/31/2017	Parcel 3/AL32	BIP	11/2/2017
PD Fuze	Fuze	2	4	No	10/31/2017	Parcel 3/AE32	Destroyed	11/15/2017
PD Fuze	Fuze	3	6	No	10/31/2017	Parcel 3/AF32	Destroyed	11/15/2017
PD Fuze	Fuze	1	3	No	10/31/2017	Parcel 3/AL31	Destroyed	11/15/2017
PD Fuze	Fuze	1	3	No	10/31/2017	Parcel 3/AL32	Destroyed	11/15/2017
37mm	Projectile	1	3	No	11/1/2017	Parcel 3/AJ31	Destroyed	2/14/2018
37mm	Projectile	1	2	No	11/1/2017	Parcel 3/AK31	Destroyed	2/14/2018
37mm	Projectile	2	4	Yes	11/1/2017	Parcel 3/AK31	Destroyed	12/8/2017
40mm	Projectile	1	2	No	11/1/2017	Parcel 3/AD32	Destroyed	2/14/2018
40mm	Projectile	1	1	No	11/1/2017	Parcel 3/AJ31	Destroyed	2/14/2018
75mm	Projectile	1	6	No	11/1/2017	Parcel 3/AD32	Destroyed	8/21/2018
M83 Butterfly	Bomb	1	3	Yes	11/1/2017	Parcel 3/AD32	BIP	11/2/2017
PD Fuze	Fuze	2	4	No	11/1/2017	Parcel 3/AJ31	Destroyed	11/15/2017
PD Fuze	Fuze	3	5	No	11/1/2017	Parcel 3/AK31	Destroyed	11/15/2017
37mm	Projectile	1	2	No	11/2/2017	Parcel 3/AI31	Destroyed	2/14/2018
40mm	Projectile	1	4	No	11/2/2017	Parcel 3/AH31	Destroyed	2/14/2018
Blu-3	Bomb	1	4	No	11/2/2017	Parcel 3/AH31	Destroyed	3/14/2018
Booster	Booster	1	5	No	11/2/2017	Parcel 3/AC32	Destroyed	11/15/2017
Booster	Booster	1	4	No	11/2/2017	Parcel 3/AI31	Destroyed	11/15/2017
PD Fuze	Fuze	3	5	No	11/2/2017	Parcel 3/AC32	Destroyed	11/15/2017
PD Fuze	Fuze	1	4	No	11/2/2017	Parcel 3/AH31	Destroyed	11/15/2017
PD Fuze	Fuze	3	6	No	11/2/2017	Parcel 3/AI31	Destroyed	11/15/2017
37mm	Projectile	1	5	No	11/3/2017	Parcel 3/AH32	Destroyed	2/14/2018
37mm	Projectile	1	4	Yes	11/3/2017	Parcel 3/AH32	Destroyed	12/8/2017
40mm	Projectile	1	4	No	11/3/2017	Parcel 3/AA32	Destroyed	2/14/2018
40mm	Projectile	1	3	No	11/3/2017	Parcel 3/AH32	Destroyed	2/14/2018
Booster	Booster	1	6	No	11/3/2017	Parcel 3/AA32	Destroyed	11/15/2017
M2 Mine	Mine	2	3	No	11/3/2017	Parcel 3/AA32	Destroyed	3/14/2018
M83 Butterfly	Bomb	1	0	Yes	11/3/2017	Parcel 3/AA32	BIP	11/18/2017

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Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
PD Fuze	Fuze	4	6	No	11/3/2017	Parcel 3/AA32	Destroyed	11/15/2017
PD Fuze	Fuze	4	5	No	11/3/2017	Parcel 3/AH32	Destroyed	11/15/2017
37mm	Projectile	1	4	No	11/6/2017	Parcel 3/AI32	Destroyed	2/14/2018
37mm	Projectile	1	3	No	11/6/2017	Parcel 3/Y32	Destroyed	2/14/2018
37mm	Projectile	1	3	No	11/6/2017	Parcel 3/Z32	Destroyed	2/14/2018
37mm	Projectile	1	2	Yes	11/6/2017	Parcel 3/Z32	Destroyed	12/8/2017
40mm	Projectile	2	5	No	11/6/2017	Parcel 3/Z32	Destroyed	2/14/2018
40mm	Projectile	1	3	Yes	11/6/2017	Parcel 3/Y32	Destroyed	12/8/2017
Blu-3	Bomb	1	3	No	11/6/2017	Parcel 3/Z32	Destroyed	3/14/2018
Booster	Booster	1	2	No	11/6/2017	Parcel 3/Z32	Destroyed	11/15/2017
M2 Mine	Mine	1	1	No	11/6/2017	Parcel 3/Y32	Destroyed	8/27/2019
M83 Butterfly	Bomb	2	2	Yes	11/6/2017	Parcel 3/AI32	BIP	11/18/2017
PD Fuze	Fuze	1	4	No	11/6/2017	Parcel 3/AI32	Destroyed	11/15/2017
40mm	Projectile	1	4	No	11/7/2017	Parcel 3/AA30	Destroyed	2/14/2018
40mm	Projectile	1	3	No	11/7/2017	Parcel 3/Y32	Destroyed	2/14/2018
57mm	Projectile	1	3	Yes	11/7/2017	Parcel 3/Y32	Destroyed	12/16/2019
Booster	Booster	1	2	No	11/7/2017	Parcel 3/Y32	Destroyed	11/15/2017
PD Fuze	Fuze	2	4	No	11/7/2017	Parcel 3/Y32	Destroyed	11/15/2017
20lb Frag	Bomb	1	2	No	11/8/2017	Parcel 3/X32	Destroyed	8/28/2018
40mm	Projectile	1	4	No	11/8/2017	Parcel 3/AB31	Destroyed	2/14/2018
40mm	Projectile	1	3	No	11/8/2017	Parcel 3/X32	Destroyed	2/14/2018
40mm	Projectile	1	4	No	11/8/2017	Parcel 3/X33	Destroyed	2/14/2018
40mm	Projectile	1	4	Yes	11/8/2017	Parcel 3/AB30	Destroyed	12/8/2017
Booster	Booster	1	2	No	11/8/2017	Parcel 3/AB31	Destroyed	11/15/2017
PD Fuze	Fuze	2	5	No	11/8/2017	Parcel 3/AB30	Destroyed	11/15/2017
PD Fuze	Fuze	1	4	No	11/8/2017	Parcel 3/AB31	Destroyed	11/15/2017
37mm	Projectile	1	4	No	11/9/2017	Parcel 3/AA31	Destroyed	2/14/2018
37mm	Projectile	1	3	No	11/9/2017	Parcel 3/Z31	Destroyed	2/14/2018
40mm	Projectile	1	3	No	11/9/2017	Parcel 3/Y33	Destroyed	2/14/2018
60mm	Projectile	1	3	Yes	11/9/2017	Parcel 3/Y33	Destroyed	12/8/2017
Booster	Booster	1	3	No	11/9/2017	Parcel 3/Z31	Destroyed	11/15/2017
M83 Butterfly	Bomb	1	4	Yes	11/9/2017	Parcel 3/Z31	BIP	11/18/2017
PD Fuze	Fuze	1	5	No	11/9/2017	Parcel 3/Y33	Destroyed	11/15/2017
105mm	Projectile	1	3	No	11/10/2017	Parcel 3/Y31	Destroyed	3/14/2018
37mm	Projectile	1	4	Yes	11/10/2017	Parcel 3/Y31	Destroyed	12/8/2017
40mm	Projectile	2	5	No	11/10/2017	Parcel 3/Y31	Destroyed	2/14/2018
40mm	Projectile	1	4	No	11/10/2017	Parcel 3/Z31	Destroyed	2/14/2018
40mm	Projectile	1	4	No	11/10/2017	Parcel 3/Z33	Destroyed	2/14/2018
BD Fuze	Fuze	1	3	No	11/10/2017	Parcel 3/AA33	Destroyed	11/15/2017
Booster	Booster	1	5	No	11/10/2017	Parcel 3/Z31	Destroyed	11/15/2017
M83 Butterfly	Bomb	1	7	Yes	11/10/2017	Parcel 3/Z33	BIP	11/18/2017
PD Fuze	Fuze	1	6	No	11/10/2017	Parcel 3/AA33	Destroyed	11/15/2017
PD Fuze	Fuze	4	4	No	11/10/2017	Parcel 3/Y31	Destroyed	11/15/2017
37mm	Projectile	1	2	No	11/13/2017	Parcel 3/AB33	Destroyed	2/14/2018
37mm	Projectile	1	5	No	11/13/2017	Parcel 3/X31	Destroyed	2/14/2018

TABLE 3-4
MEC RECOVERED
FORT WINGATE DEPOT ACTIVITY
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Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
40mm	Projectile	2	5	No	11/13/2017	Parcel 3/W33	Destroyed	2/14/2018
40mm	Projectile	1	3	No	11/13/2017	Parcel 3/X30	Destroyed	2/14/2018
75mm	Projectile	1	2	No	11/13/2017	Parcel 3/X30	Destroyed	8/21/2018
BD Fuze	Fuze	1	1	No	11/13/2017	Parcel 3/X30	Destroyed	11/15/2017
Booster	Booster	1	3	No	11/13/2017	Parcel 3/AB33	Destroyed	11/15/2017
Booster	Booster	1	1	No	11/13/2017	Parcel 3/X31	Destroyed	11/15/2017
M83 Butterfly	Bomb	2	3	Yes	11/13/2017	Parcel 3/X31	BIP	11/18/2017
PD Fuze	Fuze	1	2	No	11/13/2017	Parcel 3/X30	Destroyed	11/15/2017
PD Fuze	Fuze	4	4	No	11/13/2017	Parcel 3/X31	Destroyed	11/15/2017
Rocket Motor	Rocket	1	2	No	11/13/2017	Parcel 3/X31	Destroyed	3/14/2018
37mm	Projectile	1	1	No	11/14/2017	Parcel 3/X30	Destroyed	2/14/2018
40mm	Projectile	3	3	No	11/14/2017	Parcel 3/V33	Destroyed	2/14/2018
40mm	Projectile	1	5	No	11/14/2017	Parcel 3/X30	Destroyed	2/14/2018
40mm	Projectile	1	6	No	11/14/2017	Parcel 3/Y30	Destroyed	2/14/2018
75mm	Projectile	1	2	No	11/14/2017	Parcel 3/V33	Destroyed	3/14/2018
Blu-3	Bomb	1	2	No	11/14/2017	Parcel 3/Y30	Destroyed	3/14/2018
Impact Fuze	Fuze	1	1	No	11/14/2017	Parcel 3/X30	BIP	11/18/2017
PD Fuze	Fuze	2	4	No	11/14/2017	Parcel 3/V33	Destroyed	11/15/2017
PD Fuze	Fuze	1	1	No	11/14/2017	Parcel 3/X30	Destroyed	11/15/2017
PD Fuze	Fuze	4	2	No	11/14/2017	Parcel 3/Y30	Destroyed	11/15/2017
20mm	Projectile	1	1	No	11/15/2017	Parcel 3/Z30	Destroyed	2/14/2018
37mm	Projectile	1	7	No	11/15/2017	Parcel 3/U33	Destroyed	2/14/2018
40mm	Projectile	1	1	No	11/15/2017	Parcel 3/U33	Destroyed	2/14/2018
40mm	Projectile	2	2	No	11/15/2017	Parcel 3/Z30	Destroyed	2/14/2018
BD Fuze	Fuze	2	3	No	11/15/2017	Parcel 3/U33	Destroyed	9/27/2018
Booster	Booster	1	1	No	11/15/2017	Parcel 3/Z30	Destroyed	8/28/2018
M83 Butterfly	Bomb	2	2	Yes	11/15/2017	Parcel 3/U33	BIP	11/18/2017
PD Fuze	Fuze	2	4	No	11/15/2017	Parcel 3/U33	Destroyed	9/20/2018
37mm	Projectile	2	2	No	11/16/2017	Parcel 3/W28	Destroyed	2/14/2018
37mm	Projectile	1	4	Yes	11/16/2017	Parcel 3/S33	Destroyed	12/8/2017
57mm	Projectile	1	3	Yes	11/16/2017	Parcel 3/W28	Destroyed	12/16/2019
60mm	Projectile	1	3	No	11/16/2017	Parcel 3/W28	Destroyed	3/14/2018
75mm	Projectile	1	6	No	11/16/2017	Parcel 3/S33	Destroyed	3/14/2018
BD Fuze	Fuze	1	5	No	11/16/2017	Parcel 3/W28	Destroyed	9/27/2018
Booster	Booster	2	4	No	11/16/2017	Parcel 3/W28	Destroyed	8/28/2018
M83 Butterfly	Bomb	1	2	No	11/16/2017	Parcel 3/S33	Destroyed	3/14/2018
M83 Butterfly	Bomb	1	1	Yes	11/16/2017	Parcel 3/T33	BIP	11/18/2017
PD Fuze	Fuze	2	2	No	11/16/2017	Parcel 3/S33	Destroyed	9/20/2018
PD Fuze	Fuze	1	4	No	11/16/2017	Parcel 3/T33	Destroyed	9/20/2018
PD Fuze	Fuze	3	3	No	11/16/2017	Parcel 3/W28	Destroyed	9/20/2018
37mm	Projectile	1	3	No	11/17/2017	Parcel 3/W28	Destroyed	2/14/2018
BD Fuze	Fuze	1	1	No	11/17/2017	Parcel 3/S32	Destroyed	9/27/2018
Blu-3	Bomb	1	1	Yes	11/17/2017	Parcel 3/V28	BIP	11/18/2017
Booster	Booster	1	3	No	11/17/2017	Parcel 3/S32	Destroyed	8/28/2018
M83 Butterfly	Bomb	1	2	Yes	11/17/2017	Parcel 3/S32	BIP	11/18/2017

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Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
PD Fuze	Fuze	1	2	No	11/17/2017	Parcel 3/S32	Destroyed	9/20/2018
PD Fuze	Fuze	1	4	No	11/17/2017	Parcel 3/V28	Destroyed	9/20/2018
PD Fuze	Fuze	1	3	No	11/17/2017	Parcel 3/W28	Destroyed	9/20/2018
37mm	Projectile	1	3	No	11/20/2017	Parcel 3/T32	Destroyed	2/14/2018
37mm	Projectile	4	4	No	11/20/2017	Parcel 3/V28	Destroyed	2/14/2018
40mm	Projectile	1	2	No	11/20/2017	Parcel 3/V28	Destroyed	2/14/2018
57mm	Projectile	1	2	No	11/20/2017	Parcel 3/V28	Destroyed	3/14/2018
60mm	Projectile	1	2	No	11/20/2017	Parcel 3/T32	Destroyed	3/14/2018
Booster	Booster	1	1	No	11/20/2017	Parcel 3/T32	Destroyed	8/28/2018
M83 Butterfly	Bomb	2	3	Yes	11/20/2017	Parcel 3/V28	BIP	12/2/2017
PD Fuze	Fuze	1	3	No	11/20/2017	Parcel 3/T32	Destroyed	9/20/2018
PD Fuze	Fuze	1	3	No	11/20/2017	Parcel 3/V28	Destroyed	9/20/2018
37mm	Projectile	1	3	No	11/21/2017	Parcel 3/U32	Destroyed	2/14/2018
40mm	Projectile	1	3	No	11/21/2017	Parcel 3/U28	Destroyed	2/14/2018
M83 Butterfly	Bomb	1	2	No	11/21/2017	Parcel 3/U32	Destroyed	3/14/2018
PD Fuze	Fuze	4	5	No	11/21/2017	Parcel 3/U28	Destroyed	9/20/2018
37mm	Projectile	1	4	No	11/28/2017	Parcel 3/U28	Destroyed	2/14/2018
60mm	Projectile	1	4	No	11/28/2017	Parcel 3/U28	Destroyed	3/14/2018
Blu-4	Bomb	1	3	Yes	11/28/2017	Parcel 3/U28	BIP	12/2/2017
M2 Mine	Mine	1	2	No	11/28/2017	Parcel 3/V32	Destroyed	8/27/2019
M83 Butterfly	Bomb	1	3	No	11/28/2017	Parcel 3/V32	Destroyed	3/14/2018
PD Fuze	Fuze	1	5	No	11/28/2017	Parcel 3/U28	Destroyed	9/20/2018
37mm	Projectile	1	1	No	11/29/2017	Parcel 3/W32	Destroyed	2/14/2018
40mm	Projectile	1	3	No	11/29/2017	Parcel 3/T28	Destroyed	2/14/2018
40mm	Projectile	1	4	No	11/29/2017	Parcel 3/W32	Destroyed	2/14/2018
Booster	Booster	1	4	No	11/29/2017	Parcel 3/T28	Destroyed	8/28/2018
M83 Butterfly	Bomb	1	1	Yes	11/29/2017	Parcel 3/W32	BIP	12/2/2017
PD Fuze	Fuze	2	5	No	11/29/2017	Parcel 3/S28	Destroyed	9/20/2018
PD Fuze	Fuze	1	5	No	11/29/2017	Parcel 3/T28	Destroyed	9/20/2018
PD Fuze	Fuze	1	2	No	11/29/2017	Parcel 3/X34	Destroyed	9/20/2018
37mm	Projectile	1	2	No	11/30/2017	Parcel 3/S29	Destroyed	2/14/2018
37mm	Projectile	1	2	No	11/30/2017	Parcel 3/X34	Destroyed	2/14/2018
40mm	Projectile	2	4	No	11/30/2017	Parcel 3/S28	Destroyed	2/14/2018
BD Fuze	Fuze	1	2	No	11/30/2017	Parcel 3/S28	Destroyed	9/27/2018
Blu-3	Bomb	1	2	No	11/30/2017	Parcel 3/S28	Destroyed	3/14/2018
M2 Mine	Mine	1	4	No	11/30/2017	Parcel 3/Y34	Destroyed	8/27/2019
PD Fuze	Fuze	2	3	No	11/30/2017	Parcel 3/Y34	Destroyed	9/20/2018
37mm	Projectile	1	4	No	12/1/2017	Parcel 3/S29	Destroyed	2/14/2018
37mm	Projectile	1	5	Yes	12/1/2017	Parcel 3/Y34	Destroyed	12/8/2017
40mm	Projectile	1	3	No	12/1/2017	Parcel 3/S29	Destroyed	2/14/2018
60mm	Projectile	1	3	No	12/1/2017	Parcel 3/T29	Destroyed	3/14/2018
75mm	Projectile	1	2	No	12/1/2017	Parcel 3/Y34	Destroyed	8/21/2018
M83 Butterfly	Bomb	1	2	Yes	12/1/2017	Parcel 3/S29	BIP	12/2/2017
37mm	Projectile	1	1	No	12/4/2017	Parcel 3/T29	Destroyed	2/14/2018
40mm	Projectile	2	5	No	12/4/2017	Parcel 3/AA34	Destroyed	2/14/2018

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Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
60mm	Projectile	1	5	Yes	12/4/2017	Parcel 3/T29	Destroyed	12/8/2017
M83 Butterfly	Bomb	1	7	Yes	12/4/2017	Parcel 3/AA34	BIP	12/9/2017
PD Fuze	Fuze	1	3	No	12/4/2017	Parcel 3/AB34	Destroyed	9/20/2018
PD Fuze	Fuze	2	4	No	12/4/2017	Parcel 3/T29	Destroyed	9/20/2018
37mm	Projectile	1	2	No	12/5/2017	Parcel 3/AA35	Destroyed	2/14/2018
37mm	Projectile	1	4	No	12/5/2017	Parcel 3/U29	Destroyed	2/14/2018
37mm	Projectile	1	4	No	12/5/2017	Parcel 3/V29	Destroyed	2/14/2018
37mm	Projectile	1	1	Yes	12/5/2017	Parcel 3/AA35	Destroyed	12/8/2017
40mm	Projectile	1	3	No	12/5/2017	Parcel 3/V29	Destroyed	2/14/2018
BD Fuze	Fuze	1	4	No	12/5/2017	Parcel 3/U29	Destroyed	9/27/2018
Booster	Booster	1	2	No	12/5/2017	Parcel 3/U29	Destroyed	8/28/2018
M83 Butterfly	Bomb	1	2	No	12/5/2017	Parcel 3/AA35	Destroyed	3/14/2018
M83 Butterfly	Bomb	1	3	Yes	12/5/2017	Parcel 3/U29	BIP	12/9/2017
PD Fuze	Fuze	1	4	No	12/5/2017	Parcel 3/AA35	Destroyed	9/20/2018
PD Fuze	Fuze	3	3	No	12/5/2017	Parcel 3/U29	Destroyed	9/20/2018
37mm	Projectile	2	5	No	12/6/2017	Parcel 3/V29	Destroyed	2/14/2018
37mm	Projectile	1	2	Yes	12/6/2017	Parcel 3/Z35	Destroyed	12/8/2017
40mm	Projectile	1	6	No	12/6/2017	Parcel 3/V29	Destroyed	2/14/2018
40mm	Projectile	2	3	No	12/6/2017	Parcel 3/Y35	Destroyed	2/14/2018
40mm	Projectile	1	3	Yes	12/6/2017	Parcel 3/V29	Destroyed	12/8/2017
75mm	Projectile	1	5	No	12/6/2017	Parcel 3/V29	Destroyed	3/14/2018
M2 Mine	Mine	1	3	No	12/6/2017	Parcel 3/Z35	Destroyed	8/27/2019
PD Fuze	Fuze	1	2	No	12/6/2017	Parcel 3/V29	Destroyed	9/20/2018
PD Fuze	Fuze	1	3	No	12/6/2017	Parcel 3/W29	Destroyed	9/20/2018
PD Fuze	Fuze	1	4	No	12/6/2017	Parcel 3/Y35	Destroyed	9/20/2018
37mm	Projectile	2	5	No	12/7/2017	Parcel 3/W29	Destroyed	2/14/2018
40mm	Projectile	1	4	No	12/7/2017	Parcel 3/W29	Destroyed	2/14/2018
BD Fuze	Fuze	1	5	No	12/7/2017	Parcel 3/R29	Destroyed	9/27/2018
M83 Butterfly	Fuze	1	2	Yes	12/7/2017	Parcel 3/Y35	BIP	12/9/2017
PD Fuze	Fuze	2	6	No	12/7/2017	Parcel 3/W29	Destroyed	9/20/2018
PD Fuze	Fuze	1	5	No	12/7/2017	Parcel 3/X35	Destroyed	9/20/2018
PD Fuze	Fuze	1	4	No	12/7/2017	Parcel 3/Y35	Destroyed	9/20/2018
20lb Frag	Bomb	1	4	No	12/8/2017	Parcel 3/R29	Destroyed	8/28/2018
20mm	Projectile	1	4	No	12/8/2017	Parcel 3/R29	Destroyed	2/14/2018
37mm	Projectile	1	3	No	12/8/2017	Parcel 3/R29	Destroyed	2/14/2018
37mm	Projectile	1	1	Yes	12/8/2017	Parcel 3/X36	Destroyed	11/18/2019
40mm	Projectile	1	1	No	12/8/2017	Parcel 3/Y36	Destroyed	2/14/2018
Booster	Booster	1	1	No	12/8/2017	Parcel 3/R29	Destroyed	8/28/2018
PD Fuze	Fuze	2	5	No	12/8/2017	Parcel 3/R29	Destroyed	9/20/2018
PD Fuze	Fuze	1	2	No	12/8/2017	Parcel 3/X36	Destroyed	9/20/2018
37mm	Projectile	1	3	No	12/11/2017	Parcel 3/Y36	Destroyed	2/14/2018
37mm	Projectile	1	2	Yes	12/11/2017	Parcel 3/Y36	Destroyed	12/10/2019
40mm	Projectile	2	4	No	12/11/2017	Parcel 3/Q29	Destroyed	2/14/2018
75mm	Projectile	1	5	No	12/11/2017	Parcel 3/Q29	Destroyed	3/14/2018
M83 Butterfly	Bomb	1	1	Yes	12/11/2017	Parcel 3/Q29	BIP	12/16/2017

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Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
PD Fuze	Fuze	1	8	No	12/11/2017	Parcel 3/Z36	Destroyed	9/20/2018
37mm	Projectile	1	7	No	12/12/2017	Parcel 3/P29	Destroyed	2/14/2018
37mm	Projectile	1	4	No	12/12/2017	Parcel 3/Q29	Destroyed	2/14/2018
37mm	Projectile	1	4	Yes	12/12/2017	Parcel 3/AA36	Destroyed	12/10/2019
40mm	Projectile	1	5	No	12/12/2017	Parcel 3/P29	Destroyed	2/14/2018
M83 Butterfly	Bomb	1	6	Yes	12/12/2017	Parcel 3/P29	BIP	12/16/2017
PD Fuze	Fuze	2	5	No	12/12/2017	Parcel 3/P29	Destroyed	9/20/2018
37mm	Projectile	1	4	No	12/13/2017	Parcel 3/O29	Destroyed	2/14/2018
40mm	Projectile	2	5	No	12/13/2017	Parcel 3/O29	Destroyed	2/14/2018
60mm	Projectile	1	5	No	12/13/2017	Parcel 3/O29	Destroyed	3/14/2018
M83 Butterfly	Bomb	1	2	No	12/13/2017	Parcel 3/O29	Destroyed	3/14/2018
PD Fuze	Fuze	1	5	No	12/13/2017	Parcel 3/O29	Destroyed	9/20/2018
37mm	Projectile	1	4	Yes	12/14/2017	Parcel 3/N29	Destroyed	12/10/2019
40mm	Projectile	1	5	No	12/14/2017	Parcel 3/N29	Destroyed	2/14/2018
40mm	Projectile	1	5	No	12/14/2017	Parcel 3/O29	Destroyed	2/14/2018
37mm	Projectile	1	1	Yes	12/15/2017	Parcel 3/AL38	Destroyed	12/10/2019
37mm	Projectile	1	4	Yes	12/15/2017	Parcel 3/X37	Destroyed	12/10/2019
M83 Butterfly	Bomb	2	2	Yes	12/15/2017	Parcel 3/X37	BIP	12/16/2017
PD Fuze	Fuze	1	2	No	12/15/2017	Parcel 3/Y37	Destroyed	9/20/2018
20mm	Projectile	1	2	No	12/18/2017	Parcel 3/V35	Destroyed	2/14/2018
37mm	Projectile	1	3	No	12/18/2017	Parcel 3/AK37	Destroyed	2/14/2018
37mm	Projectile	1	5	No	12/18/2017	Parcel 3/V35	Destroyed	2/14/2018
40mm	Projectile	1	3	No	12/18/2017	Parcel 3/AL37	Destroyed	2/14/2018
Blu-3	Bomb	1	2	Yes	12/18/2017	Parcel 3/W35	BIP	12/20/2017
PD Fuze	Fuze	1	1	No	12/18/2017	Parcel 3/V35	Destroyed	9/20/2018
PD Fuze	Fuze	1	1	No	12/18/2017	Parcel 3/W35	Destroyed	9/20/2018
37mm	Projectile	2	4	No	12/19/2017	Parcel 3/AI37	Destroyed	2/14/2018
37mm	Projectile	1	6	No	12/19/2017	Parcel 3/AJ37	Destroyed	2/14/2018
37mm	Projectile	1	3	No	12/19/2017	Parcel 3/U35	Destroyed	2/14/2018
37mm	Projectile	1	2	No	12/19/2017	Parcel 3/V35	Destroyed	2/14/2018
37mm	Projectile	1	2	Yes	12/19/2017	Parcel 3/U35	Destroyed	12/10/2019
75mm	Projectile	1	6	No	12/19/2017	Parcel 3/AJ37	Destroyed	8/21/2018
37mm	Projectile	1	1	No	12/20/2017	Parcel 3/AH38	Destroyed	2/14/2018
60mm	Projectile	1	2	No	12/20/2017	Parcel 3/AH38	Destroyed	3/14/2018
Booster	Booster	1	3	No	12/20/2017	Parcel 3/AH38	Destroyed	8/28/2018
40mm	Projectile	1	4	No	1/9/2018	Parcel 3/T35	Destroyed	2/14/2018
57mm	Projectile	1	3	Yes	1/9/2018	Parcel 3/AI38	Destroyed	12/16/2019
37mm	Projectile	1	2	No	1/11/2018	Parcel 3/AF38	Destroyed	2/14/2018
37mm	Projectile	1	5	Yes	1/11/2018	Parcel 3/S35	Destroyed	12/10/2019
60mm	Projectile	2	5	No	1/11/2018	Parcel 3/S34	Destroyed	3/14/2018
75mm	Projectile	1	6	No	1/11/2018	Parcel 3/S34	Destroyed	3/14/2018
PD Fuze	Fuze	1	6	No	1/11/2018	Parcel 3/S35	Destroyed	9/20/2018
37mm	Projectile	1	2	No	1/15/2018	Parcel 3/AD38	Destroyed	2/14/2018
37mm	Projectile	1	1	No	1/15/2018	Parcel 3/T34	Destroyed	2/14/2018
37mm	Projectile	1	1	Yes	1/15/2018	Parcel 3/AD38	Destroyed	12/10/2019

TABLE 3-4
MEC RECOVERED
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Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
57mm	Projectile	1	2	Yes	1/15/2018	Parcel 3/AC38	Destroyed	12/16/2019
75mm	Projectile	1	1	No	1/15/2018	Parcel 3/AC38	Destroyed	8/21/2018
M83 Butterfly	Bomb	1	3	No	1/15/2018	Parcel 3/T34	Destroyed	3/14/2018
M83 Butterfly	Bomb	1	2	Yes	1/15/2018	Parcel 3/AD38	BIP	2/3/2018
M83 Butterfly	Bomb	1	2	Yes	1/15/2018	Parcel3/U34	BIP	2/3/2018
37mm	Projectile	1	7	No	1/16/2018	Parcel 3/V34	Destroyed	2/14/2018
37mm	Projectile	1	6	Yes	1/16/2018	Parcel 3/AC37	Destroyed	12/10/2019
37mm	Projectile	2	3	Yes	1/16/2018	Parcel 3/AC38	Destroyed	12/10/2019
37mm	Projectile	1	5	Yes	1/16/2018	Parcel 3/U34	Destroyed	12/10/2019
40mm	Projectile	1	1	No	1/16/2018	Parcel 3/V34	Destroyed	2/14/2018
60mm	Projectile	1	5	No	1/16/2018	Parcel 3/AC37	Destroyed	3/14/2018
75mm	Projectile	1	2	Yes	1/16/2018	Parcel 3/V34	Destroyed	4/4/2019
M2 Mine	Mine	1	4	No	1/16/2018	Parcel 3/U34	Destroyed	8/27/2019
PD Fuze	Fuze	1	4	No	1/16/2018	Parcel 3/AC38	Destroyed	9/20/2018
37mm	Projectile	1	4	No	1/17/2018	Parcel 3/AD37	Destroyed	2/14/2018
37mm	Projectile	1	4	No	1/17/2018	Parcel 3/W34	Destroyed	2/14/2018
PD Fuze	Fuze	1	4	No	1/17/2018	Parcel 3/AE37	Destroyed	9/20/2018
PD Fuze	Fuze	1	6	No	1/17/2018	Parcel 3/W34	Destroyed	9/20/2018
37mm	Projectile	3	4	No	1/18/2018	Parcel 3/AF37	Destroyed	2/14/2018
37mm	Projectile	1	1	Yes	1/18/2018	Parcel 3/W34	Destroyed	12/10/2019
40mm	Projectile	1	1	No	1/18/2018	Parcel 3/W34	Destroyed	2/14/2018
M2 Mine	Mine	1	2	No	1/18/2018	Parcel 3/W34	Destroyed	8/27/2019
40mm	Projectile	1	8	No	1/19/2018	Parcel 3/AG36	Destroyed	2/14/2018
Booster	Booster	2	5	No	1/19/2018	Parcel 3/AG37	Destroyed	8/28/2018
60mm	Projectile	2	3	No	1/22/2018	Parcel 3/AG36	Destroyed	3/14/2018
37mm	Projectile	1	1	No	1/23/2018	Parcel 3/AF36	Destroyed	2/14/2018
BD Fuze	Fuze	1	3	No	1/23/2018	Parcel 3/U36	Destroyed	9/27/2018
Blu-3	Bomb	1	1	Yes	1/23/2018	Parcel 3/U36	BIP	2/3/2018
PD Fuze	Fuze	1	4	No	1/23/2018	Parcel 3/U36	Destroyed	9/20/2018
37mm	Projectile	1	6	Yes	1/24/2018	Parcel 3/AE36	Destroyed	12/10/2019
M83 Butterfly	Bomb	1	10	Yes	1/24/2018	Parcel 3/T36	BIP	2/3/2018
PD Fuze	Fuze	2	4	No	1/24/2018	Parcel 3/T36	Destroyed	9/20/2018
M2 Mine	Mine	1	3	No	1/25/2018	Parcel 3/S37	Destroyed	8/27/2019
M83 Butterfly	Bomb	1	3	No	1/26/2018	Parcel 3/S37	Destroyed	3/14/2018
37mm	Projectile	1	1	No	1/29/2018	Parcel 3/AE35	Destroyed	2/14/2018
PD Fuze	Fuze	1	3	No	1/29/2018	Parcel 3/T37	Destroyed	9/20/2018
PD Fuze	Fuze	1	4	No	1/30/2018	Parcel 3/AE35	Destroyed	9/20/2018
PD Fuze	Fuze	1	1	No	1/30/2018	Parcel 3/U37	Destroyed	9/20/2018
37mm	Projectile	1	1	Yes	1/31/2018	Parcel 3/AF35	Destroyed	12/10/2019
37mm	Projectile	2	12	Yes	1/31/2018	Parcel 3/AG35	Destroyed	12/10/2019
Booster	Booster	1	7	No	1/31/2018	Parcel 3/AG35	Destroyed	8/28/2018
40mm	Projectile	1	3	No	2/1/2018	Parcel 3/W37	Destroyed	2/14/2018
40mm	Projectile	1	8	No	2/2/2018	Parcel 3/AA29	Destroyed	2/14/2018
40mm	Projectile	1	7	No	2/5/2018	Parcel 3/AA29	Destroyed	2/14/2018
40mm	Projectile	1	5	No	2/5/2018	Parcel 3/AB29	Destroyed	2/14/2018

TABLE 3-4
MEC RECOVERED
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
37mm	Projectile	1	12	No	2/6/2018	Parcel 3/AB29	Destroyed	2/14/2018
40mm	Projectile	1	8	No	2/6/2018	Parcel 3/AB29	Destroyed	2/14/2018
40mm	Projectile	1	13	Yes	2/7/2018	Parcel 3/AB28	Destroyed	11/18/2019
BLU-4	Bomb	1	6	Yes	2/7/2018	Parcel 3/Q33	BIP	2/9/2018
Booster	Booster	1	7	No	2/7/2018	Parcel 3/AB28	Destroyed	8/28/2018
M83 Butterfly	Bomb	1	8	Yes	2/7/2018	Parcel 3/P33	BIP	2/9/2018
PD Fuze	Fuze	1	5	No	2/7/2018	Parcel 3/AB28	Destroyed	9/20/2018
37mm	Projectile	1	5	No	2/8/2018	Parcel 3/P33	Destroyed	2/14/2018
40mm	Projectile	1	3	No	2/8/2018	Parcel 3/P33	Destroyed	2/14/2018
60mm	Projectile	1	1	Yes	2/8/2018	Parcel 3/AB28	Destroyed	3/14/2018
Booster	Booster	1	2	No	2/8/2018	Parcel 3/AB28	Destroyed	8/28/2018
PD Fuze	Fuze	3	1	No	2/8/2018	Parcel 3/AB28	Destroyed	9/20/2018
37mm	Projectile	1	6	No	2/12/2018	Parcel 3/AA28	Destroyed	2/14/2018
40mm	Projectile	1	3	No	2/12/2018	Parcel 3/AA28	Destroyed	2/14/2018
60mm	Projectile	1	3	No	2/12/2018	Parcel 3/AA28	Destroyed	3/14/2018
BD Fuze	Fuze	1	3	No	2/12/2018	Parcel 3/O33	Destroyed	9/27/2018
Blu-3	Bomb	1	7	Yes	2/12/2018	Parcel 3/O33	BIP	2/16/2018
PD Fuze	Fuze	1	4	No	2/12/2018	Parcel 3/AA28	Destroyed	9/20/2018
37mm	Projectile	1	2	Yes	2/13/2018	Parcel 3/N33	Destroyed	12/10/2019
Booster	Booster	1	6	No	2/13/2018	Parcel 3/AA28	Destroyed	8/28/2018
PD Fuze	Fuze	1	3	No	2/13/2018	Parcel 3/AA28	Destroyed	9/20/2018
PD Fuze	Fuze	1	8	No	2/13/2018	Parcel 3/N33	Destroyed	9/20/2018
37mm	Projectile	1	5	Yes	2/14/2018	Parcel 3/N32	Destroyed	12/10/2019
PD Fuze	Fuze	1	4	No	2/14/2018	Parcel 3/N32	Destroyed	9/20/2018
PD Fuze	Fuze	1	8	No	2/14/2018	Parcel 3/Z28	Destroyed	9/20/2018
37mm	Projectile	1	10	No	2/16/2018	Parcel 3/O32	Destroyed	8/14/2018
37mm	Projectile	1	5	No	2/16/2018	Parcel 3/Z28	Destroyed	8/14/2018
40mm	Projectile	1	3	No	2/16/2018	Parcel 3/O32	Destroyed	8/8/2018
Booster	Booster	1	12	No	2/16/2018	Parcel 3/Z28	Destroyed	8/28/2018
M83 Butterfly	Bomb	1	7	No	2/16/2018	Parcel 3/Z28	Destroyed	3/14/2018
PD Fuze	Fuze	3	13	No	2/16/2018	Parcel 3/Z28	Destroyed	9/20/2018
37mm	Projectile	1	4	No	2/27/2018	Parcel 3/K39	Destroyed	8/14/2018
40mm	Projectile	1	6	No	2/27/2018	Parcel 3/K39	Destroyed	8/8/2018
60mm	Projectile	1	2	Yes	2/27/2018	Parcel 3/X39	Destroyed	3/14/2018
M83 Butterfly	Bomb	1	4	No	2/27/2018	Parcel 3/L39	Destroyed	3/14/2018
PD Fuze	Fuze	1	1	No	2/27/2018	Parcel 3/W39	Destroyed	9/20/2018
75mm	Projectile	1	2	No	3/1/2018	Parcel 3/W39	Destroyed	8/21/2018
PD Fuze	Fuze	1	3	No	3/1/2018	Parcel 3/W39	Destroyed	9/20/2018
40mm	Projectile	2	1	No	3/2/2018	Parcel 3/V39	Destroyed	8/8/2018
BD Fuze	Fuze	2	1	No	3/2/2018	Parcel 3/V39	Destroyed	9/27/2018
M83 Butterfly	Bomb	1	1	Yes	3/5/2018	Parcel 3/U39	BIP	3/17/2018
20mm	Projectile	1	3	Yes	3/8/2018	Parcel 3/Y28	Destroyed	10/24/2019
40mm	Projectile	1	4	No	3/8/2018	Parcel 3/T39	Destroyed	8/8/2018
40mm	Projectile	1	2	No	3/8/2018	Parcel 3/Y28	Destroyed	8/8/2018
57mm	Projectile	1	3	Yes	3/8/2018	Parcel 3/L38	Destroyed	12/16/2019

TABLE 3-4
MEC RECOVERED
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
Blu-4	Bomb	1	4	No	3/8/2018	Parcel 3/H34	Destroyed	3/5/2019
M83 Butterfly	Bomb	1	2	Yes	3/8/2018	Parcel 3/Y28	BIP	3/17/2018
PD Fuze	Fuze	1	3	No	3/8/2018	Parcel 3/Y28	Destroyed	9/20/2018
37mm	Projectile	1	3	Yes	3/9/2018	Parcel 3/K38	Destroyed	12/10/2019
60mm	Projectile	1	4	No	3/9/2018	Parcel 3/Y28	Destroyed	3/14/2018
M83 Butterfly	Bomb	2	6	Yes	3/9/2018	Parcel 3/Y28	BIP	3/17/2018
PD Fuze	Fuze	2	5	No	3/9/2018	Parcel 3/K38	Destroyed	9/20/2018
PD Fuze	Fuze	1	3	No	3/9/2018	Parcel 3/T38	Destroyed	9/20/2018
PD Fuze	Fuze	1	2	No	3/9/2018	Parcel 3/Y28	Destroyed	9/20/2018
37mm	Projectile	1	3	Yes	3/12/2018	Parcel 3/J38	Destroyed	12/10/2019
37mm	Projectile	1	4	Yes	3/12/2018	Parcel 3/Y28	Destroyed	12/10/2019
40mm	Projectile	1	4	No	3/12/2018	Parcel 3/Y28	Destroyed	8/8/2018
PD Fuze	Fuze	1	5	No	3/12/2018	Parcel 3/V38	Destroyed	9/20/2018
PD Fuze	Fuze	2	3	No	3/12/2018	Parcel 3/Y28	Destroyed	9/20/2018
20lb Frag	Bomb	1	4	No	3/13/2018	Parcel 3/W38	Destroyed	8/28/2018
40mm	Projectile	1	1	No	3/13/2018	Parcel 3/V38	Destroyed	8/8/2018
40mm	Projectile	1	3	No	3/13/2018	Parcel 3/W38	Destroyed	8/8/2018
40mm	Projectile	1	1	Yes	3/13/2018	Parcel 3/I38	Destroyed	11/18/2019
57mm	Projectile	1	15	Yes	3/13/2018	Parcel 3/X28	Destroyed	12/16/2019
BLU-4	Bomb	1	2	Yes	3/13/2018	Parcel 3/G34	BIP	3/17/2018
M83 (Fuze)	Fuze	1	1	Yes	3/13/2018	Parcel 3/X28	BIP	3/17/2018
PD Fuze	Fuze	1	1	No	3/13/2018	Parcel 3/W38	Destroyed	9/20/2018
40mm	Projectile	1	1	No	3/14/2018	Parcel 3/X38	Destroyed	8/8/2018
AN-M110	Fuze	1	2	No	3/14/2018	Parcel 3/X28	BIP	3/17/2018
M83 Butterfly	Bomb	1	2	Yes	3/14/2018	Parcel 3/X38	BIP	3/17/2018
PD Fuze	Fuze	1	1	No	3/14/2018	Parcel 3/X38	Destroyed	9/20/2018
PD Fuze	Fuze	2	2	No	3/14/2018	Parcel 3/X28	Destroyed	9/20/2018
40mm	Projectile	1	1	No	3/15/2018	Parcel 3/S39	Destroyed	8/8/2018
75mm	Projectile	1	2	No	3/15/2018	Parcel 3/F38	Destroyed	8/21/2018
M219	Fuze	2	1	No	3/15/2018	Parcel 3/F34	BIP	3/17/2018
40mm	Projectile	1	2	No	3/19/2018	Parcel 3/X29	Destroyed	8/8/2018
60mm	Projectile	1	6	No	3/19/2018	Parcel 3/X29	Destroyed	8/16/2018
M83 Butterfly	Bomb	1	3	No	3/20/2018	Parcel 3/X29	Destroyed	8/14/2018
40mm	Projectile	2	5	No	3/21/2018	Parcel 3/X29	Destroyed	8/8/2018
60mm	Projectile	1	3	No	3/21/2018	Parcel 3/O38	Destroyed	8/16/2018
Booster	Booster	1	4	No	3/21/2018	Parcel 3/X29	Destroyed	8/28/2018
PD Fuze	Fuze	1	3	No	3/21/2018	Parcel 3/X29	Destroyed	9/20/2018
37mm	Projectile	1	8	No	3/22/2018	Parcel 3/Y29	Destroyed	8/14/2018
40mm	Projectile	1	4	No	3/22/2018	Parcel 3/P38	Destroyed	8/8/2018
60mm	Projectile	3	6	No	3/22/2018	Parcel 3/Y29	Destroyed	8/16/2018
BD Fuze	Fuze	1	3	No	3/22/2018	Parcel 3/Y29	Destroyed	9/27/2018
Blu-4	Bomb	1	3	No	3/22/2018	Parcel 3/P38	Destroyed	3/5/2019
M83 Butterfly	Bomb	1	6	Yes	3/22/2018	Parcel 3/I39	BIP	3/29/2018
PD Fuze	Fuze	1	1	No	3/22/2018	Parcel 3/Y29	Destroyed	9/20/2018
PD Fuze	Fuze	1	5	No	3/22/2018	Parcel 3/Q38	Destroyed	9/20/2018

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FORT WINGATE DEPOT ACTIVITY
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Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
37mm	Projectile	2	2	No	3/23/2018	Parcel 3/R28	Destroyed	8/14/2018
37mm	Projectile	1	4	No	3/23/2018	Parcel 3/Y29	Destroyed	8/14/2018
40mm	Projectile	1	3	No	3/23/2018	Parcel 3/R28	Destroyed	8/8/2018
75mm	Projectile	1	2	No	3/23/2018	Parcel 3/R38	Destroyed	8/21/2018
BD Fuze	Fuze	1	2	No	3/23/2018	Parcel 3/R28	Destroyed	9/27/2018
BD Fuze	Fuze	1	2	No	3/23/2018	Parcel 3/Y29	Destroyed	9/27/2018
Booster	Booster	1	2	No	3/23/2018	Parcel 3/R28	Destroyed	8/28/2017
M2 Mine	Mine	1	4	No	3/23/2018	Parcel 3/R28	Destroyed	8/27/2019
M83 Butterfly	Bomb	1	6	Yes	3/23/2018	Parcel 3/Y29	BIP	3/29/2018
PD Fuze	Fuze	2	3	No	3/23/2018	Parcel 3/R28	Destroyed	9/20/2018
PD Fuze	Fuze	2	2	No	3/23/2018	Parcel 3/Y29	Destroyed	9/20/2018
37mm	Projectile	1	1	No	3/26/2018	Parcel 3/S38	Destroyed	8/14/2018
40mm	Projectile	2	4	No	3/26/2018	Parcel 3/R28	Destroyed	8/8/2018
57mm	Projectile	1	2	No	3/26/2018	Parcel 3/S38	Destroyed	8/14/2018
M219	Fuze	1	2	No	3/26/2018	Parcel 3/R28	BIP	8/28/2018
PD Fuze	Fuze	4	4	No	3/26/2018	Parcel 3/R28	Destroyed	9/20/2018
PD Fuze	Fuze	1	6	No	3/26/2018	Parcel 3/Y29	Destroyed	9/20/2018
37mm	Projectile	1	3	No	3/27/2018	Parcel 3/Z29	Destroyed	8/14/2018
40mm	Projectile	1	3	No	3/27/2018	Parcel 3/Q28	Destroyed	8/8/2018
40mm	Projectile	1	2	No	3/27/2018	Parcel 3/R28	Destroyed	8/8/2018
Booster	Booster	1	4	No	3/27/2018	Parcel 3/Z29	Destroyed	8/28/2018
PD Fuze	Fuze	1	2	No	3/27/2018	Parcel 3/Q28	Destroyed	9/20/2018
37mm	Projectile	1	2	No	3/28/2018	Parcel 3/Q28	Destroyed	8/14/2018
37mm	Projectile	1	4	Yes	3/28/2018	Parcel 3/Q28	Destroyed	12/10/2019
40mm	Projectile	1	1	No	3/28/2018	Parcel 3/O37	Destroyed	8/8/2018
40mm	Projectile	2	3	No	3/28/2018	Parcel 3/Z29	Destroyed	8/8/2018
BD Fuze	Fuze	3	5	No	3/28/2018	Parcel 3/Z29	Destroyed	9/27/2018
Blu-4	Bomb	1	1	Yes	3/28/2018	Parcel 3/E35	BIP	3/29/2018
PD Fuze	Fuze	2	4	No	3/28/2018	Parcel 3/Q28	Destroyed	9/20/2018
37mm	Projectile	2	9	No	3/29/2018	Parcel 3/Z29	Destroyed	8/14/2018
40mm	Projectile	1	3	No	3/29/2018	Parcel 3/Q28	Destroyed	8/8/2018
40mm	Projectile	1	4	No	3/29/2018	Parcel 3/Z29	Destroyed	8/8/2018
60mm	Projectile	1	5	Yes	3/29/2018	Parcel 3/Q28	Destroyed	8/16/2018
BD Fuze	Fuze	2	4	No	3/29/2018	Parcel 3/Q28	Destroyed	9/27/2018
BD Fuze	Fuze	1	2	No	3/29/2018	Parcel 3/Z29	Destroyed	9/27/2018
Booster	Booster	1	1	No	3/29/2018	Parcel 3/Q28	Destroyed	8/28/2018
Booster	Booster	1	2	No	3/29/2018	Parcel 3/Z29	BIP	3/29/2018
PD Fuze	Fuze	3	6	No	3/29/2018	Parcel 3/Z29	Destroyed	9/20/2018
PD Fuze	Fuze	2	4	No	3/29/2018	Parcel 3/Q28	Destroyed	9/20/2018
37mm	Projectile	1	1	No	4/10/2018	Parcel 3/P37	Destroyed	8/14/2018
37mm	Projectile	1	4	No	4/10/2018	Parcel 3/M36	Destroyed	8/14/2018
37mm	Projectile	1	1	No	4/10/2018	Parcel 3/L36	Destroyed	8/14/2018
37mm	Projectile	1	3	Yes	4/10/2018	Parcel 3/H37	Destroyed	12/10/2019
40mm	Projectile	1	6	No	4/10/2018	Parcel 3/M36	Destroyed	8/8/2018
60mm	Projectile	1	3	No	4/10/2018	Parcel 3/Q37	Destroyed	8/16/2018

TABLE 3-4
MEC RECOVERED
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
BD Fuze	Fuze	1	4	No	4/10/2018	Parcel 3/M36	Destroyed	9/27/2018
BD Fuze	Fuze	1	5	No	4/10/2018	Parcel 3/L36	Destroyed	9/27/2018
Booster	Booster	1	2	No	4/10/2018	Parcel 3/P28	Destroyed	8/28/2018
PD Fuze	Fuze	3	5	No	4/10/2018	Parcel 3/P28	Destroyed	9/20/2018
PD Fuze	Fuze	1	3	No	4/10/2018	Parcel 3/P37	Destroyed	9/20/2018
PD Fuze	Fuze	1	2	No	4/11/2018	Parcel 3/O28	Destroyed	9/20/2018
40mm	Projectile	1	3	No	4/12/2018	Parcel 3/Q37	Destroyed	8/8/2018
40mm	Projectile	1	1	No	4/12/2018	Parcel 3/I36	Destroyed	8/8/2018
BD Fuze	Fuze	1	2	No	4/12/2018	Parcel 3/I36	Destroyed	9/27/2018
PD Fuze	Fuze	1	5	No	4/12/2018	Parcel 3/I36	Destroyed	9/20/2018
40mm	Projectile	1	1	No	4/13/2018	Parcel 3/C37	Destroyed	8/8/2018
BD Fuze	Fuze	1	1	No	4/13/2018	Parcel 3/I36	Destroyed	9/27/2018
PD Fuze	Fuze	1	1	No	4/13/2018	Parcel 3/I36	Destroyed	9/20/2018
20mm	Projectile	1	1	No	4/16/2018	Parcel 3/N28	Destroyed	8/14/2018
BD Fuze	Fuze	1	2	No	4/16/2018	Parcel 3/K37	Destroyed	9/27/2018
PD Fuze	Fuze	2	1	No	4/16/2018	Parcel 3/N28	Destroyed	9/20/2018
PD Fuze	Fuze	1	2	No	4/16/2018	Parcel 3/J37	Destroyed	9/20/2018
20mm	Projectile	1	1	No	4/18/2018	Parcel 3/N28	Destroyed	8/14/2018
75mm	Projectile	1	3	Yes	4/18/2018	Parcel 3/F36	Destroyed	4/4/2019
BD Fuze	Fuze	2	3	No	4/18/2018	Parcel 3/M37	Destroyed	9/27/2018
Booster	Booster	4	2	No	4/18/2018	Parcel 3/N28	Destroyed	8/28/2018
M83 Butterfly	Bomb	1	2	No	4/18/2018	Parcel 3/F36	Destroyed	8/14/2018
PD Fuze	Fuze	1	2	No	4/18/2018	Parcel 3/N28	Destroyed	9/20/2018
PD Fuze	Fuze	1	4	No	4/18/2018	Parcel 3/L37	Destroyed	9/20/2018
37mm	Projectile	3	4	No	4/19/2018	Parcel 3/AC29	Destroyed	8/14/2018
M83 Butterfly	Bomb	1	5	No	4/19/2018	Parcel 3/AC29	Destroyed	8/14/2018
PD Fuze	Fuze	1	4	No	4/19/2018	Parcel 3/AC29	Destroyed	9/20/2018
PD Fuze	Fuze	2	2	No	4/19/2018	Parcel 3/AQ29	Destroyed	9/20/2018
20mm	Projectile	2	3	No	4/20/2018	Parcel 3/AQ29	Destroyed	8/14/2018
37mm	Projectile	3	4	No	4/20/2018	Parcel 3/AC29	Destroyed	8/14/2018
37mm	Projectile	3	3	No	4/20/2018	Parcel 3/AQ29	Destroyed	8/14/2018
37mm	Projectile	1	2	Yes	4/20/2018	Parcel 3/AQ29	Destroyed	12/10/2019
40mm	Projectile	2	3	No	4/20/2018	Parcel 3/AQ29	Destroyed	8/8/2018
57mm	Projectile	1	4	Yes	4/20/2018	Parcel 3/AQ29	Destroyed	12/16/2019
BD Fuze	Fuze	3	1	No	4/20/2018	Parcel 3/AC29	Destroyed	9/27/2018
Booster	Booster	3	4	No	4/20/2018	Parcel 3/AQ29	Destroyed	8/28/2018
M83 Butterfly	Bomb	1	3	No	4/20/2018	Parcel 3/E37	Destroyed	8/14/2018
PD Fuze	Fuze	3	2	No	4/20/2018	Parcel 3/AQ29	Destroyed	9/20/2018
37mm	Projectile	1	1	No	4/23/2018	Parcel 3/W30	Destroyed	8/14/2018
37mm	Projectile	1	2	No	4/23/2018	Parcel 3/AP29	Destroyed	8/14/2018
40mm	Projectile	1	1	No	4/23/2018	Parcel 3/W30	Destroyed	8/8/2018
PD Fuze	Fuze	1	1	No	4/23/2018	Parcel 3/W30	Destroyed	9/20/2018
37mm	Projectile	3	3	No	4/24/2018	Parcel 3/W30	Destroyed	8/14/2018
37mm	Projectile	9	1	No	4/24/2018	Parcel 3/AD29	Destroyed	8/14/2018
37mm	Projectile	1	2	Yes	4/24/2018	Parcel 3/AP29	Destroyed	12/10/2019

TABLE 3-4
MEC RECOVERED
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
37mm	Projectile	1	2	Yes	4/24/2018	Parcel 3/W30	Destroyed	12/10/2019
40mm	Projectile	1	3	No	4/24/2018	Parcel 3/W30	Destroyed	8/8/2018
BD Fuze	Fuze	5	1	No	4/24/2018	Parcel 3/W30	Destroyed	9/27/2018
BD Fuze	Fuze	5	2	No	4/24/2018	Parcel 3/AD29	Destroyed	9/27/2018
Booster	Booster	2	2	No	4/24/2018	Parcel 3/AP29	Destroyed	8/28/2018
Booster	Booster	2	1	No	4/24/2018	Parcel 3/W30	Destroyed	8/28/2018
PD Fuze	Fuze	1	1	No	4/24/2018	Parcel 3/AP29	Destroyed	9/20/2018
PD Fuze	Fuze	2	3	No	4/24/2018	Parcel 3/W30	Destroyed	9/20/2018
PD Fuze	Fuze	2	2	No	4/24/2018	Parcel 3/AD29	Destroyed	9/20/2018
37mm	Projectile	2	3	No	4/25/2018	Parcel 3/AO29	Destroyed	8/14/2018
37mm	Projectile	2	4	No	4/25/2018	Parcel 3/V30	Destroyed	8/14/2018
37mm	Projectile	6	1	No	4/25/2018	Parcel 3/AD29	Destroyed	8/14/2018
37mm	Projectile	1	2	No	4/25/2018	Parcel 3/Q36	Destroyed	8/14/2018
40mm	Projectile	1	1	No	4/25/2018	Parcel 3/V30	Destroyed	8/8/2018
60mm	Projectile	2	2	No	4/25/2018	Parcel 3/AO29	Destroyed	8/16/2018
60mm	Projectile	1	4	Yes	4/25/2018	Parcel 3/AO29	Destroyed	8/16/2018
BD Fuze	Fuze	2	3	No	4/25/2018	Parcel 3/AO29	Destroyed	9/27/2018
BD Fuze	Fuze	3	2	No	4/25/2018	Parcel 3/V30	Destroyed	9/27/2018
BD Fuze	Fuze	2	1	No	4/25/2018	Parcel 3/AD29	Destroyed	9/27/2018
BD Fuze	Fuze	5	1	No	4/25/2018	Parcel 3/Q36	Destroyed	9/27/2018
Booster	Booster	1	1	No	4/25/2018	Parcel 3/AO29	Destroyed	8/28/2018
M83 Butterfly	Bomb	1	1	Yes	4/25/2018	Parcel 3/AO29	BIP	4/28/2018
PD Fuze	Fuze	2	1	No	4/25/2018	Parcel 3/V30	Destroyed	9/20/2018
PD Fuze	Fuze	2	2	No	4/25/2018	Parcel 3/AD29	Destroyed	9/20/2018
20mm	Projectile	3	3	No	4/26/2018	Parcel 3/AN29	Destroyed	8/14/2018
37mm	Projectile	3	1	No	4/26/2018	Parcel 3/AN29	Destroyed	8/14/2018
37mm	Projectile	4	2	No	4/26/2018	Parcel 3/V30	Destroyed	8/14/2018
40mm	Projectile	1	4	No	4/26/2018	Parcel 3/AD29	Destroyed	8/8/2018
40mm	Projectile	1	3	No	4/26/2018	Parcel 3/AN29	Destroyed	8/8/2018
40mm	Projectile	5	1	No	4/26/2018	Parcel 3/V30	Destroyed	8/8/2018
BD Fuze	Fuze	3	4	No	4/26/2018	Parcel 3/P36	Destroyed	9/27/2018
BD Fuze	Fuze	1	3	No	4/26/2018	Parcel 3/AD29	Destroyed	9/27/2018
BD Fuze	Fuze	6	2	No	4/26/2018	Parcel 3/V30	Destroyed	9/27/2018
Blu-3	Bomb	1	1	No	4/26/2018	Parcel 3/V30	Destroyed	8/14/2018
M83 Butterfly	Bomb	1	1	Yes	4/26/2018	Parcel 3/AN29	BIP	4/28/2018
PD Fuze	Fuze	1	1	No	4/26/2018	Parcel 3/AN29	Destroyed	9/20/2018
PD Fuze	Fuze	8	1	No	4/26/2018	Parcel 3/V30	Destroyed	9/20/2018
37mm	Projectile	1	5	No	4/27/2018	Parcel 3/U30	Destroyed	8/14/2018
37mm	Projectile	2	2	No	4/27/2018	Parcel 3/AE29	Destroyed	8/14/2018
37mm	Projectile	2	1	No	4/27/2018	Parcel 3/AN29	Destroyed	8/14/2018
40mm	Projectile	1	2	No	4/27/2018	Parcel 3/U30	Destroyed	8/8/2018
40mm	Projectile	1	1	No	4/27/2018	Parcel 3/AE29	Destroyed	8/8/2018
40mm	Projectile	1	2	No	4/27/2018	Parcel 3/AN29	Destroyed	8/8/2018
BD Fuze	Fuze	3	1	No	4/27/2018	Parcel 3/U30	Destroyed	9/27/2018
BD Fuze	Fuze	4	4	No	4/27/2018	Parcel 3/AE29	Destroyed	9/27/2018

TABLE 3-4
MEC RECOVERED
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
M83 Butterfly	Bomb	1	4	No	4/27/2018	Parcel 3/AN29	Destroyed	8/14/2018
PD Fuze	Fuze	1	2	No	4/27/2018	Parcel 3/AE29	Destroyed	9/20/2018
PD Fuze	Fuze	4	3	No	4/27/2018	Parcel 3/AN29	Destroyed	9/20/2018
37mm	Projectile	2	4	No	4/30/2018	Parcel 3/AE29	Destroyed	8/14/2018
37mm	Projectile	1	2	No	4/30/2018	Parcel 3/AM29	Destroyed	8/14/2018
37mm	Projectile	1	2	Yes	4/30/2018	Parcel 3/AE29	Destroyed	12/10/2019
40mm	Projectile	2	4	No	4/30/2018	Parcel 3/AE29	Destroyed	8/8/2018
BD Fuze	Fuze	4	1	No	4/30/2018	Parcel 3/U30	Destroyed	9/27/2018
BD Fuze	Fuze	3	4	No	4/30/2018	Parcel 3/AE29	Destroyed	9/27/2018
Booster	Booster	1	3	No	4/30/2018	Parcel 3/AE29	Destroyed	8/28/2018
PD Fuze	Fuze	4	14	No	4/30/2018	Parcel 3/AE29	Destroyed	9/20/2018
PD Fuze	Fuze	3	5	No	4/30/2018	Parcel 3/AM29	Destroyed	9/20/2018
37mm	Projectile	2	12	No	5/1/2018	Parcel 3/U30	Destroyed	8/14/2018
37mm	Projectile	2	6	No	5/1/2018	Parcel 3/AE29	Destroyed	8/14/2018
37mm	Projectile	4	6	No	5/1/2018	Parcel 3/AM29	Destroyed	8/14/2018
40mm	Projectile	2	1	No	5/1/2018	Parcel 3/U30	Destroyed	8/8/2018
BD Fuze	Fuze	11	1	No	5/1/2018	Parcel 3/U30	Destroyed	9/27/2018
Booster	Booster	1	1	No	5/1/2018	Parcel 3/U30	Destroyed	8/28/2018
M83 Butterfly	Bomb	2	1	No	5/1/2018	Parcel 3/U30	Destroyed	8/14/2018
M83 Butterfly	Bomb	1	4	No	5/1/2018	Parcel 3/AF29	Destroyed	8/14/2018
PD Fuze	Fuze	5	4	No	5/1/2018	Parcel 3/U30	Destroyed	9/20/2018
PD Fuze	Fuze	2	6	No	5/1/2018	Parcel 3/AE29	Destroyed	9/20/2018
PD Fuze	Fuze	2	12	No	5/1/2018	Parcel 3/AM29	Destroyed	9/20/2018
37mm	Projectile	3	5	No	5/2/2018	Parcel 3/AM30	Destroyed	8/14/2018
37mm	Projectile	2	4	Yes	5/2/2018	Parcel 3/AM30	Destroyed	12/10/2019
60mm	Projectile	1	6	No	5/2/2018	Parcel 3/AM30	Destroyed	8/16/2018
BD Fuze	Fuze	3	4	No	5/2/2018	Parcel 3/AM30	Destroyed	9/27/2018
M83 Butterfly	Bomb	2	10	No	5/2/2018	Parcel 3/AM30	Destroyed	8/14/2018
PD Fuze	Fuze	2	8	No	5/2/2018	Parcel 3/AM30	Destroyed	9/20/2018
37mm	Projectile	2	5	No	5/3/2018	Parcel 3/AF29	Destroyed	8/14/2018
37mm	Projectile	1	3	No	5/3/2018	Parcel 3/O36	Destroyed	8/14/2018
37mm	Projectile	1	1	No	5/3/2018	Parcel 3/T30	Destroyed	8/14/2018
40mm	Projectile	1	2	No	5/3/2018	Parcel 3/AF29	Destroyed	8/8/2018
40mm	Projectile	1	2	No	5/3/2018	Parcel 3/O36	Destroyed	8/8/2018
40mm	Projectile	1	1	No	5/3/2018	Parcel 3/T30	Destroyed	8/8/2018
60mm	Projectile	1	4	No	5/3/2018	Parcel 3/AF29	Destroyed	8/16/2018
60mm	Projectile	1	2	No	5/3/2018	Parcel 3/O36	Destroyed	8/16/2018
60mm	Projectile	1	1	No	5/3/2018	Parcel 3/T30	Destroyed	8/16/2018
90mm	Projectile	1	1	No	5/3/2018	Parcel 3/T30	Destroyed	8/1/2019
BD Fuze	Fuze	1	4	No	5/3/2018	Parcel 3/AF29	Destroyed	9/27/2018
BD Fuze	Fuze	5	1	No	5/3/2018	Parcel 3/T30	Destroyed	9/27/2018
Blu-3	Bomb	2	1	No	5/3/2018	Parcel 3/T30	Destroyed	8/14/2018
Booster	Booster	1	2	No	5/3/2018	Parcel 3/AF29	Destroyed	8/28/2018
Booster	Booster	2	1	No	5/3/2018	Parcel 3/T30	Destroyed	8/28/2018
PD Fuze	Fuze	4	4	No	5/3/2018	Parcel 3/AF29	Destroyed	9/20/2018

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MEC RECOVERED
FORT WINGATE DEPOT ACTIVITY
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Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
PD Fuze	Fuze	1	5	No	5/3/2018	Parcel 3/AM30	Destroyed	9/20/2018
PD Fuze	Fuze	10	1	No	5/3/2018	Parcel 3/T30	Destroyed	9/20/2018
37mm	Projectile	1	1	No	5/4/2018	Parcel 3/AF29	Destroyed	8/14/2018
40mm	Projectile	3	4	No	5/4/2018	Parcel 3/AN30	Destroyed	8/8/2018
40mm	Projectile	1	0	No	5/4/2018	Parcel 3/N36	Destroyed	8/8/2018
60mm	Projectile	1	4	No	5/4/2018	Parcel 3/AF29	Destroyed	8/16/2018
BD Fuze	Fuze	1	6	No	5/4/2018	Parcel 3/T30	Destroyed	9/27/2018
BD Fuze	Fuze	2	3	No	5/4/2018	Parcel 3/AF29	Destroyed	9/27/2018
BD Fuze	Fuze	2	5	No	5/4/2018	Parcel 3/AN30	Destroyed	9/27/2018
BD Fuze	Fuze	7	4	No	5/4/2018	Parcel 3/N36	Destroyed	9/27/2018
M83 Butterfly	Bomb	1	4	No	5/4/2018	Parcel 3/AF29	Destroyed	8/14/2018
PD Fuze	Fuze	1	1	No	5/4/2018	Parcel 3/T30	Destroyed	9/20/2018
PD Fuze	Fuze	2	2	No	5/4/2018	Parcel 3/AF29	Destroyed	9/20/2018
PD Fuze	Fuze	8	3	No	5/4/2018	Parcel 3/AN30	Destroyed	9/20/2018
37mm	Projectile	4	2	No	5/7/2018	Parcel 3/AO30	Destroyed	8/14/2018
37mm	Projectile	4	1	No	5/7/2018	Parcel 3/AG29	Destroyed	8/14/2018
37mm	Projectile	5	3	No	5/7/2018	Parcel 3/S30	Destroyed	8/14/2018
40mm	Projectile	1	4	No	5/7/2018	Parcel 3/AG29	Destroyed	8/8/2018
40mm	Projectile	2	1	No	5/7/2018	Parcel 3/S30	Destroyed	8/8/2018
60mm	Projectile	1	8	No	5/7/2018	Parcel 3/AO30	Destroyed	8/16/2018
75mm	Projectile	1	4	No	5/7/2018	Parcel 3/AO30	Destroyed	8/21/2018
BD Fuze	Fuze	1	4	No	5/7/2018	Parcel 3/AO30	Destroyed	9/27/2018
BD Fuze	Fuze	2	3	No	5/7/2018	Parcel 3/AG29	Destroyed	9/27/2018
BD Fuze	Fuze	2	1	No	5/7/2018	Parcel 3/S30	Destroyed	9/27/2018
Booster	Booster	1	3	No	5/7/2018	Parcel 3/AG29	Destroyed	8/28/2018
PD Fuze	Fuze	4	4	No	5/7/2018	Parcel 3/AO30	Destroyed	9/20/2018
PD Fuze	Fuze	2	5	No	5/7/2018	Parcel 3/S30	Destroyed	9/20/2018
37mm	Projectile	2	3	No	5/8/2018	Parcel 3/AO30	Destroyed	8/14/2018
37mm	Projectile	1	4	No	5/8/2018	Parcel 3/S30	Destroyed	8/14/2018
37mm	Projectile	3	1	No	5/8/2018	Parcel 3/AG29	Destroyed	8/14/2018
37mm	Projectile	1	2	Yes	5/8/2018	Parcel 3/G33	Destroyed	12/10/2019
37mm	Projectile	1	2	Yes	5/8/2018	Parcel 3/AG29	Destroyed	12/10/2019
40mm	Projectile	1	1	No	5/8/2018	Parcel 3/G33	Destroyed	8/8/2018
60mm	Projectile	1	1	No	5/8/2018	Parcel 3/S30	Destroyed	8/16/2018
BD Fuze	Fuze	2	1	No	5/8/2018	Parcel 3/S30	Destroyed	9/27/2018
BD Fuze	Fuze	1	2	No	5/8/2018	Parcel 3/AG29	Destroyed	9/27/2018
Booster	Booster	1	1	No	5/8/2018	Parcel 3/AG29	Destroyed	8/28/2018
PD Fuze	Fuze	1	14	No	5/8/2018	Parcel 3/AO30	Destroyed	9/20/2018
PD Fuze	Fuze	1	1	No	5/8/2018	Parcel 3/G33	Destroyed	9/20/2018
PD Fuze	Fuze	2	1	No	5/8/2018	Parcel 3/S30	Destroyed	9/20/2018
20mm	Projectile	1	1	No	5/9/2018	Parcel 3/AP30	Destroyed	8/14/2018
37mm	Projectile	1	4	No	5/9/2018	Parcel 3/AP30	Destroyed	8/14/2018
37mm	Projectile	1	1	No	5/9/2018	Parcel 3/S30	Destroyed	8/14/2018
37mm	Projectile	1	2	No	5/9/2018	Parcel 3/G33	Destroyed	8/14/2018
37mm	Projectile	4	3	No	5/9/2018	Parcel 3/AG29	Destroyed	8/14/2018

TABLE 3-4
MEC RECOVERED
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Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
40mm	Projectile	1	4	No	5/9/2018	Parcel 3/AP30	Destroyed	8/8/2018
60mm	Projectile	1	4	No	5/9/2018	Parcel 3/AG29	Destroyed	8/16/2018
BD Fuze	Fuze	1	2	No	5/9/2018	Parcel 3/AP30	Destroyed	9/27/2018
BD Fuze	Fuze	2	5	No	5/9/2018	Parcel 3/AG29	Destroyed	9/27/2018
Booster	Booster	1	1	No	5/9/2018	Parcel 3/S30	Destroyed	8/28/2018
PD Fuze	Fuze	1	2	No	5/9/2018	Parcel 3/AP30	Destroyed	9/20/2018
PD Fuze	Fuze	1	1	No	5/9/2018	Parcel 3/S30	Destroyed	9/20/2018
PD Fuze	Fuze	1	1	No	5/9/2018	Parcel 3/AG29	Destroyed	9/20/2018
20mm	Projectile	1	3	No	5/10/2018	Parcel 3/AG29	Destroyed	8/14/2018
37mm	Projectile	1	2	No	5/10/2018	Parcel 3/AG30	Destroyed	8/14/2018
40mm	Projectile	1	1	No	5/10/2018	Parcel 3/S31	Destroyed	8/8/2018
60mm	Projectile	1	3	No	5/10/2018	Parcel 3/AG30	Destroyed	8/16/2018
BD Fuze	Fuze	1	1	No	5/10/2018	Parcel 3/AP30	Destroyed	9/27/2018
BD Fuze	Fuze	3	2	No	5/10/2018	Parcel 3/S31	Destroyed	9/27/2018
PD Fuze	Fuze	1	4	No	5/10/2018	Parcel 3/AG29	Destroyed	9/20/2018
PD Fuze	Fuze	1	2	No	5/10/2018	Parcel 3/AP30	Destroyed	9/20/2018
PD Fuze	Fuze	1	1	No	5/10/2018	Parcel 3/S31	Destroyed	9/20/2018
37mm	Projectile	4	3	No	5/11/2018	Parcel 3/AQ30	Destroyed	8/14/2018
37mm	Projectile	1	4	No	5/11/2018	Parcel 3/S31	Destroyed	8/14/2018
37mm	Projectile	5	2	No	5/11/2018	Parcel 3/AG30	Destroyed	8/14/2018
40mm	Projectile	2	3	No	5/11/2018	Parcel 3/AQ30	Destroyed	8/8/2018
40mm	Projectile	1	6	No	5/11/2018	Parcel 3/AG30	Destroyed	8/8/2018
BD Fuze	Fuze	3	5	No	5/11/2018	Parcel 3/AQ30	Destroyed	9/27/2018
PD Fuze	Fuze	3	4	No	5/11/2018	Parcel 3/AQ30	Destroyed	9/20/2018
37mm	Projectile	1	2	No	5/14/2018	Parcel 3/AG30	Destroyed	8/14/2018
37mm	Projectile	1	2	No	5/14/2018	Parcel 3/AQ28	Destroyed	8/14/2018
60mm	Projectile	1	1	No	5/14/2018	Parcel 3/S31	Destroyed	8/16/2018
BD Fuze	Fuze	2	1	No	5/14/2018	Parcel 3/S31	Destroyed	9/27/2018
BD Fuze	Fuze	1	1	No	5/14/2018	Parcel 3/AQ28	Destroyed	9/27/2018
PD Fuze	Fuze	2	2	No	5/14/2018	Parcel 3/S31	Destroyed	9/20/2018
PD Fuze	Fuze	1	4	No	5/14/2018	Parcel 3/AG30	Destroyed	9/20/2018
PD Fuze	Fuze	3	1	No	5/14/2018	Parcel 3/AQ28	Destroyed	9/20/2018
37mm	Projectile	1	1	No	5/15/2018	Parcel 3/AG30	Destroyed	8/14/2018
37mm	Projectile	3	2	No	5/15/2018	Parcel 3/AQ28	Destroyed	8/14/2018
40mm	Projectile	1	2	No	5/15/2018	Parcel 3/S31	Destroyed	8/8/2018
40mm	Projectile	1	1	No	5/15/2018	Parcel 3/AG30	Destroyed	8/8/2018
BD Fuze	Fuze	1	3	No	5/15/2018	Parcel 3/S31	Destroyed	9/27/2018
BD Fuze	Fuze	1	1	No	5/15/2018	Parcel 3/E33	Destroyed	9/27/2018
PD Fuze	Fuze	2	4	No	5/15/2018	Parcel 3/AG30	Destroyed	9/20/2018
PD Fuze	Fuze	1	3	No	5/15/2018	Parcel 3/AQ28	Destroyed	9/20/2018
37mm	Projectile	1	4	No	5/16/2018	Parcel 3/T31	Destroyed	8/14/2018
37mm	Projectile	3	3	No	5/16/2018	Parcel 3/AF30	Destroyed	8/14/2018
37mm	Projectile	3	2	No	5/16/2018	Parcel 3/AP28	Destroyed	8/14/2018
40mm	Projectile	2	5	No	5/16/2018	Parcel 3/T31	Destroyed	8/8/2018
40mm	Projectile	2	4	No	5/16/2018	Parcel 3/AF30	Destroyed	8/8/2018

TABLE 3-4
MEC RECOVERED
FORT WINGATE DEPOT ACTIVITY
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Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
40mm	Projectile	1	3	No	5/16/2018	Parcel 3/AP28	Destroyed	8/8/2018
40mm	Projectile	1	2	Yes	5/16/2018	Parcel 3/AF30	Destroyed	11/18/2019
BD Fuze	Fuze	3	3	No	5/16/2018	Parcel 3/T31	Destroyed	9/27/2018
BD Fuze	Fuze	1	2	No	5/16/2018	Parcel 3/AF30	Destroyed	9/27/2018
BD Fuze	Fuze	3	4	No	5/16/2018	Parcel 3/AP28	Destroyed	9/27/2018
PD Fuze	Fuze	2	2	No	5/16/2018	Parcel 3/T31	Destroyed	9/20/2018
PD Fuze	Fuze	3	3	No	5/16/2018	Parcel 3/AF30	Destroyed	9/20/2018
PD Fuze	Fuze	4	4	No	5/16/2018	Parcel 3/AP28	Destroyed	9/20/2018
37mm	Projectile	1	4	No	5/17/2018	Parcel 3/T31	Destroyed	8/14/2018
37mm	Projectile	1	4	No	5/17/2018	Parcel 3/AF30	Destroyed	8/14/2018
37mm	Projectile	4	3	No	5/17/2018	Parcel 3/AO28	Destroyed	8/14/2018
40mm	Projectile	1	3	No	5/17/2018	Parcel 3/AF30	Destroyed	8/8/2018
40mm	Projectile	1	5	No	5/17/2018	Parcel 3/AO28	Destroyed	8/8/2018
BD Fuze	Fuze	1	4	No	5/17/2018	Parcel 3/AP28	Destroyed	9/27/2018
BD Fuze	Fuze	3	2	No	5/17/2018	Parcel 3/AF30	Destroyed	9/27/2018
BD Fuze	Fuze	4	2	No	5/17/2018	Parcel 3/AO28	Destroyed	9/27/2018
M83 Butterfly	Bomb	2	3	Yes	5/17/2018	Parcel 3/AO28	BIP	5/19/2018
M83 Butterfly	Bomb	1	2	Yes	5/17/2018	Parcel 3/U31	BIP	5/19/2018
PD Fuze	Fuze	1	2	No	5/17/2018	Parcel 3/AP28	Destroyed	9/20/2018
PD Fuze	Fuze	1	4	No	5/17/2018	Parcel 3/AF30	Destroyed	9/20/2018
PD Fuze	Fuze	2	3	No	5/17/2018	Parcel 3/AO28	Destroyed	9/20/2018
37mm	Projectile	2	6	No	5/18/2018	Parcel 3/AO28	Destroyed	8/14/2018
37mm	Projectile	1	4	No	5/18/2018	Parcel 3/U31	Destroyed	8/14/2018
37mm	Projectile	2	3	No	5/18/2018	Parcel 3/AF30	Destroyed	8/14/2018
37mm	Projectile	1	4	Yes	5/18/2018	Parcel 3/AO28	Destroyed	12/10/2019
37mm	Projectile	1	1	Yes	5/18/2018	Parcel 3/AF30	Destroyed	12/10/2019
40mm	Projectile	2	1	No	5/18/2018	Parcel 3/U31	Destroyed	8/8/2018
60mm	Projectile	1	1	No	5/18/2018	Parcel 3/U31	Destroyed	8/16/2018
AN-M110	Fuze	1	1	No	5/18/2018	Parcel 3/AF30	BIP	5/19/2018
BD Fuze	Fuze	1	4	No	5/18/2018	Parcel 3/AO28	Destroyed	9/27/2018
BD Fuze	Fuze	2	1	No	5/18/2018	Parcel 3/U31	Destroyed	9/27/2018
PD Fuze	Fuze	10	6	No	5/18/2018	Parcel 3/AO28	Destroyed	9/20/2018
PD Fuze	Fuze	1	4	No	5/18/2018	Parcel 3/U31	Destroyed	9/20/2018
PD Fuze	Fuze	2	3	No	5/18/2018	Parcel 3/AF30	Destroyed	9/20/2018
37mm	Projectile	2	2	No	5/21/2018	Parcel 3/AF30	Destroyed	8/14/2018
37mm	Projectile	2	4	No	5/21/2018	Parcel 3/U31	Destroyed	8/14/2018
37mm	Projectile	2	4	No	5/21/2018	Parcel 3/AE30	Destroyed	8/14/2018
37mm	Projectile	5	3	No	5/21/2018	Parcel 3/AN28	Destroyed	8/14/2018
75mm	Projectile	1	1	No	5/21/2018	Parcel 3/U31	Destroyed	8/21/2018
BD Fuze	Fuze	8	2	No	5/21/2018	Parcel 3/U31	Destroyed	9/27/2018
BD Fuze	Fuze	3	3	No	5/21/2018	Parcel 3/AN28	Destroyed	9/27/2018
Booster	Booster	1	1	No	5/21/2018	Parcel 3/U31	Destroyed	8/28/2018
M83 Butterfly	Bomb	1	1	No	5/21/2018	Parcel 3/U31	Destroyed	8/14/2018
M83 Butterfly	Bomb	1	1	Yes	5/21/2018	Parcel 3/AN28	BIP	5/25/2018
PD Fuze	Fuze	8	3	No	5/21/2018	Parcel 3/AF30	Destroyed	9/20/2018

TABLE 3-4
MEC RECOVERED
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
PD Fuze	Fuze	2	4	No	5/21/2018	Parcel 3/U31	Destroyed	9/20/2018
PD Fuze	Fuze	2	5	No	5/21/2018	Parcel 3/AE30	Destroyed	9/20/2018
PD Fuze	Fuze	11	1	No	5/21/2018	Parcel 3/AN28	Destroyed	9/20/2018
37mm	Projectile	2	2	No	5/22/2018	Parcel 3/U31	Destroyed	8/14/2018
37mm	Projectile	7	4	No	5/22/2018	Parcel 3/AN28	Destroyed	8/14/2018
40mm	Projectile	2	3	No	5/22/2018	Parcel 3/AE30	Destroyed	8/8/2018
60mm	Projectile	1	5	No	5/22/2018	Parcel 3/AE30	Destroyed	8/16/2018
AN-M110	Fuze	1	1	No	5/22/2018	Parcel 3/AE30	BIP	5/25/2018
BD Fuze	Fuze	2	4	No	5/22/2018	Parcel 3/U31	Destroyed	9/27/2018
BD Fuze	Fuze	4	2	No	5/22/2018	Parcel 3/AN28	Destroyed	9/27/2018
Blu-4	Bomb	1	6	No	5/22/2018	Parcel 3/C33	Destroyed	3/5/2019
Booster	Booster	1	1	No	5/22/2018	Parcel 3/U31	Destroyed	8/28/2018
M83 Butterfly	Bomb	1	2	Yes	5/22/2018	Parcel 3/AE30	BIP	5/25/2018
PD Fuze	Fuze	3	2	No	5/22/2018	Parcel 3/U31	Destroyed	9/20/2018
PD Fuze	Fuze	9	3	No	5/22/2018	Parcel 3/AN28	Destroyed	9/20/2018
PD Fuze	Projectile	7	4	No	5/22/2018	Parcel 3/AE30	Destroyed	9/20/2018
37mm	Projectile	1	5	No	5/23/2018	Parcel 3/AE30	Destroyed	8/14/2018
37mm	Projectile	7	1	No	5/23/2018	Parcel 3/V31	Destroyed	8/14/2018
37mm	Projectile	3	4	No	5/23/2018	Parcel 3/AM28	Destroyed	8/14/2018
40mm	Projectile	4	1	No	5/23/2018	Parcel 3/V31	Destroyed	8/8/2018
40mm	Projectile	1	4	No	5/23/2018	Parcel 3/AM28	Destroyed	8/8/2018
40mm	Projectile	1	1	Yes	5/23/2018	Parcel 3/AE30	Destroyed	11/18/2019
BD Fuze	Fuze	5	2	No	5/23/2018	Parcel 3/V31	Destroyed	9/27/2018
BD Fuze	Fuze	2	1	No	5/23/2018	Parcel 3/AM28	Destroyed	9/27/2018
Blu-3	Bomb	1	1	No	5/23/2018	Parcel 3/V31	Destroyed	8/14/2018
PD Fuze	Fuze	1	2	No	5/23/2018	Parcel 3/AE30	Destroyed	9/20/2018
PD Fuze	Fuze	6	4	No	5/23/2018	Parcel 3/V31	Destroyed	9/20/2018
PD Fuze	Fuze	14	3	No	5/23/2018	Parcel 3/AM28	Destroyed	9/20/2018
37mm	Projectile	2	4	No	5/24/2018	Parcel 3/V31	Destroyed	8/14/2018
37mm	Projectile	2	4	No	5/24/2018	Parcel 3/AM28	Destroyed	8/14/2018
37mm	Projectile	3	1	No	5/24/2018	Parcel 3/AD30	Destroyed	8/14/2018
40mm	Projectile	1	4	No	5/24/2018	Parcel 3/V31	Destroyed	8/8/2018
40mm	Projectile	1	1	No	5/24/2018	Parcel 3/AM28	Destroyed	8/8/2018
60mm	Projectile	1	3	No	5/24/2018	Parcel 3/AD30	Destroyed	8/16/2018
BD Fuze	Fuze	3	1	No	5/24/2018	Parcel 3/V31	Destroyed	9/27/2018
BD Fuze	Fuze	2	4	No	5/24/2018	Parcel 3/AM28	Destroyed	9/27/2018
BD Fuze	Fuze	1	5	No	5/24/2018	Parcel 3/AD30	Destroyed	9/27/2018
Blu-3	Bomb	1	1	Yes	5/24/2018	Parcel 3/V31	BIP	5/25/2018
Booster	Booster	1	1	No	5/24/2018	Parcel 3/V31	Destroyed	8/28/2018
M131	Fuze	1	3	No	5/24/2018	Parcel 3/AD30	BIP	5/25/2018
PD Fuze	Fuze	4	1	No	5/24/2018	Parcel 3/V31	Destroyed	9/20/2018
PD Fuze	Fuze	6	3	No	5/24/2018	Parcel 3/AM28	Destroyed	9/20/2018
PD Fuze	Fuze	2	4	No	5/24/2018	Parcel 3/AD30	Destroyed	9/20/2018
37mm	Projectile	2	4	No	5/29/2018	Parcel 3/AD30	Destroyed	8/14/2018
37mm	Projectile	3	3	No	5/29/2018	Parcel 3/AM27	Destroyed	8/14/2018

TABLE 3-4
MEC RECOVERED
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
37mm	Projectile	1	2	Yes	5/29/2018	Parcel 3/AM27	Destroyed	12/10/2019
40mm	Projectile	1	4	No	5/29/2018	Parcel 3/C35	Destroyed	8/8/2018
40mm	Projectile	2	2	No	5/29/2018	Parcel 3/AD30	Destroyed	8/8/2018
40mm	Projectile	3	4	No	5/29/2018	Parcel 3/AM27	Destroyed	8/8/2018
60mm	Projectile	1	1	No	5/29/2018	Parcel 3/W31	Destroyed	8/16/2018
BD Fuze	Fuze	5	4	No	5/29/2018	Parcel 3/W31	Destroyed	9/27/2018
BD Fuze	Fuze	6	2	No	5/29/2018	Parcel 3/AM27	Destroyed	9/27/2018
Blu-3	Bomb	1	1	Yes	5/29/2018	Parcel 3/W31	BIP	6/2/2018
M83 Butterfly	Bomb	1	1	No	5/29/2018	Parcel 3/AM27	Destroyed	8/14/2018
M83 Butterfly	Bomb	1	3	Yes	5/29/2018	Parcel 3/AM27	BIP	6/2/2018
PD Fuze	Fuze	2	3	No	5/29/2018	Parcel 3/W31	Destroyed	9/20/2018
PD Fuze	Fuze	2	4	No	5/29/2018	Parcel 3/AD30	Destroyed	9/20/2018
PD Fuze	Fuze	10	2	No	5/29/2018	Parcel 3/AM27	Destroyed	9/20/2018
37mm	Projectile	4	3	No	5/30/2018	Parcel 3/AD30	Destroyed	8/14/2018
37mm	Projectile	1	2	No	5/30/2018	Parcel 3/AM27	Destroyed	8/14/2018
37mm	Projectile	4	4	No	5/30/2018	Parcel 3/W31	Destroyed	8/14/2018
40mm	Projectile	1	3	No	5/30/2018	Parcel 3/AD30	Destroyed	8/8/2018
40mm	Projectile	1	2	No	5/30/2018	Parcel 3/AM27	Destroyed	8/8/2018
BD Fuze	Fuze	1	4	No	5/30/2018	Parcel 3/AD30	Destroyed	9/27/2018
BD Fuze	Fuze	1	1	No	5/30/2018	Parcel 3/AM27	Destroyed	9/27/2018
BD Fuze	Fuze	4	1	No	5/30/2018	Parcel 3/W31	Destroyed	9/27/2018
Booster	Booster	1	5	No	5/30/2018	Parcel 3/AD30	Destroyed	8/28/2018
M83 Butterfly	Bomb	1	2	Yes	5/30/2018	Parcel 3/AD30	BIP	6/2/2018
PD Fuze	Fuze	2	1	No	5/30/2018	Parcel 3/AD30	Destroyed	9/20/2018
PD Fuze	Fuze	8	2	No	5/30/2018	Parcel 3/AM27	Destroyed	9/20/2018
PD Fuze	Fuze	6	3	No	5/30/2018	Parcel 3/W31	Destroyed	9/20/2018
37mm	Projectile	3	3	No	5/31/2018	Parcel 3/AD30	Destroyed	8/14/2018
37mm	Projectile	2	4	No	5/31/2018	Parcel 3/N30	Destroyed	8/14/2018
37mm	Projectile	3	2	No	5/31/2018	Parcel 3/AN27	Destroyed	8/14/2018
40mm	Projectile	2	4	No	5/31/2018	Parcel 3/C32	Destroyed	8/8/2018
40mm	Projectile	2	2	No	5/31/2018	Parcel 3/AN27	Destroyed	8/8/2018
57mm	Projectile	1	2	Yes	5/31/2018	Parcel 3/AD30	Destroyed	12/16/2019
60mm	Projectile	1	3	No	5/31/2018	Parcel 3/AN27	Destroyed	8/16/2018
BD Fuze	Fuze	1	1	No	5/31/2018	Parcel 3/N30	Destroyed	9/27/2018
BD Fuze	Fuze	3	3	No	5/31/2018	Parcel 3/AN27	Destroyed	9/27/2018
Blu-3	Bomb	1	0	No	5/31/2018	Parcel 3/C32	Destroyed	8/14/2018
PD Fuze	Fuze	5	3	No	5/31/2018	Parcel 3/AD30	Destroyed	9/20/2018
PD Fuze	Fuze	6	4	No	5/31/2018	Parcel 3/AN27	Destroyed	9/20/2018
37mm	Projectile	5	2	No	6/1/2018	Parcel 3/AN27	Destroyed	8/14/2018
37mm	Projectile	1	1	No	6/1/2018	Parcel 3/AC30	Destroyed	8/14/2018
40mm	Projectile	2	3	No	6/1/2018	Parcel 3/AN27	Destroyed	8/8/2018
40mm	Projectile	1	2	No	6/1/2018	Parcel 3/N30	Destroyed	8/8/2018
40mm	Projectile	1	1	No	6/1/2018	Parcel 3/AC30	Destroyed	8/8/2018
57mm	Projectile	1	8	Yes	6/1/2018	Parcel 3/AC30	Destroyed	12/16/2019
75mm	Projectile	1	1	No	6/1/2018	Parcel 3/N30	Destroyed	8/21/2018

TABLE 3-4
MEC RECOVERED
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
BD Fuze	Fuze	3	1	No	6/1/2018	Parcel 3/AN27	Destroyed	9/27/2018
BD Fuze	Fuze	1	3	No	6/1/2018	Parcel 3/N30	Destroyed	9/27/2018
BD Fuze	Fuze	1	1	No	6/1/2018	Parcel 3/AC30	Destroyed	9/27/2018
PD Fuze	Fuze	14	5	No	6/1/2018	Parcel 3/AN27	Destroyed	9/20/2018
PD Fuze	Fuze	1	4	No	6/1/2018	Parcel 3/N30	Destroyed	9/20/2018
PD Fuze	Fuze	6	1	No	6/1/2018	Parcel 3/AC30	Destroyed	9/20/2018
37mm	Projectile	2	3	No	6/4/2018	Parcel 3/N30	Destroyed	8/14/2018
37mm	Projectile	2	2	No	6/4/2018	Parcel 3/AC30	Destroyed	8/14/2018
37mm	Projectile	3	1	No	6/4/2018	Parcel 3/AO27	Destroyed	8/14/2018
40mm	Projectile	1	3	No	6/4/2018	Parcel 3/AC30	Destroyed	8/8/2018
57mm	Projectile	1	6	No	6/4/2018	Parcel 3/AC30	Destroyed	8/8/2018
BD Fuze	Fuze	1	1	No	6/4/2018	Parcel 3/N30	Destroyed	9/27/2018
BD Fuze	Fuze	2	6	No	6/4/2018	Parcel 3/AC30	Destroyed	9/27/2018
BD Fuze	Fuze	2	2	No	6/4/2018	Parcel 3/AO27	Destroyed	9/27/2018
Booster	Booster	1	1	No	6/4/2018	Parcel 3/N30	Destroyed	8/28/2018
PD Fuze	Fuze	5	3	No	6/4/2018	Parcel 3/AC30	Destroyed	9/20/2018
PD Fuze	Fuze	8	4	No	6/4/2018	Parcel 3/AO27	Destroyed	9/20/2018
37mm	Projectile	4	1	No	6/5/2018	Parcel 3/O30	Destroyed	8/14/2018
37mm	Projectile	3	1	No	6/5/2018	Parcel 3/AO27	Destroyed	8/14/2018
40mm	Projectile	1	4	No	6/5/2018	Parcel 3/AC30	Destroyed	8/8/2018
40mm	Projectile	1	2	No	6/5/2018	Parcel 3/AO27	Destroyed	8/8/2018
40mm	Projectile	1	2	Yes	6/5/2018	Parcel 3/AO27	Destroyed	11/18/2019
BD Fuze	Fuze	3	3	No	6/5/2018	Parcel 3/O30	Destroyed	9/27/2018
BD Fuze	Fuze	2	5	No	6/5/2018	Parcel 3/AC30	Destroyed	9/27/2018
BD Fuze	Fuze	4	1	No	6/5/2018	Parcel 3/AO27	Destroyed	9/27/2018
PD Fuze	Fuze	1	5	No	6/5/2018	Parcel 3/O30	Destroyed	9/20/2018
PD Fuze	Fuze	9	4	No	6/5/2018	Parcel 3/AC30	Destroyed	9/20/2018
PD Fuze	Fuze	14	1	No	6/5/2018	Parcel 3/AO27	Destroyed	9/20/2018
20mm	Projectile	1	1	No	6/6/2018	Parcel 3/O30	Destroyed	8/14/2018
37mm	Projectile	1	3	No	6/6/2018	Parcel 3/I28	Destroyed	8/14/2018
37mm	Projectile	4	1	No	6/6/2018	Parcel 3/O30	Destroyed	8/14/2018
37mm	Projectile	1	1	No	6/6/2018	Parcel 3/AP27	Destroyed	8/14/2018
40mm	Projectile	1	3	No	6/6/2018	Parcel 3/AO27	Destroyed	8/8/2018
40mm	Projectile	1	1	No	6/6/2018	Parcel 3/AP27	Destroyed	8/8/2018
BD Fuze	Fuze	2	1	No	6/6/2018	Parcel 3/O30	Destroyed	9/27/2018
BD Fuze	Fuze	1	1	No	6/6/2018	Parcel 3/AP27	Destroyed	9/27/2018
BD Fuze	Fuze	1	3	No	6/6/2018	Parcel 3/F32	Destroyed	9/27/2018
Blu-4	Bomb	1	2	No	6/6/2018	Parcel 3/F32	Destroyed	8/14/2018
Booster	Booster	1	2	No	6/6/2018	Parcel 3/I28	Destroyed	8/28/2018
Booster	Booster	2	1	No	6/6/2018	Parcel 3/O30	Destroyed	8/28/2018
M83 Butterfly	Bomb	1	1	Yes	6/6/2018	Parcel 3/AP27	BIP	6/15/2018
PD Fuze	Fuze	1	1	No	6/6/2018	Parcel 3/AO27	Destroyed	9/20/2018
PD Fuze	Fuze	3	1	No	6/6/2018	Parcel 3/O30	Destroyed	9/20/2018
PD Fuze	Fuze	4	1	No	6/6/2018	Parcel 3/AP27	Destroyed	9/20/2018
37mm	Projectile	3	1	No	6/7/2018	Parcel 3/AP27	Destroyed	8/14/2018

TABLE 3-4
MEC RECOVERED
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
37mm	Projectile	1	4	No	6/7/2018	Parcel 3/G32	Destroyed	8/14/2018
37mm	Projectile	1	1	Yes	6/7/2018	Parcel 3/AP27	Destroyed	12/10/2019
40mm	Projectile	1	1	No	6/7/2018	Parcel 3/O30	Destroyed	8/8/2018
40mm	Projectile	1	1	No	6/7/2018	Parcel 3/AP27	Destroyed	8/8/2018
57mm	Projectile	1	2	Yes	6/7/2018	Parcel 3/AP27	Destroyed	12/16/2019
BD Fuze	Fuze	2	1	No	6/7/2018	Parcel 3/O30	Destroyed	9/27/2018
BD Fuze	Fuze	4	1	No	6/7/2018	Parcel 3/AP27	Destroyed	9/27/2018
BD Fuze	Fuze	1	15	No	6/7/2018	Parcel 3/I28	Destroyed	9/27/2018
Booster	Booster	1	1	No	6/7/2018	Parcel 3/AP27	Destroyed	8/28/2018
Booster	Booster	1	3	No	6/7/2018	Parcel 3/I28	Destroyed	8/28/2018
M83 Butterfly	Bomb	1	1	No	6/7/2018	Parcel 3/AP27	Destroyed	8/14/2018
PD Fuze	Fuze	1	1	No	6/7/2018	Parcel 3/O30	Destroyed	9/20/2018
PD Fuze	Fuze	7	1	No	6/7/2018	Parcel 3/AP27	Destroyed	9/20/2018
PD Fuze	Fuze	2	3	No	6/7/2018	Parcel 3/I28	Destroyed	9/20/2018
37mm	Projectile	1	1	No	6/8/2018	Parcel 3/AP27	Destroyed	8/14/2018
40mm	Projectile	2	1	No	6/8/2018	Parcel 3/P30	Destroyed	8/8/2018
60mm	Projectile	1	3	No	6/8/2018	Parcel 3/AP27	Destroyed	8/16/2018
BD Fuze	Fuze	1	2	No	6/8/2018	Parcel 3/G32	Destroyed	9/27/2018
BD Fuze	Fuze	1	1	No	6/8/2018	Parcel 3/P30	Destroyed	9/27/2018
Booster	Booster	1	1	No	6/8/2018	Parcel 3/P30	Destroyed	8/28/2018
PD Fuze	Fuze	1	3	No	6/8/2018	Parcel 3/G32	Destroyed	9/20/2018
PD Fuze	Fuze	9	2	No	6/8/2018	Parcel 3/AP27	Destroyed	9/20/2018
PD Fuze	Fuze	1	4	No	6/8/2018	Parcel 3/I28	Destroyed	9/20/2018
37mm	Projectile	3	2	No	6/11/2018	Parcel 3/AQ27	Destroyed	8/14/2018
37mm	Projectile	2	1	No	6/11/2018	Parcel 3/P30	Destroyed	8/14/2018
37mm	Projectile	1	1	Yes	6/11/2018	Parcel 3/AQ27	Destroyed	12/10/2019
40mm	Projectile	1	1	No	6/11/2018	Parcel 3/P30	Destroyed	8/8/2018
BD Fuze	Fuze	1	2	No	6/11/2018	Parcel 3/AQ27	Destroyed	9/27/2018
BD Fuze	Fuze	1	1	No	6/11/2018	Parcel 3/P30	Destroyed	9/27/2018
Booster	Booster	1	3	No	6/11/2018	Parcel 3/I28	Destroyed	8/28/2018
PD Fuze	Fuze	6	3	No	6/11/2018	Parcel 3/AQ27	Destroyed	9/20/2018
PD Fuze	Fuze	1	4	No	6/11/2018	Parcel 3/I28	Destroyed	9/20/2018
105mm	Projectile	1	1	Yes	6/12/2018	Parcel 3/AQ27	Destroyed	6/6/2019
20mm	Projectile	1	1	No	6/12/2018	Parcel 3/P30	Destroyed	8/14/2018
37mm	Projectile	5	1	No	6/12/2018	Parcel 3/AQ27	Destroyed	8/14/2018
37mm	Projectile	2	1	No	6/12/2018	Parcel 3/P30	Destroyed	8/14/2018
37mm	Projectile	1	1	Yes	6/12/2018	Parcel 3/AQ27	Destroyed	12/10/2019
BD Fuze	Fuze	3	1	No	6/12/2018	Parcel 3/AQ27	Destroyed	9/27/2018
BD Fuze	Fuze	1	3	No	6/12/2018	Parcel 3/J28	Destroyed	9/27/2018
Blu-3	Bomb	2	1	Yes	6/12/2018	Parcel 3/J28	BIP	6/15/2018
Booster	Booster	1	1	No	6/12/2018	Parcel 3/P30	Destroyed	8/28/2018
PD Fuze	Fuze	4	1	No	6/12/2018	Parcel 3/AQ27	Destroyed	9/20/2018
PD Fuze	Fuze	3	1	No	6/12/2018	Parcel 3/P30	Destroyed	9/20/2018
37mm	Projectile	2	1	No	6/13/2018	Parcel 3/J28	Destroyed	8/14/2018
37mm	Projectile	3	2	No	6/13/2018	Parcel 3/Q30	Destroyed	8/14/2018

TABLE 3-4
MEC RECOVERED
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
37mm	Projectile	2	1	No	6/13/2018	Parcel 3/AQ26	Destroyed	8/14/2018
37mm	Projectile	1	4	Yes	6/13/2018	Parcel 3/AQ26	Destroyed	12/10/2019
40mm	Projectile	3	1	No	6/13/2018	Parcel 3/Q30	Destroyed	8/8/2018
40mm	Projectile	1	2	No	6/13/2018	Parcel 3/AQ26	Destroyed	8/8/2018
BD Fuze	Fuze	1	1	No	6/13/2018	Parcel 3/H33	Destroyed	9/27/2018
BD Fuze	Fuze	1	1	No	6/13/2018	Parcel 3/Q30	Destroyed	9/27/2018
BD Fuze	Fuze	2	1	No	6/13/2018	Parcel 3/AQ26	Destroyed	9/27/2018
Blu-3	Bomb	1	1	Yes	6/13/2018	Parcel 3/Q30	BIP	6/22/2018
Blu-4	Bomb	1	1	Yes	6/13/2018	Parcel 3/J28	BIP	6/15/2018
Booster	Booster	4	3	No	6/13/2018	Parcel 3/J28	Destroyed	8/28/2018
M83 Butterfly	Bomb	2	1	Yes	6/13/2018	Parcel 3/AQ26	BIP	6/15/2018
PD Fuze	Fuze	1	2	No	6/13/2018	Parcel 3/J28	Destroyed	9/20/2018
PD Fuze	Fuze	1	2	No	6/13/2018	Parcel 3/Q30	Destroyed	9/20/2018
PD Fuze	Fuze	4	1	No	6/13/2018	Parcel 3/AQ26	Destroyed	9/20/2018
37mm	Projectile	2	1	No	6/14/2018	Parcel 3/AP26	Destroyed	8/14/2018
37mm	Projectile	3	1	No	6/14/2018	Parcel 3/Q30	Destroyed	8/14/2018
40mm	Projectile	1	1	No	6/14/2018	Parcel 3/AP26	Destroyed	8/8/2018
40mm	Projectile	1	1	No	6/14/2018	Parcel 3/Q30	Destroyed	8/8/2018
60mm	Projectile	1	1	Yes	6/14/2018	Parcel 3/AP26	Destroyed	8/16/2018
BD Fuze	Fuze	2	1	No	6/14/2018	Parcel 3/AP26	Destroyed	9/27/2018
BD Fuze	Fuze	1	1	No	6/14/2018	Parcel 3/Q30	Destroyed	9/27/2018
Blu-4	Bomb	1	2	Yes	6/14/2018	Parcel 3/J28	BIP	6/15/2018
Booster	Booster	2	1	No	6/14/2018	Parcel 3/AP26	Destroyed	8/28/2018
Booster	Booster	1	3	No	6/14/2018	Parcel 3/J28	Destroyed	8/28/2018
M83 Butterfly	Bomb	1	1	No	6/14/2018	Parcel 3/AP26	Destroyed	8/14/2018
M83 Butterfly	Bomb	1	3	Yes	6/14/2018	Parcel 3/AP26	BIP	6/15/2018
PD Fuze	Fuze	1	3	No	6/14/2018	Parcel 3/AQ26	Destroyed	9/20/2018
PD Fuze	Fuze	2	1	No	6/14/2018	Parcel 3/Q30	Destroyed	9/20/2018
PD Fuze	Fuze	1	1	No	6/14/2018	Parcel 3/J28	Destroyed	9/20/2018
37mm	Projectile	4	3	No	6/18/2018	Parcel 3/AP26	Destroyed	8/14/2018
40mm	Projectile	1	1	No	6/18/2018	Parcel 3/AP26	Destroyed	8/8/2018
BD Fuze	Fuze	1	3	No	6/18/2018	Parcel 3/K28	Destroyed	9/27/2018
BD Fuze	Fuze	2	2	No	6/18/2018	Parcel 3/Q30	Destroyed	9/27/2018
BD Fuze	Fuze	2	1	No	6/18/2018	Parcel 3/AP26	Destroyed	9/27/2018
Booster	Booster	7	4	No	6/18/2018	Parcel 3/K28	Destroyed	8/28/2018
Booster	Booster	1	3	No	6/18/2018	Parcel 3/Q30	Destroyed	8/28/2018
M83 Butterfly	Bomb	1	1	Yes	6/18/2018	Parcel 3/AP26	BIP	6/22/2018
PD Fuze	Fuze	1	4	No	6/18/2018	Parcel 3/Q30	Destroyed	9/20/2018
PD Fuze	Fuze	12	2	No	6/18/2018	Parcel 3/AP26	Destroyed	9/20/2018
37mm	Projectile	2	2	No	6/20/2018	Parcel 3/K28	Destroyed	8/14/2018
37mm	Projectile	5	1	No	6/20/2018	Parcel 3/R30	Destroyed	8/14/2018
37mm	Projectile	6	1	No	6/20/2018	Parcel 3/AO26	Destroyed	8/14/2018
37mm	Projectile	1	6	Yes	6/20/2018	Parcel 3/AO26	Destroyed	12/10/2019
40mm	Projectile	3	1	No	6/20/2018	Parcel 3/R30	Destroyed	8/8/2018
40mm	Projectile	2	2	No	6/20/2018	Parcel 3/AO26	Destroyed	8/8/2018

TABLE 3-4
MEC RECOVERED
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
40mm	Projectile	1	2	Yes	6/20/2018	Parcel 3/AO26	Destroyed	11/18/2019
81mm	Projectile	1	1	No	6/20/2018	Parcel 3/R30	Destroyed	8/1/2019
BD Fuze	Fuze	2	4	No	6/20/2018	Parcel 3/K28	Destroyed	9/27/2018
BD Fuze	Fuze	6	2	No	6/20/2018	Parcel 3/R30	Destroyed	9/27/2018
BD Fuze	Fuze	3	3	No	6/20/2018	Parcel 3/AO26	Destroyed	9/27/2018
Booster	Booster	4	2	No	6/20/2018	Parcel 3/K28	Destroyed	8/28/2018
Booster	Booster	3	4	No	6/20/2018	Parcel 3/R30	Destroyed	8/28/2018
M83 Butterfly	Bomb	1	2	No	6/20/2018	Parcel 3/AO26	Destroyed	8/14/2018
PD Fuze	Fuze	3	4	No	6/20/2018	Parcel 3/R30	Destroyed	9/20/2018
PD Fuze	Fuze	20	2	No	6/20/2018	Parcel 3/AO26	Destroyed	9/20/2018
37mm	Projectile	1	2	No	6/21/2018	Parcel 3/H31	Destroyed	8/14/2018
BD Fuze	Fuze	3	1	No	6/21/2018	Parcel 3/R30	Destroyed	9/27/2018
BD Fuze	Fuze	2	4	No	6/21/2018	Parcel 3/L28	Destroyed	9/27/2018
Booster	Booster	2	5	No	6/21/2018	Parcel 3/R30	Destroyed	8/28/2018
Booster	Booster	2	1	No	6/21/2018	Parcel 3/L28	Destroyed	8/28/2018
M83 Butterfly	Bomb	1	1	Yes	6/21/2018	Parcel 3/AO26	BIP	6/22/2018
PD Fuze	Fuze	13	1	No	6/21/2018	Parcel 3/AO26	Destroyed	9/20/2018
Blu-3	Bomb	2	3	Yes	6/22/2018	Parcel 3/L28	BIP	6/22/2018
20mm	Projectile	1	1	No	6/25/2018	Parcel 3/R31	Destroyed	8/14/2018
3.5" Rocket Motor	Rocket	1	1	No	6/25/2018	Parcel 3/AN26	Destroyed	8/14/2018
37mm	Projectile	1	1	No	6/25/2018	Parcel 3/L28	Destroyed	8/14/2018
37mm	Projectile	3	1	No	6/25/2018	Parcel 3/R31	Destroyed	8/14/2018
37mm	Projectile	8	2	No	6/25/2018	Parcel 3/AN26	Destroyed	8/14/2018
40mm	Projectile	3	1	No	6/25/2018	Parcel 3/R31	Destroyed	8/8/2018
BD Fuze	Fuze	3	4	No	6/25/2018	Parcel 3/L28	Destroyed	9/27/2018
BD Fuze	Fuze	5	1	No	6/25/2018	Parcel 3/R31	Destroyed	9/27/2018
BD Fuze	Fuze	1	2	No	6/25/2018	Parcel 3/AN26	Destroyed	9/27/2018
Booster	Booster	4	3	No	6/25/2018	Parcel 3/L28	Destroyed	8/28/2018
PD Fuze	Fuze	2	1	No	6/25/2018	Parcel 3/R31	Destroyed	9/20/2018
PD Fuze	Fuze	12	1	No	6/25/2018	Parcel 3/AN26	Destroyed	9/20/2018
37mm	Projectile	2	1	No	6/26/2018	Parcel 3/AN26	Destroyed	8/14/2018
PD Fuze	Fuze	5	1	No	6/26/2018	Parcel 3/AN26	Destroyed	9/20/2018
37mm	Projectile	1	4	No	6/27/2018	Parcel 3/M28	Destroyed	8/14/2018
37mm	Projectile	3	1	No	6/27/2018	Parcel 3/Q31	Destroyed	8/14/2018
37mm	Projectile	4	1	No	6/27/2018	Parcel 3/AM26	Destroyed	8/14/2018
37mm	Projectile	1	1	Yes	6/27/2018	Parcel 3/AM26	Destroyed	12/10/2019
40mm	Projectile	1	3	No	6/27/2018	Parcel 3/M28	Destroyed	8/8/2018
40mm	Projectile	1	2	No	6/27/2018	Parcel 3/Q31	Destroyed	8/8/2018
40mm	Projectile	2	1	No	6/27/2018	Parcel 3/AM26	Destroyed	8/8/2018
60mm	Projectile	1	1	No	6/27/2018	Parcel 3/AM26	Destroyed	8/16/2018
BD Fuze	Fuze	1	1	No	6/27/2018	Parcel 3/Q31	Destroyed	9/27/2018
BD Fuze	Fuze	3	1	No	6/27/2018	Parcel 3/AM26	Destroyed	9/27/2018
Booster	Booster	2	3	No	6/27/2018	Parcel 3/M28	Destroyed	8/28/2018
M83 Butterfly	Bomb	1	1	No	6/27/2018	Parcel 3/AM26	Destroyed	8/14/2018
PD Fuze	Fuze	3	1	No	6/27/2018	Parcel 3/M28	Destroyed	9/20/2018

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MEC RECOVERED
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Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
PD Fuze	Fuze	3	3	No	6/27/2018	Parcel 3/Q31	Destroyed	9/20/2018
PD Fuze	Fuze	10	1	No	6/27/2018	Parcel 3/AM26	Destroyed	9/20/2018
20mm	Projectile	1	1	No	6/28/2018	Parcel 3/AM26	Destroyed	8/14/2018
37mm	Projectile	2	4	No	6/28/2018	Parcel 3/AM26	Destroyed	8/14/2018
37mm	Projectile	2	1	No	6/28/2018	Parcel 3/M28	Destroyed	8/14/2018
37mm	Projectile	2	3	No	6/28/2018	Parcel 3/Q31	Destroyed	8/14/2018
40mm	Projectile	1	1	No	6/28/2018	Parcel 3/Q31	Destroyed	8/8/2018
BD Fuze	Fuze	5	1	No	6/28/2018	Parcel 3/AM26	Destroyed	9/27/2018
BD Fuze	Fuze	1	1	No	6/28/2018	Parcel 3/Q31	Destroyed	9/27/2018
Booster	Booster	1	1	No	6/28/2018	Parcel 3/AM26	Destroyed	8/28/2018
Booster	Booster	1	1	No	6/28/2018	Parcel 3/Q31	Destroyed	8/28/2018
PD Fuze	Fuze	12	1	No	6/28/2018	Parcel 3/AM26	Destroyed	9/20/2018
PD Fuze	Fuze	1	3	No	6/28/2018	Parcel 3/M28	Destroyed	9/20/2018
PD Fuze	Fuze	2	1	No	6/28/2018	Parcel 3/Q31	Destroyed	9/20/2018
20mm	Projectile	1	1	No	7/9/2018	Parcel 3/AM25	Destroyed	8/14/2018
37mm	Projectile	1	1	No	7/9/2018	Parcel 3/M28	Destroyed	8/14/2018
37mm	Projectile	1	3	No	7/9/2018	Parcel 3/AM25	Destroyed	8/14/2018
40mm	Projectile	1	4	No	7/9/2018	Parcel 3/M28	Destroyed	8/8/2018
BD Fuze	Fuze	1	1	No	7/9/2018	Parcel 3/Q31	Destroyed	9/27/2018
BD Fuze	Fuze	2	1	No	7/9/2018	Parcel 3/AM25	Destroyed	9/27/2018
Blu-4	Bomb	1	1	Yes	7/9/2018	Parcel 3/M28	BIP	7/28/2018
M83 Butterfly	Bomb	1	1	No	7/9/2018	Parcel 3/AM25	Destroyed	8/14/2018
M83 Butterfly	Bomb	1	2	Yes	7/9/2018	Parcel 3/AM26	BIP	7/28/2018
M83 Butterfly	Bomb	1	1	Yes	7/9/2018	Parcel 3/AM25	BIP	7/28/2018
PD Fuze	Fuze	1	1	No	7/9/2018	Parcel 3/M28	Destroyed	9/20/2018
PD Fuze	Fuze	1	3	No	7/9/2018	Parcel 3/Q31	Destroyed	9/20/2018
PD Fuze	Fuze	8	1	No	7/9/2018	Parcel 3/AM25	Destroyed	9/20/2018
20mm	Projectile	1	1	No	7/10/2018	Parcel 3/AM25	Destroyed	8/14/2018
37mm	Projectile	2	1	No	7/10/2018	Parcel 3/AM25	Destroyed	8/14/2018
BD Fuze	Fuze	2	1	No	7/10/2018	Parcel 3/AM25	Destroyed	9/27/2018
PD Fuze	Fuze	9	1	No	7/10/2018	Parcel 3/AM25	Destroyed	9/20/2018
37mm	Projectile	6	1	No	7/11/2018	Parcel 3/AM25	Destroyed	8/14/2018
37mm	Projectile	2	1	No	7/11/2018	Parcel 3/P31	Destroyed	8/14/2018
40mm	Projectile	2	2	No	7/11/2018	Parcel 3/AM25	Destroyed	8/8/2018
40mm	Projectile	2	1	No	7/11/2018	Parcel 3/P31	Destroyed	8/8/2018
60mm	Projectile	1	3	Yes	7/11/2018	Parcel 3/AM25	Destroyed	8/16/2018
BD Fuze	Fuze	3	1	No	7/11/2018	Parcel 3/AM25	Destroyed	9/27/2018
BD Fuze	Fuze	5	2	No	7/11/2018	Parcel 3/P31	Destroyed	9/27/2018
Booster	Booster	1	1	No	7/11/2018	Parcel 3/P31	Destroyed	8/28/2018
PD Fuze	Fuze	14	2	No	7/11/2018	Parcel 3/AM25	Destroyed	9/20/2018
20mm	Projectile	1	1	No	7/13/2018	Parcel 3/AN25	Destroyed	8/14/2018
37mm	Projectile	4	2	No	7/13/2018	Parcel 3/AN25	Destroyed	8/14/2018
37mm	Projectile	1	2	No	7/13/2018	Parcel 3/M29	Destroyed	8/14/2018
37mm	Projectile	1	1	Yes	7/13/2018	Parcel 3/M29	Destroyed	12/10/2019
40mm	Projectile	3	3	No	7/13/2018	Parcel 3/AN25	Destroyed	8/8/2018

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FORT WINGATE DEPOT ACTIVITY
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Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
40mm	Projectile	2	1	No	7/13/2018	Parcel 3/O31	Destroyed	8/8/2018
40mm	Projectile	2	2	No	7/13/2018	Parcel 3/M29	Destroyed	8/8/2018
BD Fuze	Fuze	2	5	No	7/13/2018	Parcel 3/O31	Destroyed	9/27/2018
BD Fuze	Fuze	2	3	No	7/13/2018	Parcel 3/M29	Destroyed	9/27/2018
Blu-3	Bomb	1	1	Yes	7/13/2018	Parcel 3/O31	BIP	7/28/2018
Blu-3	Bomb	2	1	Yes	7/13/2018	Parcel 3/M29	BIP	7/28/2018
Booster	Booster	2	2	No	7/13/2018	Parcel 3/O31	Destroyed	8/28/2018
Booster	Booster	4	3	No	7/13/2018	Parcel 3/M29	Destroyed	8/28/2018
M83 Butterfly	Bomb	1	1	Yes	7/13/2018	Parcel 3/AN25	BIP	7/28/2018
PD Fuze	Fuze	7	1	No	7/13/2018	Parcel 3/AN25	Destroyed	9/20/2018
PD Fuze	Fuze	3	2	No	7/13/2018	Parcel 3/O31	Destroyed	9/20/2018
20mm	Projectile	1	1	No	7/16/2018	Parcel 3/O31	Destroyed	8/14/2018
37mm	Projectile	1	1	No	7/16/2018	Parcel 3/AN25	Destroyed	8/14/2018
37mm	Projectile	2	1	No	7/16/2018	Parcel 3/O31	Destroyed	8/14/2018
37mm	Projectile	1	1	Yes	7/16/2018	Parcel 3/AN25	Destroyed	12/10/2019
40mm	Projectile	2	1	No	7/16/2018	Parcel 3/AN25	Destroyed	8/8/2018
40mm	Projectile	3	1	No	7/16/2018	Parcel 3/O31	Destroyed	8/8/2018
BD Fuze	Fuze	3	1	No	7/16/2018	Parcel 3/AN25	Destroyed	9/27/2018
BD Fuze	Fuze	3	1	No	7/16/2018	Parcel 3/O31	Destroyed	9/27/2018
Booster	Booster	3	1	No	7/16/2018	Parcel 3/O31	Destroyed	8/28/2018
PD Fuze	Fuze	1	1	No	7/16/2018	Parcel 3/AN25	Destroyed	9/20/2018
PD Fuze	Fuze	2	1	No	7/16/2018	Parcel 3/O31	Destroyed	9/20/2018
40mm	Projectile	1	6	No	7/17/2018	Parcel 3/L29	Destroyed	8/8/2018
BD Fuze	Fuze	1	5	No	7/17/2018	Parcel 3/L29	Destroyed	9/27/2018
Booster	Booster	1	3	No	7/17/2018	Parcel 3/L29	Destroyed	8/28/2018
PD Fuze	Fuze	1	5	No	7/17/2018	Parcel 3/L29	Destroyed	9/20/2018
37mm	Projectile	3	1	No	7/19/2018	Parcel 3/AO25	Destroyed	8/14/2018
37mm	Projectile	1	1	No	7/19/2018	Parcel 3/AN25	Destroyed	8/14/2018
37mm	Projectile	1	1	No	7/19/2018	Parcel 3/N31	Destroyed	8/14/2018
40mm	Projectile	1	1	No	7/19/2018	Parcel 3/AO25	Destroyed	8/8/2018
40mm	Projectile	1	1	No	7/19/2018	Parcel 3/AN25	Destroyed	8/8/2018
40mm	Projectile	2	1	No	7/19/2018	Parcel 3/N31	Destroyed	8/8/2018
BD Fuze	Fuze	3	1	No	7/19/2018	Parcel 3/N31	Destroyed	9/27/2018
Blu-3	Bomb	1	1	Yes	7/19/2018	Parcel 3/N31	BIP	7/28/2018
Booster	Booster	5	1	No	7/19/2018	Parcel 3/N31	Destroyed	8/28/2018
M83 Butterfly	Bomb	1	1	Yes	7/19/2018	Parcel 3/AO25	BIP	7/28/2018
M83 Butterfly	Bomb	1	1	Yes	7/19/2018	Parcel 3/N31	BIP	7/28/2018
PD Fuze	Fuze	10	1	No	7/19/2018	Parcel 3/AN25	Destroyed	9/20/2018
PD Fuze	Fuze	3	1	No	7/19/2018	Parcel 3/N31	Destroyed	9/20/2018
37mm	Projectile	5	1	No	7/20/2018	Parcel 3/AO25	Destroyed	8/14/2018
37mm	Projectile	1	1	No	7/20/2018	Parcel 3/K29	Destroyed	8/14/2018
40mm	Projectile	1	4	No	7/20/2018	Parcel 3/AO25	Destroyed	8/8/2018
BD Fuze	Fuze	4	1	No	7/20/2018	Parcel 3/AO25	Destroyed	9/27/2018
BD Fuze	Fuze	1	3	No	7/20/2018	Parcel 3/K29	Destroyed	9/27/2018
Blu-3	Bomb	1	1	No	7/20/2018	Parcel 3/AO25	Destroyed	8/14/2018

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Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
Booster	Booster	5	4	No	7/20/2018	Parcel 3/K29	Destroyed	8/28/2018
M83 Butterfly	Bomb	1	1	Yes	7/20/2018	Parcel 3/AO25	BIP	7/28/2018
PD Fuze	Fuze	4	3	No	7/20/2018	Parcel 3/AO25	Destroyed	9/20/2018
PD Fuze	Fuze	3	2	No	7/20/2018	Parcel 3/K29	Destroyed	9/20/2018
37mm	Projectile	2	1	No	7/23/2018	Parcel 3/P32	Destroyed	8/14/2018
40mm	Projectile	2	1	No	7/23/2018	Parcel 3/P32	Destroyed	8/8/2018
AN-M110	Fuze	1	0	Yes	7/23/2018	Parcel 3/AO25	BIP	7/28/2018
AN-M110	Fuze	1	0	Yes	7/23/2018	Parcel 3/AO25	BIP	7/28/2018
BD Fuze	Fuze	2	1	No	7/23/2018	Parcel 3/AO25	Destroyed	9/27/2018
BD Fuze	Fuze	4	1	No	7/23/2018	Parcel 3/P32	Destroyed	9/27/2018
Booster	Booster	1	2	No	7/23/2018	Parcel 3/AO25	Destroyed	8/28/2018
PD Fuze	Fuze	2	1	No	7/23/2018	Parcel 3/AO25	Destroyed	9/20/2018
PD Fuze	Fuze	2	1	No	7/23/2018	Parcel 3/P32	Destroyed	9/20/2018
37mm	Projectile	3	1	No	7/25/2018	Parcel 3/O32	Destroyed	8/14/2018
37mm	Projectile	1	3	No	7/25/2018	Parcel 3/J29	Destroyed	8/14/2018
BD Fuze	Fuze	2	1	No	7/25/2018	Parcel 3/O32	Destroyed	9/27/2018
Booster	Booster	5	3	No	7/25/2018	Parcel 3/J29	Destroyed	8/28/2018
Booster	Fuze	4	2	No	7/25/2018	Parcel 3/O32	Destroyed	8/28/2018
PD Fuze	Fuze	1	6	No	7/25/2018	Parcel 3/J29	Destroyed	9/20/2018
20lb Frag	Bomb	2	2	No	7/26/2018	Parcel 3/AP25	Destroyed	8/28/2018
37mm	Projectile	3	1	No	7/26/2018	Parcel 3/AP25	Destroyed	8/14/2018
37mm	Projectile	3	1	No	7/26/2018	Parcel 3/Q32	Destroyed	8/14/2018
37mm	Projectile	1	1	Yes	7/26/2018	Parcel 3/Q32	Destroyed	12/10/2019
40mm	Projectile	1	1	No	7/26/2018	Parcel 3/AP25	Destroyed	8/8/2018
40mm	Projectile	1	1	No	7/26/2018	Parcel 3/Q32	Destroyed	8/8/2018
BD Fuze	Fuze	5	1	No	7/26/2018	Parcel 3/AP25	Destroyed	9/27/2018
Blu-3	Bomb	1	1	Yes	7/26/2018	Parcel 3/J29	BIP	7/28/2018
Booster	Booster	1	1	No	7/26/2018	Parcel 3/AP25	Destroyed	8/28/2018
Booster	Booster	1	1	No	7/26/2018	Parcel 3/Q32	Destroyed	8/28/2018
M83 Butterfly	Bomb	1	0	No	7/26/2018	Parcel 3/AP25	Destroyed	8/14/2018
M83 Butterfly	Bomb	1	1	Yes	7/26/2018	Parcel 3/AP25	BIP	7/28/2018
PD Fuze	Fuze	9	1	No	7/26/2018	Parcel 3/AP25	Destroyed	9/20/2018
PD Fuze	Fuze	2	1	No	7/26/2018	Parcel 3/Q32	Destroyed	9/20/2018
37mm	Projectile	1	1	No	7/27/2018	Parcel 3/AP25	Destroyed	8/14/2018
37mm	Projectile	1	1	No	7/27/2018	Parcel 3/I29	Destroyed	8/14/2018
37mm	Projectile	1	2	Yes	7/27/2018	Parcel 3/AP25	Destroyed	12/10/2019
40mm	Projectile	1	1	No	7/27/2018	Parcel 3/AP25	Destroyed	8/8/2018
BD Fuze	Fuze	2	1	No	7/27/2018	Parcel 3/AP25	Destroyed	9/27/2018
BD Fuze	Fuze	1	1	No	7/27/2018	Parcel 3/I29	Destroyed	9/27/2018
Booster	Booster	3	1	No	7/27/2018	Parcel 3/I29	Destroyed	8/28/2018
M83 Butterfly	Bomb	1	1	Yes	7/27/2018	Parcel 3/AP25	BIP	7/28/2018
PD Fuze	Fuze	7	1	No	7/27/2018	Parcel 3/AP25	Destroyed	9/20/2018
PD Fuze	Fuze	1	2	No	7/27/2018	Parcel 3/I29	Destroyed	9/20/2018
37mm	Projectile	3	1	No	7/30/2018	Parcel 3/R32	Destroyed	8/14/2018
40mm	Projectile	2	1	No	7/30/2018	Parcel 3/R32	Destroyed	8/8/2018

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FORT WINGATE DEPOT ACTIVITY
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Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
BD Fuze	Fuze	9	1	No	7/30/2018	Parcel 3/R32	Destroyed	9/27/2018
Booster	Booster	1	3	No	7/30/2018	Parcel 3/I29	Destroyed	8/28/2018
PD Fuze	Fuze	5	1	No	7/30/2018	Parcel 3/R32	Destroyed	9/20/2018
37mm	Projectile	3	1	No	7/31/2018	Parcel 3/R35	Destroyed	8/14/2018
37mm	Projectile	3	2	No	7/31/2018	Parcel 3/AP25	Destroyed	8/14/2018
37mm	Projectile	1	2	Yes	7/31/2018	Parcel 3/AP25	Destroyed	12/10/2019
40mm	Projectile	1	2	No	7/31/2018	Parcel 3/R35	Destroyed	8/8/2018
40mm	Projectile	4	3	No	7/31/2018	Parcel 3/AP25	Destroyed	8/8/2018
60mm	Projectile	1	2	Yes	7/31/2018	Parcel 3/AP25	Destroyed	8/16/2018
BD Fuze	Fuze	2	1	No	7/31/2018	Parcel 3/R35	Destroyed	9/27/2018
BD Fuze	Fuze	1	1	No	7/31/2018	Parcel 3/AP25	Destroyed	9/27/2018
PD Fuze	Fuze	16	3	No	7/31/2018	Parcel 3/AP25	Destroyed	9/20/2018
BD Fuze	Fuze	3	3	No	8/1/2018	Parcel 3/M33	Destroyed	9/27/2018
BD Fuze	Fuze	3	2	No	8/1/2018	Parcel 3/R35	Destroyed	9/27/2018
Booster	Booster	1	1	No	8/1/2018	Parcel 3/M33	Destroyed	8/28/2018
PD Fuze	Fuze	1	1	No	8/1/2018	Parcel 3/R35	Destroyed	9/20/2018
37mm	Projectile	4	2	No	8/2/2018	Parcel 3/AQ25	Destroyed	8/14/2018
37mm	Projectile	1	1	Yes	8/2/2018	Parcel 3/AQ25	Destroyed	12/10/2019
40mm	Projectile	1	1	No	8/2/2018	Parcel 3/AQ25	Destroyed	8/8/2018
AN-M110	Fuze	1	1	Yes	8/2/2018	Parcel 3/Q35	BIP	8/18/2018
BD Fuze	Fuze	1	2	No	8/2/2018	Parcel 3/L33	Destroyed	9/27/2018
BD Fuze	Fuze	3	1	No	8/2/2018	Parcel 3/AQ25	Destroyed	9/27/2018
Booster	Booster	2	1	No	8/2/2018	Parcel 3/L33	Destroyed	8/28/2018
Bulk HE	HE	1	0	No	8/2/2018	Parcel 3/AQ25	Destroyed	9/27/2018
PD Fuze	Fuze	1	1	No	8/2/2018	Parcel 3/L33	Destroyed	9/20/2018
PD Fuze	Fuze	2	2	No	8/2/2018	Parcel 3/Q35	Destroyed	9/20/2018
PD Fuze	Fuze	12	3	No	8/2/2018	Parcel 3/AQ25	Destroyed	9/20/2018
37mm	Projectile	3	2	No	8/3/2018	Parcel 3/AQ25	Destroyed	8/14/2018
37mm	Projectile	1	2	Yes	8/3/2018	Parcel 3/L33	Destroyed	12/10/2019
37mm	Projectile	1	1	Yes	8/3/2018	Parcel 3/AQ25	Destroyed	12/10/2019
40mm	Projectile	2	2	No	8/3/2018	Parcel 3/AQ25	Destroyed	8/8/2018
BD Fuze	Fuze	1	3	No	8/3/2018	Parcel 3/AQ25	Destroyed	9/27/2018
Booster	Booster	1	2	No	8/3/2018	Parcel 3/L33	Destroyed	8/28/2018
PD Fuze	Fuze	7	3	No	8/3/2018	Parcel 3/AQ25	Destroyed	9/20/2018
Blu-3	Bomb	1	2	Yes	8/6/2018	Parcel 3/K33	BIP	8/18/2018
37mm	Projectile	4	2	No	8/7/2018	Parcel 3/X26	Destroyed	8/14/2018
37mm	Projectile	1	1	No	8/7/2018	Parcel 3/P35	Destroyed	8/14/2018
37mm	Projectile	1	1	No	8/7/2018	Parcel 3/K33	Destroyed	8/14/2018
37mm	Projectile	1	2	Yes	8/7/2018	Parcel 3/K33	Destroyed	12/10/2019
40mm	Projectile	2	1	No	8/7/2018	Parcel 3/X26	Destroyed	8/8/2018
75mm	Projectile	1	6	No	8/7/2018	Parcel 3/P35	Destroyed	8/21/2018
BD Fuze	Fuze	5	3	No	8/7/2018	Parcel 3/X26	Destroyed	9/27/2018
BD Fuze	Fuze	4	2	No	8/7/2018	Parcel 3/P35	Destroyed	9/27/2018
BD Fuze	Fuze	3	1	No	8/7/2018	Parcel 3/K33	Destroyed	9/27/2018
PD Fuze	Fuze	2	2	No	8/7/2018	Parcel 3/X26	Destroyed	9/20/2018

TABLE 3-4
MEC RECOVERED
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
PD Fuze	Fuze	1	1	No	8/7/2018	Parcel 3/K33	Destroyed	9/20/2018
37mm	Projectile	1	1	No	8/8/2018	Parcel 3/O35	Destroyed	8/14/2018
37mm	Projectile	1	1	No	8/8/2018	Parcel 3/X26	Destroyed	8/14/2018
40mm	Projectile	1	3	No	8/8/2018	Parcel 3/X26	Destroyed	9/11/2018
BD Fuze	Fuze	2	2	No	8/8/2018	Parcel 3/J33	Destroyed	9/27/2018
BD Fuze	Fuze	5	2	No	8/8/2018	Parcel 3/O35	Destroyed	9/27/2018
BD Fuze	Fuze	3	1	No	8/8/2018	Parcel 3/X26	Destroyed	9/27/2018
Booster	Booster	1	2	No	8/8/2018	Parcel 3/X26	Destroyed	8/28/2018
M83 Butterfly	Bomb	1	1	Yes	8/8/2018	Parcel 3/X26	BIP	8/18/2018
PD Fuze	Fuze	1	3	No	8/8/2018	Parcel 3/O35	Destroyed	9/20/2018
PD Fuze	Fuze	4	1	No	8/8/2018	Parcel 3/X26	Destroyed	9/20/2018
37mm	Projectile	3	3	No	8/9/2018	Parcel 3/X26	Destroyed	8/14/2018
37mm	Projectile	1	2	No	8/9/2018	Parcel 3/I33	Destroyed	8/14/2018
40mm	Projectile	1	3	No	8/9/2018	Parcel 3/X26	Destroyed	9/11/2018
40mm	Projectile	1	2	No	8/9/2018	Parcel 3/I33	Destroyed	9/11/2018
BD Fuze	Fuze	1	2	No	8/9/2018	Parcel 3/X26	Destroyed	9/27/2018
BD Fuze	Fuze	3	3	No	8/9/2018	Parcel 3/I33	Destroyed	9/27/2018
PD Fuze	Fuze	1	1	No	8/9/2018	Parcel 3/X26	Destroyed	9/20/2018
37mm	Projectile	1	2	No	8/10/2018	Parcel 3/X26	Destroyed	8/14/2018
40mm	Projectile	1	1	No	8/10/2018	Parcel 3/N35	Destroyed	9/11/2018
40mm	Projectile	1	2	No	8/10/2018	Parcel 3/X26	Destroyed	9/11/2018
BD Fuze	Fuze	4	3	No	8/10/2018	Parcel 3/X26	Destroyed	9/27/2018
Blu-4	Bomb	1	3	Yes	8/10/2018	Parcel 3/I33	BIP	8/18/2018
Booster	Booster	1	1	No	8/10/2018	Parcel 3/X26	Destroyed	8/28/2018
M83 Butterfly	Bomb	1	1	Yes	8/10/2018	Parcel 3/N35	BIP	8/18/2018
PD Fuze	Fuze	4	3	No	8/10/2018	Parcel 3/X26	Destroyed	9/20/2018
20mm	Projectile	1	4	No	8/13/2018	Parcel 3/X26	Destroyed	8/14/2018
37mm	Projectile	3	3	No	8/13/2018	Parcel 3/X26	Destroyed	8/14/2018
37mm	Projectile	2	2	No	8/13/2018	Parcel 3/I32	Destroyed	8/14/2018
40mm	Projectile	4	4	No	8/13/2018	Parcel 3/X26	Destroyed	9/11/2018
BD Fuze	Fuze	1	2	No	8/13/2018	Parcel 3/X26	Destroyed	9/27/2018
BD Fuze	Fuze	2	5	No	8/13/2018	Parcel 3/I32	Destroyed	9/27/2018
Booster	Booster	1	2	No	8/13/2018	Parcel 3/X26	Destroyed	8/28/2018
Booster	Booster	2	3	No	8/13/2018	Parcel 3/I32	Destroyed	8/28/2018
PD Fuze	Fuze	12	3	No	8/13/2018	Parcel 3/X26	Destroyed	9/20/2018
37mm	Projectile	3	3	No	8/14/2018	Parcel 3/X26	Destroyed	9/11/2018
37mm	Projectile	2	1	No	8/14/2018	Parcel 3/N34	Destroyed	9/11/2018
40mm	Projectile	1	2	No	8/14/2018	Parcel 3/X26	Destroyed	9/11/2018
40mm	Projectile	1	1	No	8/14/2018	Parcel 3/N34	Destroyed	9/11/2018
60mm	Projectile	1	6	No	8/14/2018	Parcel 3/X26	Destroyed	8/16/2018
BD Fuze	Fuze	3	2	No	8/14/2018	Parcel 3/X26	Destroyed	9/27/2018
BD Fuze	Fuze	1	1	No	8/14/2018	Parcel 3/N34	Destroyed	9/27/2018
Booster	Booster	1	1	No	8/14/2018	Parcel 3/X26	Destroyed	8/28/2018
Booster	Booster	1	1	No	8/14/2018	Parcel 3/N34	Destroyed	8/28/2018
Bulk HE	HE	1	0	No	8/14/2018	Parcel 3/X26	Destroyed	1/30/2019

TABLE 3-4
MEC RECOVERED
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
PD Fuze	Fuze	8	2	No	8/14/2018	Parcel 3/X26	Destroyed	9/20/2018
PD Fuze	Fuze	1	1	No	8/14/2018	Parcel 3/N34	Destroyed	9/20/2018
37mm	Projectile	2	4	No	8/15/2018	Parcel 3/J32	Destroyed	9/11/2018
37mm	Projectile	1	2	No	8/15/2018	Parcel 3/X26	Destroyed	9/11/2018
37mm	Projectile	2	3	Yes	8/15/2018	Parcel 3/X26	Destroyed	12/10/2019
40mm	Projectile	4	5	No	8/15/2018	Parcel 3/J32	Destroyed	9/11/2018
75mm	Projectile	1	10	No	8/15/2018	Parcel 3/J32	Destroyed	8/21/2018
BD Fuze	Fuze	2	3	No	8/15/2018	Parcel 3/J32	Destroyed	9/27/2018
BD Fuze	Fuze	1	3	No	8/15/2018	Parcel 3/X26	Destroyed	9/27/2018
Booster	Booster	3	2	No	8/15/2018	Parcel 3/J32	Destroyed	8/28/2018
Booster	Booster	1	2	No	8/15/2018	Parcel 3/X26	Destroyed	8/28/2018
M83 Butterfly	Bomb	1	5	No	8/15/2018	Parcel 3/J32	Destroyed	9/11/2018
PD Fuze	Fuze	1	2	No	8/15/2018	Parcel 3/J32	Destroyed	9/20/2018
PD Fuze	Fuze	11	3	No	8/15/2018	Parcel 3/X26	Destroyed	9/20/2018
20mm	Projectile	1	1	No	8/16/2018	Parcel 3/O34	Destroyed	9/11/2018
BD Fuze	Fuze	3	1	No	8/16/2018	Parcel 3/O34	Destroyed	9/27/2018
PD Fuze	Fuze	1	1	No	8/16/2018	Parcel 3/O34	Destroyed	9/20/2018
37mm	Projectile	1	5	No	8/17/2018	Parcel 3/K32	Destroyed	9/11/2018
37mm	Projectile	6	6	No	8/17/2018	Parcel 3/AL30	Destroyed	9/11/2018
40mm	Projectile	2	3	No	8/17/2018	Parcel 3/K32	Destroyed	9/11/2018
40mm	Projectile	1	4	No	8/17/2018	Parcel 3/AL30	Destroyed	9/11/2018
BD Fuze	Fuze	1	5	No	8/17/2018	Parcel 3/K32	Destroyed	9/27/2018
BD Fuze	Fuze	3	6	No	8/17/2018	Parcel 3/AL30	Destroyed	9/27/2018
Booster	Booster	2	4	No	8/17/2018	Parcel 3/K32	Destroyed	8/28/2018
PD Fuze	Fuze	3	4	No	8/17/2018	Parcel 3/K32	Destroyed	9/20/2018
PD Fuze	Fuze	2	3	No	8/17/2018	Parcel 3/AL30	Destroyed	9/20/2018
37mm	Projectile	1	3	No	8/20/2018	Parcel 3/AL30	Destroyed	9/11/2018
37mm	Projectile	1	1	No	8/20/2018	Parcel 3/P34	Destroyed	9/11/2018
37mm	Projectile	1	3	No	8/20/2018	Parcel 3/L32	Destroyed	9/11/2018
40mm	Projectile	3	1	No	8/20/2018	Parcel 3/P34	Destroyed	9/11/2018
BD Fuze	Fuze	1	2	No	8/20/2018	Parcel 3/AL30	Destroyed	9/27/2018
BD Fuze	Fuze	2	6	No	8/20/2018	Parcel 3/P34	Destroyed	9/27/2018
BD Fuze	Fuze	3	3	No	8/20/2018	Parcel 3/L32	Destroyed	9/27/2018
Booster	Booster	3	3	No	8/20/2018	Parcel 3/L32	Destroyed	8/28/2018
M83 Butterfly	Bomb	1	1	Yes	8/20/2018	Parcel 3/AL30	BIP	8/24/2018
PD Fuze	Fuze	3	3	No	8/20/2018	Parcel 3/AL30	Destroyed	9/20/2018
PD Fuze	Fuze	3	4	No	8/20/2018	Parcel 3/P34	Destroyed	9/20/2018
20mm	Projectile	1	2	No	8/22/2018	Parcel 3/Q34	Destroyed	9/11/2018
37mm	Projectile	5	4	No	8/22/2018	Parcel 3/Q34	Destroyed	9/11/2018
37mm	Projectile	1	6	Yes	8/22/2018	Parcel 3/M32	Destroyed	12/10/2019
37mm	Projectile	2	3	Yes	8/22/2018	Parcel 3/Q34	Destroyed	12/10/2019
40mm	Projectile	1	4	No	8/22/2018	Parcel 3/M32	Destroyed	9/11/2018
40mm	Projectile	3	5	No	8/22/2018	Parcel 3/AK30	Destroyed	9/11/2018
57mm	Projectile	1	6	No	8/22/2018	Parcel 3/Q34	Destroyed	9/11/2018
75mm	Projectile	1	10	No	8/22/2018	Parcel 3/Q34	Destroyed	4/4/2019

TABLE 3-4
MEC RECOVERED
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
BD Fuze	Fuze	5	6	No	8/22/2018	Parcel 3/M32	Destroyed	9/27/2018
BD Fuze	Fuze	5	4	No	8/22/2018	Parcel 3/Q34	Destroyed	9/27/2018
BD Fuze	Fuze	3	3	No	8/22/2018	Parcel 3/AK30	Destroyed	9/27/2018
Booster	Booster	3	4	No	8/22/2018	Parcel 3/M32	Destroyed	8/28/2018
PD Fuze	Fuze	3	5	No	8/22/2018	Parcel 3/Q34	Destroyed	9/20/2018
PD Fuze	Fuze	5	6	No	8/22/2018	Parcel 3/AK30	Destroyed	9/20/2018
37mm	Projectile	1	4	No	8/24/2018	Parcel 3/R34	Destroyed	9/11/2018
37mm	Projectile	3	5	No	8/24/2018	Parcel 3/AK30	Destroyed	9/11/2018
37mm	Projectile	1	1	Yes	8/24/2018	Parcel 3/R34	Destroyed	12/10/2019
40mm	Projectile	1	6	No	8/24/2018	Parcel 3/M31	Destroyed	9/11/2018
40mm	Projectile	1	2	No	8/24/2018	Parcel 3/R34	Destroyed	9/11/2018
40mm	Projectile	1	2	No	8/24/2018	Parcel 3/AK30	Destroyed	9/11/2018
60mm	Projectile	1	3	No	8/24/2018	Parcel 3/M31	Destroyed	9/11/2018
75mm	Projectile	2	10	No	8/24/2018	Parcel 3/M31	Destroyed	4/4/2019
90mm	Projectile	1	3	No	8/24/2018	Parcel 3/M31	Destroyed	8/1/2019
BD Fuze	Fuze	4	2	No	8/24/2018	Parcel 3/M31	Destroyed	9/27/2018
BD Fuze	Fuze	7	3	No	8/24/2018	Parcel 3/R34	Destroyed	9/27/2018
Booster	Booster	3	3	No	8/24/2018	Parcel 3/M31	Destroyed	8/28/2018
PD Fuze	Fuze	3	5	No	8/24/2018	Parcel 3/M31	Destroyed	9/20/2018
PD Fuze	Fuze	1	4	No	8/24/2018	Parcel 3/R34	Destroyed	9/20/2018
PD Fuze	Fuze	7	6	No	8/24/2018	Parcel 3/AK30	Destroyed	9/20/2018
37mm	Projectile	2	6	No	8/28/2018	Parcel 3/AJ30	Destroyed	9/11/2018
37mm	Projectile	1	5	No	8/28/2018	Parcel 3/M34	Destroyed	9/11/2018
37mm	Projectile	1	2	No	8/28/2018	Parcel 3/L31	Destroyed	9/11/2018
40mm	Projectile	2	1	No	8/28/2018	Parcel 3/M34	Destroyed	9/11/2018
40mm	Projectile	1	4	No	8/28/2018	Parcel 3/L31	Destroyed	9/11/2018
BD Fuze	Fuze	3	6	No	8/28/2018	Parcel 3/AJ30	Destroyed	9/27/2018
BD Fuze	Fuze	2	5	No	8/28/2018	Parcel 3/M34	Destroyed	9/27/2018
Booster	Booster	3	4	No	8/28/2018	Parcel 3/L31	Destroyed	1/30/2019
PD Fuze	Fuze	11	6	No	8/28/2018	Parcel 3/AJ30	Destroyed	9/20/2018
PD Fuze	Fuze	1	5	No	8/28/2018	Parcel 3/M34	Destroyed	9/20/2018
PD Fuze	Fuze	1	4	No	8/28/2018	Parcel 3/L31	Destroyed	9/20/2018
37mm	Projectile	1	1	No	8/29/2018	Parcel 3/L34	Destroyed	9/11/2018
40mm	Projectile	1	6	No	8/29/2018	Parcel 3/AJ30	Destroyed	9/11/2018
BD Fuze	Fuze	1	3	No	8/29/2018	Parcel 3/L31	Destroyed	9/27/2018
BD Fuze	Fuze	5	1	No	8/29/2018	Parcel 3/L34	Destroyed	9/27/2018
Blu-3	Bomb	1	3	Yes	8/29/2018	Parcel 3/L31	BIP	8/30/2018
Blu-4	Bomb	1	2	Yes	8/29/2018	Parcel 3/L31	BIP	8/30/2018
PD Fuze	Fuze	1	6	No	8/29/2018	Parcel 3/L34	Destroyed	9/20/2018
PD Fuze	Fuze	3	7	No	8/29/2018	Parcel 3/AJ30	Destroyed	9/20/2018
Booster	Booster	1	1	No	9/4/2018	Parcel 3/F31	Destroyed	1/30/2019
37mm	Projectile	2	1	No	9/5/2018	Parcel 3/K34	Destroyed	9/11/2018
BD Fuze	Fuze	2	3	No	9/5/2018	Parcel 3/AI30	Destroyed	9/27/2018
BD Fuze	Fuze	2	2	No	9/5/2018	Parcel 3/K34	Destroyed	9/27/2018
Booster	Booster	3	1	No	9/5/2018	Parcel 3/K34	Destroyed	1/30/2019

TABLE 3-4
MEC RECOVERED
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
PD Fuze	Fuze	4	3	No	9/5/2018	Parcel 3/AI30	Destroyed	9/20/2018
PD Fuze	Fuze	1	2	No	9/5/2018	Parcel 3/K34	Destroyed	9/20/2018
37mm	Projectile	3	4	No	9/7/2018	Parcel 3/AI30	Destroyed	9/11/2018
37mm	Projectile	1	3	Yes	9/7/2018	Parcel 3/K31	Destroyed	12/10/2019
40mm	Projectile	1	4	No	9/7/2018	Parcel 3/K31	Destroyed	9/11/2018
40mm	Projectile	1	3	No	9/7/2018	Parcel 3/J34	Destroyed	9/11/2018
40mm	Projectile	3	4	No	9/7/2018	Parcel 3/AI30	Destroyed	9/11/2018
BD Fuze	Fuze	1	3	No	9/7/2018	Parcel 3/K31	Destroyed	9/27/2018
BD Fuze	Fuze	1	1	No	9/7/2018	Parcel 3/J34	Destroyed	9/27/2018
BD Fuze	Fuze	3	2	No	9/7/2018	Parcel 3/AI30	Destroyed	9/27/2018
Blu-3	Bomb	1	0	Yes	9/7/2018	Parcel 3/K31	BIP	9/8/2018
Booster	Booster	1	1	No	9/7/2018	Parcel 3/K31	Destroyed	1/30/2019
Booster	Booster	2	2	No	9/7/2018	Parcel 3/AI30	Destroyed	1/30/2019
M83 Butterfly	Bomb	1	6	Yes	9/7/2018	Parcel 3/AI30	BIP	9/8/2018
PD Fuze	Fuze	3	4	No	9/7/2018	Parcel 3/AI30	Destroyed	9/20/2018
37mm	Projectile	1	3	No	9/10/2018	Parcel 3/AI30	Destroyed	9/11/2018
40mm	Projectile	1	2	No	9/10/2018	Parcel 3/AI30	Destroyed	9/11/2018
BD Fuze	Fuze	7	3	No	9/10/2018	Parcel 3/AI30	Destroyed	9/27/2018
Booster	Booster	1	2	No	9/10/2018	Parcel 3/AI30	Destroyed	1/30/2019
M83 Butterfly	Bomb	1	3	Yes	9/10/2018	Parcel 3/AI30	BIP	9/15/2018
PD Fuze	Fuze	5	4	No	9/10/2018	Parcel 3/AI30	Destroyed	9/20/2018
37mm	Projectile	2	1	No	9/11/2018	Parcel 3/I34	Destroyed	11/1/2018
BD Fuze	Fuze	1	1	No	9/11/2018	Parcel 3/I34	Destroyed	9/27/2018
PD Fuze	Fuze	1	1	No	9/11/2018	Parcel 3/I34	Destroyed	9/20/2018
37mm	Projectile	3	2	No	9/12/2018	Parcel 3/I35	Destroyed	9/27/2018
37mm	Projectile	1	1	Yes	9/12/2018	Parcel 3/I31	Destroyed	12/10/2019
40mm	Projectile	1	1	No	9/12/2018	Parcel 3/I35	Destroyed	11/1/2018
BD Fuze	Fuze	1	3	No	9/12/2018	Parcel 3/I31	Destroyed	9/27/2018
Blu-4	Bomb	1	1	Yes	9/12/2018	Parcel 3/I35	BIP	9/15/2018
Booster	Booster	3	4	No	9/12/2018	Parcel 3/I31	Destroyed	1/30/2019
37mm	Projectile	8	4	No	9/13/2018	Parcel 3/AH30	Destroyed	11/1/2018
40mm	Projectile	2	2	No	9/13/2018	Parcel 3/AH30	Destroyed	11/1/2018
AN-M110	Fuze	1	1	Yes	9/13/2018	Parcel 3/AH30	BIP	9/15/2018
BD Fuze	Fuze	7	3	No	9/13/2018	Parcel 3/AH30	Destroyed	9/27/2018
PD Fuze	Fuze	11	4	No	9/13/2018	Parcel 3/AH30	Destroyed	9/20/2018
37mm	Projectile	2	1	No	9/14/2018	Parcel 3/J35	Destroyed	11/1/2018
40mm	Projectile	2	1	No	9/14/2018	Parcel 3/J35	Destroyed	11/1/2018
BD Fuze	Fuze	1	4	No	9/14/2018	Parcel 3/I30	Destroyed	9/27/2018
Booster	Booster	3	3	No	9/14/2018	Parcel 3/I30	Destroyed	1/30/2019
PD Fuze	Fuze	1	4	No	9/14/2018	Parcel 3/I30	Destroyed	9/20/2018
37mm	Projectile	2	4	No	9/17/2018	Parcel 3/AH30	Destroyed	11/1/2018
37mm	Projectile	3	3	No	9/17/2018	Parcel 3/AH29	Destroyed	11/1/2018
37mm	Projectile	2	2	Yes	9/17/2018	Parcel 3/K35	Destroyed	12/10/2019
40mm	Projectile	1	1	No	9/17/2018	Parcel 3/AH29	Destroyed	11/1/2018
BD Fuze	Fuze	5	3	No	9/17/2018	Parcel 3/AH30	Destroyed	9/27/2018

TABLE 3-4
MEC RECOVERED
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
BD Fuze	Fuze	2	4	No	9/17/2018	Parcel 3/K35	Destroyed	9/27/2018
M83 Butterfly	Bomb	2	3	No	9/17/2018	Parcel 3/AH30	Destroyed	3/5/2019
PD Fuze	Fuze	6	2	No	9/17/2018	Parcel 3/AH30	Destroyed	9/20/2018
PD Fuze	Fuze	1	1	No	9/17/2018	Parcel 3/AH29	Destroyed	9/20/2018
37mm	Projectile	4	4	No	9/18/2018	Parcel 3/AH29	Destroyed	11/1/2018
40mm	Projectile	1	4	No	9/18/2018	Parcel 3/AH29	Destroyed	11/1/2018
60mm	Projectile	1	4	No	9/18/2018	Parcel 3/AH29	Destroyed	3/5/2019
BD Fuze	Fuze	7	6	No	9/18/2018	Parcel 3/AH29	Destroyed	9/27/2018
Booster	Booster	1	1	No	9/18/2018	Parcel 3/AH29	Destroyed	1/30/2019
Booster	Booster	2	3	No	9/18/2018	Parcel 3/J30	Destroyed	1/30/2019
M83 Butterfly	Bomb	1	4	No	9/18/2018	Parcel 3/AH29	Destroyed	3/5/2019
PD Fuze	Fuze	8	4	No	9/18/2018	Parcel 3/AH29	Destroyed	9/20/2018
37mm	Projectile	1	1	No	9/19/2018	Parcel 3/L35	Destroyed	11/1/2018
37mm	Projectile	1	5	No	9/19/2018	Parcel 3/AH29	Destroyed	11/1/2018
37mm	Projectile	1	1	Yes	9/19/2018	Parcel 3/L35	Destroyed	12/10/2019
40mm	Projectile	1	1	No	9/19/2018	Parcel 3/L35	Destroyed	11/1/2018
BD Fuze	Fuze	2	3	No	9/19/2018	Parcel 3/L35	Destroyed	9/27/2018
BD Fuze	Fuze	4	4	No	9/19/2018	Parcel 3/AH29	Destroyed	9/27/2018
Blu-4	Bomb	1	1	Yes	9/19/2018	Parcel 3/K30	BIP	9/22/2018
PD Fuze	Fuze	1	3	No	9/19/2018	Parcel 3/L35	Destroyed	9/20/2018
PD Fuze	Fuze	8	4	No	9/19/2018	Parcel 3/AH29	Destroyed	9/20/2018
M83 Butterfly	Bomb	1	4	Yes	9/20/2018	Parcel 3/AH29	BIP	9/22/2018
M83 Butterfly	Bomb	1	0	Yes	9/20/2018	Parcel 3/K30	BIP	9/22/2018
M83 Butterfly	Bomb	1	0	Yes	9/20/2018	Parcel 3/K30	BIP	9/22/2018
37mm	Projectile	3	4	No	9/21/2018	Parcel 3/AH29	Destroyed	11/1/2018
40mm	Projectile	1	4	No	9/21/2018	Parcel 3/AH29	Destroyed	11/1/2018
BD Fuze	Fuze	1	1	No	9/21/2018	Parcel 3/M35	Destroyed	9/27/2018
BD Fuze	Fuze	1	4	No	9/21/2018	Parcel 3/AH29	Destroyed	9/27/2018
Booster	Booster	6	4	No	9/21/2018	Parcel 3/K30	Destroyed	1/30/2019
Booster	Booster	1	5	No	9/21/2018	Parcel 3/AH29	Destroyed	1/30/2019
M43	Fuze	1	2	Yes	9/21/2018	Parcel 3/K30	BIP	9/22/2018
PD Fuze	Fuze	1	3	No	9/21/2018	Parcel 3/M35	Destroyed	1/30/2019
PD Fuze	Fuze	9	4	No	9/21/2018	Parcel 3/AH29	Destroyed	1/30/2019
37mm	Projectile	2	5	No	9/24/2018	Parcel 3/AI29	Destroyed	11/1/2018
37mm	Projectile	1	2	Yes	9/24/2018	Parcel 3/AI29	Destroyed	12/10/2019
40mm	Projectile	1	4	No	9/24/2018	Parcel 3/AI29	Destroyed	11/1/2018
BD Fuze	Fuze	3	4	No	9/24/2018	Parcel 3/AI29	Destroyed	9/27/2018
PD Fuze	Fuze	7	5	No	9/24/2018	Parcel 3/AI29	Destroyed	1/30/2019
37mm	Projectile	5	4	No	9/25/2018	Parcel 3/AI29	Destroyed	11/1/2018
37mm	Projectile	1	3	No	9/25/2018	Parcel 3/L30	Destroyed	11/1/2018
37mm	Projectile	1	3	Yes	9/25/2018	Parcel 3/AI29	Destroyed	12/10/2019
40mm	Projectile	3	4	No	9/25/2018	Parcel 3/AI29	Destroyed	11/1/2018
60mm	Projectile	1	4	No	9/25/2018	Parcel 3/L30	Destroyed	3/5/2019
AN-M110	Fuze	1	3	Yes	9/25/2018	Parcel 3/L30	BIP	10/12/2018
BD Fuze	Fuze	7	6	No	9/25/2018	Parcel 3/AI29	Destroyed	9/27/2018

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MEC RECOVERED
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Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
BD Fuze	Fuze	1	4	No	9/25/2018	Parcel 3/E31	Destroyed	9/27/2018
BD Fuze	Fuze	5	5	No	9/25/2018	Parcel 3/L30	Destroyed	9/27/2018
Blu-3	Bomb	1	0	Yes	9/25/2018	Parcel 3/E31	BIP	10/12/2018
Blu-3	Bomb	1	1	Yes	9/25/2018	Parcel 3/L30	BIP	10/12/2018
Booster	Booster	3	3	No	9/25/2018	Parcel 3/E31	Destroyed	1/30/2019
Booster	Booster	8	4	No	9/25/2018	Parcel 3/L30	Destroyed	1/30/2019
PD Fuze	Fuze	4	5	No	9/25/2018	Parcel 3/AI29	Destroyed	1/30/2019
37mm	Projectile	1	3	No	9/26/2018	Parcel 3/AI29	Destroyed	11/1/2018
37mm	Projectile	1	4	Yes	9/26/2018	Parcel 3/AI29	Destroyed	12/10/2019
40mm	Projectile	1	4	No	9/26/2018	Parcel 3/AI29	Destroyed	11/1/2018
BD Fuze	Fuze	2	1	No	9/26/2018	Parcel 3/AI29	Destroyed	9/27/2018
PD Fuze	Fuze	3	3	No	9/26/2018	Parcel 3/AI29	Destroyed	1/30/2019
37mm	Projectile	2	1	No	9/27/2018	Parcel 3/AI29	Destroyed	11/1/2018
40mm	Projectile	2	3	No	9/27/2018	Parcel 3/M30	Destroyed	11/1/2018
40mm	Projectile	1	4	No	9/27/2018	Parcel 3/E31	Destroyed	11/1/2018
40mm	Projectile	2	5	No	9/27/2018	Parcel 3/AI29	Destroyed	11/1/2018
60mm	Projectile	1	3	No	9/27/2018	Parcel 3/AJ29	Destroyed	3/5/2019
BD Fuze	Fuze	2	4	No	9/27/2018	Parcel 3/AI29	Destroyed	1/30/2019
Booster	Booster	4	4	No	9/27/2018	Parcel 3/M30	Destroyed	1/30/2019
Booster	Booster	3	2	No	9/27/2018	Parcel 3/E31	Destroyed	1/30/2019
Booster	Booster	1	3	No	9/27/2018	Parcel 3/AJ29	Destroyed	1/30/2019
PD Fuze	Fuze	1	2	No	9/27/2018	Parcel 3/E31	Destroyed	1/30/2019
PD Fuze	Fuze	12	4	No	9/27/2018	Parcel 3/AI29	Destroyed	1/30/2019
PD Fuze	Fuze	2	3	No	9/27/2018	Parcel 3/AJ29	Destroyed	1/30/2019
20mm	Projectile	1	4	Yes	10/1/2018	Parcel 3/AJ29	Destroyed	10/24/2019
37mm	Projectile	6	10	No	10/1/2018	Parcel 3/AJ29	Destroyed	11/1/2018
40mm	Projectile	1	8	No	10/1/2018	Parcel 3/AJ29	Destroyed	11/1/2018
60mm	Projectile	1	5	No	10/1/2018	Parcel 3/AJ29	Destroyed	3/5/2019
BD Fuze	Fuze	4	6	No	10/1/2018	Parcel 3/AJ29	Destroyed	1/30/2019
Booster	Booster	1	3	No	10/1/2018	Parcel 3/AJ29	Destroyed	1/30/2019
PD Fuze	Fuze	6	12	No	10/1/2018	Parcel 3/AJ29	Destroyed	1/30/2019
37mm	Projectile	2	6	No	10/2/2018	Parcel 3/AJ29	Destroyed	11/1/2018
40mm	Projectile	1	6	No	10/2/2018	Parcel 3/AG28	Destroyed	11/1/2018
BD Fuze	Fuze	5	4	No	10/2/2018	Parcel 3/AG28	Destroyed	1/30/2019
BD Fuze	Fuze	4	5	No	10/2/2018	Parcel 3/AJ29	Destroyed	1/30/2019
Booster	Booster	5	1	No	10/2/2018	Parcel 3/E30	Destroyed	1/30/2019
M83 Butterfly	Bomb	1	4	No	10/2/2018	Parcel 3/AG28	Destroyed	3/5/2019
M83 Butterfly	Bomb	1	3	Yes	10/2/2018	Parcel 3/AJ29	BIP	10/12/2018
PD Fuze	Fuze	5	4	No	10/2/2018	Parcel 3/AG28	Destroyed	1/30/2019
PD Fuze	Fuze	2	4	No	10/2/2018	Parcel 3/AJ29	Destroyed	1/30/2019
3.5" Rocket Motor	Rocket	1	3	No	10/5/2018	Parcel 3/AK29	Destroyed	3/5/2019
37mm	Projectile	3	10	No	10/5/2018	Parcel 3/AK29	Destroyed	11/1/2018
BD Fuze	Fuze	11	10	No	10/5/2018	Parcel 3/AK29	Destroyed	1/30/2019
Booster	Booster	3	1	No	10/5/2018	Parcel 3/E30	Destroyed	1/30/2019
Booster	Booster	1	6	No	10/5/2018	Parcel 3/AK29	Destroyed	1/30/2019

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Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
PD Fuze	Fuze	21	10	No	10/5/2018	Parcel 3/AK29	Destroyed	1/30/2019
37mm	Projectile	3	12	No	10/9/2018	Parcel 3/AK29	Destroyed	11/1/2018
40mm	Projectile	1	8	No	10/9/2018	Parcel 3/AK29	Destroyed	11/1/2018
BD Fuze	Fuze	2	7	No	10/9/2018	Parcel 3/AK29	Destroyed	1/30/2019
Booster	Booster	3	1	No	10/9/2018	Parcel 3/F30	Destroyed	1/30/2019
M131	Fuze	1	1	No	10/9/2018	Parcel 3/AG28	BIP	10/12/2018
PD Fuze	Fuze	9	4	No	10/9/2018	Parcel 3/AG28	Destroyed	1/30/2019
PD Fuze	Fuze	6	8	No	10/9/2018	Parcel 3/AK29	Destroyed	1/30/2019
BD Fuze	Fuze	2	1	No	10/10/2018	Parcel 3/F30	Destroyed	1/30/2019
Blu-4	Bomb	1	1	Yes	10/10/2018	Parcel 3/F30	BIP	10/12/2018
2.75" Warhead	Rocket	1	6	No	10/11/2018	Parcel 3/AL29	Destroyed	3/5/2019
37mm	Projectile	2	6	No	10/11/2018	Parcel 3/AL29	Destroyed	11/1/2018
37mm	Projectile	2	4	No	10/11/2018	Parcel 3/AF28	Destroyed	11/1/2018
40mm	Projectile	4	5	No	10/11/2018	Parcel 3/AL29	Destroyed	11/1/2018
40mm	Projectile	2	3	No	10/11/2018	Parcel 3/AF28	Destroyed	11/1/2018
40mm	Projectile	1	4	Yes	10/11/2018	Parcel 3/AF28	Destroyed	11/18/2019
AN-M110	Fuze	1	2	Yes	10/11/2018	Parcel 3/AF28	BIP	10/12/2018
BD Fuze	Fuze	4	10	No	10/11/2018	Parcel 3/AL29	Destroyed	1/30/2019
BD Fuze	Fuze	3	8	No	10/11/2018	Parcel 3/AF28	Destroyed	1/30/2019
Booster	Booster	1	3	No	10/11/2018	Parcel 3/AF28	Destroyed	1/30/2019
M83 Butterfly	Bomb	1	4	Yes	10/11/2018	Parcel 3/AL29	BIP	10/12/2018
PD Fuze	Fuze	10	8	No	10/11/2018	Parcel 3/AL29	Destroyed	1/30/2019
PD Fuze	Fuze	6	6	No	10/11/2018	Parcel 3/AF28	Destroyed	1/30/2019
Blu-4	Bomb	1	1	Yes	10/15/2018	Parcel 3/H30	BIP	11/3/2018
Booster	Booster	4	1	No	10/15/2018	Parcel 3/G30	Destroyed	1/30/2019
PD Fuze	Fuze	1	1	No	10/15/2018	Parcel 3/G30	Destroyed	1/30/2019
Blu-4	Bomb	1	0	Yes	10/16/2018	Parcel 3/H30	BIP	11/3/2018
37mm	Projectile	3	7	No	10/17/2018	Parcel 3/AL28	Destroyed	11/1/2018
37mm	Projectile	2	5	No	10/17/2018	Parcel 3/H30	Destroyed	11/1/2018
40mm	Projectile	2	4	No	10/17/2018	Parcel 3/AL28	Destroyed	11/1/2018
40mm	Projectile	1	5	No	10/17/2018	Parcel 3/AF28	Destroyed	11/1/2018
60mm	Projectile	1	5	No	10/17/2018	Parcel 3/AF28	Destroyed	3/5/2019
BD Fuze	Fuze	5	7	No	10/17/2018	Parcel 3/AL28	Destroyed	1/30/2019
BD Fuze	Fuze	4	6	No	10/17/2018	Parcel 3/H30	Destroyed	1/30/2019
BD Fuze	Fuze	2	4	No	10/17/2018	Parcel 3/AF28	Destroyed	1/30/2019
Booster	Booster	9	4	No	10/17/2018	Parcel 3/H30	Destroyed	1/30/2019
Booster	Booster	1	1	No	10/17/2018	Parcel 3/AF28	Destroyed	1/30/2019
PD Fuze	Fuze	13	10	No	10/17/2018	Parcel 3/AL28	Destroyed	1/30/2019
PD Fuze	Fuze	2	1	No	10/17/2018	Parcel 3/H30	Destroyed	1/30/2019
PD Fuze	Fuze	15	5	No	10/17/2018	Parcel 3/AF28	Destroyed	1/30/2019
37mm	Projectile	1	1	No	10/18/2018	Parcel 3/H30	Destroyed	11/1/2018
BD Fuze	Fuze	1	1	No	10/18/2018	Parcel 3/H30	Destroyed	1/30/2019
Booster	Booster	7	1	No	10/18/2018	Parcel 3/H30	Destroyed	1/30/2019
PD Fuze	Fuze	1	1	No	10/18/2018	Parcel 3/H30	Destroyed	1/30/2019
20mm	Projectile	1	6	No	10/19/2018	Parcel 3/AL28	Destroyed	3/5/2019

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Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
37mm	Projectile	2	8	No	10/19/2018	Parcel 3/AE28	Destroyed	11/1/2018
37mm	Projectile	2	2	No	10/19/2018	Parcel 3/AL28	Destroyed	11/1/2018
40mm	Projectile	4	6	No	10/19/2018	Parcel 3/AE28	Destroyed	11/1/2018
40mm	Projectile	2	5	No	10/19/2018	Parcel 3/AL28	Destroyed	11/1/2018
40mm	Projectile	1	5	Yes	10/19/2018	Parcel 3/AE28	Destroyed	11/18/2019
57mm	Projectile	1	5	No	10/19/2018	Parcel 3/AE28	Destroyed	7/25/2019
BD Fuze	Fuze	1	4	No	10/19/2018	Parcel 3/AK28	Destroyed	1/30/2019
BD Fuze	Fuze	3	8	No	10/19/2018	Parcel 3/AL28	Destroyed	1/30/2019
Booster	Booster	1	3	No	10/19/2018	Parcel 3/AL28	Destroyed	1/30/2019
PD Fuze	Fuze	20	10	No	10/19/2018	Parcel 3/AE28	Destroyed	1/30/2019
PD Fuze	Fuze	1	3	No	10/19/2018	Parcel 3/AK28	Destroyed	1/30/2019
PD Fuze	Fuze	13	4	No	10/19/2018	Parcel 3/AL28	Destroyed	1/30/2019
37mm	Projectile	1	2	No	10/24/2018	Parcel 3/AE28	Destroyed	11/1/2018
37mm	Projectile	2	2	No	10/24/2018	Parcel 3/AK28	Destroyed	11/1/2018
40mm	Projectile	1	4	No	10/24/2018	Parcel 3/AE28	Destroyed	11/1/2018
40mm	Projectile	2	3	No	10/24/2018	Parcel 3/AK28	Destroyed	11/1/2018
60mm	Projectile	2	5	No	10/24/2018	Parcel 3/AE28	Destroyed	3/5/2019
75mm	Projectile	1	1	No	10/24/2018	Parcel 3/G29	Destroyed	4/4/2019
90mm	Projectile	1	5	No	10/24/2018	Parcel 3/AE28	Destroyed	8/1/2019
BD Fuze	Fuze	4	4	No	10/24/2018	Parcel 3/AK28	Destroyed	1/30/2019
Booster	Booster	5	1	No	10/24/2018	Parcel 3/G29	Destroyed	1/30/2019
Booster	Booster	1	3	No	10/24/2018	Parcel 3/AK28	Destroyed	1/30/2019
PD Fuze	Fuze	11	3	No	10/24/2018	Parcel 3/AE28	Destroyed	1/30/2019
PD Fuze	Fuze	13	4	No	10/24/2018	Parcel 3/AK28	Destroyed	1/30/2019
BD Fuze	Fuze	2	1	No	10/25/2018	Parcel 3/G28	Destroyed	1/30/2019
Blu-3	Bomb	1	1	Yes	10/25/2018	Parcel 3/AE28	BIP	11/3/2018
Booster	Booster	6	1	No	10/25/2018	Parcel 3/G28	Destroyed	1/30/2019
40mm	Projectile	1	2	No	10/26/2018	Parcel 3/AE28	Destroyed	11/1/2018
BD Fuze	Fuze	1	4	No	10/26/2018	Parcel 3/AE28	Destroyed	1/30/2019
Booster	Booster	1	3	No	10/26/2018	Parcel 3/AE28	Destroyed	1/30/2019
M83 Butterfly	Bomb	2	4	No	10/26/2018	Parcel 3/AE28	Destroyed	3/5/2019
PD Fuze	Fuze	8	5	No	10/26/2018	Parcel 3/AE28	Destroyed	1/30/2019
3.5" Motor	Rocket	1	2	No	10/29/2018	Parcel 3/G28	Destroyed	3/5/2019
37mm	Projectile	9	9	No	10/29/2018	Parcel 3/AJ28	Destroyed	11/1/2018
37mm	Projectile	2	2	No	10/29/2018	Parcel 3/G28	Destroyed	11/1/2018
40mm	Projectile	1	6	No	10/29/2018	Parcel 3/AJ28	Destroyed	11/1/2018
BD Fuze	Fuze	7	8	No	10/29/2018	Parcel 3/AJ28	Destroyed	1/30/2019
Blu-3	Bomb	1	4	No	10/29/2018	Parcel 3/AJ28	Destroyed	3/5/2019
Booster	Booster	10	1	No	10/29/2018	Parcel 3/G28	Destroyed	1/30/2019
PD Fuze	Fuze	9	8	No	10/29/2018	Parcel 3/AJ28	Destroyed	1/30/2019
Blu-4	Bomb	2	1	Yes	10/30/2018	Parcel 3/F28	BIP	11/3/2018
20mm	Projectile	2	3	No	11/1/2018	Parcel 3/AD28	Destroyed	3/5/2019
37mm	Projectile	7	4	No	11/1/2018	Parcel 3/AI28	Destroyed	3/5/2019
40mm	Projectile	2	2	No	11/1/2018	Parcel 3/AI28	Destroyed	3/5/2019
40mm	Projectile	2	5	No	11/1/2018	Parcel 3/AD28	Destroyed	3/5/2019

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MEC RECOVERED
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Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
60mm	Projectile	2	3	No	11/1/2018	Parcel 3/AI28	Destroyed	3/5/2019
BD Fuze	Fuze	3	3	No	11/1/2018	Parcel 3/F28	Destroyed	1/30/2019
BD Fuze	Fuze	5	5	No	11/1/2018	Parcel 3/AI28	Destroyed	1/30/2019
BD Fuze	Fuze	1	1	No	11/1/2018	Parcel 3/AD28	Destroyed	1/30/2019
Blu-4	Bomb	1	2	Yes	11/1/2018	Parcel 3/F28	BIP	11/3/2018
Blu-4	Bomb	1	1	Yes	11/1/2018	Parcel 3/F28	BIP	11/3/2018
Booster	Booster	3	1	No	11/1/2018	Parcel 3/F28	Destroyed	1/30/2019
Bulk HE	HE	1	0	No	11/1/2018	Parcel 3/AD28	Destroyed	1/30/2019
PD Fuze	Fuze	1	3	No	11/1/2018	Parcel 3/F28	Destroyed	1/30/2019
PD Fuze	Fuze	15	4	No	11/1/2018	Parcel 3/AI28	Destroyed	1/30/2019
PD Fuze	Fuze	15	6	No	11/1/2018	Parcel 3/AD28	Destroyed	1/30/2019
Blu-4	Bomb	2	1	Yes	11/5/2018	Parcel 3/F29	BIP	11/16/2018
PD Fuze	Fuze	11	5	No	11/5/2018	Parcel 3/AC28	Destroyed	1/30/2019
20mm	Projectile	2	5	No	11/7/2018	Parcel 3/AC28	Destroyed	3/5/2019
37mm	Projectile	4	3	No	11/7/2018	Parcel 3/AH28	Destroyed	3/5/2019
37mm	Projectile	1	2	Yes	11/7/2018	Parcel 3/AH28	Destroyed	12/10/2019
40mm	Projectile	3	3	No	11/7/2018	Parcel 3/AH28	Destroyed	3/5/2019
40mm	Projectile	1	2	No	11/7/2018	Parcel 3/E29	Destroyed	3/5/2019
40mm	Projectile	1	3	Yes	11/7/2018	Parcel 3/AC28	Destroyed	11/18/2019
60mm	Projectile	1	3	No	11/7/2018	Parcel 3/AC28	Destroyed	3/5/2019
BD Fuze	Fuze	7	3	No	11/7/2018	Parcel 3/AH28	Destroyed	1/30/2019
BD Fuze	Fuze	1	3	No	11/7/2018	Parcel 3/AC28	Destroyed	1/30/2019
BD Fuze	Fuze	2	2	No	11/7/2018	Parcel 3/E29	Destroyed	1/30/2019
Booster	Booster	2	2	No	11/7/2018	Parcel 3/AC28	Destroyed	1/30/2019
Booster	Booster	12	4	No	11/7/2018	Parcel 3/E29	Destroyed	1/30/2019
PD Fuze	Fuze	33	4	No	11/7/2018	Parcel 3/AH28	Destroyed	1/30/2019
PD Fuze	Fuze	23	3	No	11/7/2018	Parcel 3/AC28	Destroyed	1/30/2019
37mm	Projectile	5	4	No	11/8/2018	Parcel 3/AH27	Destroyed	3/5/2019
40mm	Projectile	1	5	No	11/8/2018	Parcel 3/AH27	Destroyed	3/5/2019
40mm	Projectile	1	1	No	11/8/2018	Parcel 3/E29	Destroyed	3/5/2019
60mm	Projectile	1	3	No	11/8/2018	Parcel 3/AH27	Destroyed	3/5/2019
BD Fuze	Fuze	11	3	No	11/8/2018	Parcel 3/AH27	Destroyed	1/30/2019
BD Fuze	Fuze	1	1	No	11/8/2018	Parcel 3/E29	Destroyed	1/30/2019
Booster	Booster	2	4	No	11/8/2018	Parcel 3/AH27	Destroyed	1/30/2019
Booster	Booster	5	1	No	11/8/2018	Parcel 3/E29	Destroyed	1/30/2019
M83 Butterfly	Bomb	1	1	No	11/8/2018	Parcel 3/E29	Destroyed	3/5/2019
PD Fuze	Fuze	18	5	No	11/8/2018	Parcel 3/AH27	Destroyed	1/30/2019
PD Fuze	Fuze	7	4	No	11/8/2018	Parcel 3/AC27	Destroyed	1/30/2019
20mm	Projectile	1	1	No	11/9/2018	Parcel 3/AH27	Destroyed	3/5/2019
37mm	Projectile	4	4	No	11/9/2018	Parcel 3/AH27	Destroyed	3/5/2019
37mm	Projectile	1	5	Yes	11/9/2018	Parcel 3/AC27	Destroyed	12/10/2019
40mm	Projectile	1	4	No	11/9/2018	Parcel 3/AC27	Destroyed	3/5/2019
BD Fuze	Fuze	3	4	No	11/9/2018	Parcel 3/AH27	Destroyed	1/30/2019
Booster	Booster	1	3	No	11/9/2018	Parcel 3/AC27	Destroyed	1/30/2019
PD Fuze	Fuze	14	4	No	11/9/2018	Parcel 3/AH27	Destroyed	1/30/2019

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Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
PD Fuze	Fuze	3	5	No	11/9/2018	Parcel 3/AC27	Destroyed	1/30/2019
20mm	Projectile	1	2	No	11/13/2018	Parcel 3/AI27	Destroyed	3/5/2019
37mm	Projectile	2	2	No	11/13/2018	Parcel 3/AI27	Destroyed	8/14/2018
37mm	Projectile	1	4	Yes	11/13/2018	Parcel 3/AI27	Destroyed	12/10/2019
40mm	Projectile	3	3	No	11/13/2018	Parcel 3/AI27	Destroyed	3/5/2019
40mm	Projectile	2	4	No	11/13/2018	Parcel 3/E28	Destroyed	3/5/2019
40mm	Projectile	1	1	Yes	11/13/2018	Parcel 3/AI27	Destroyed	11/18/2019
BD Fuze	Fuze	1	3	No	11/13/2018	Parcel 3/AI27	Destroyed	1/30/2019
Blu-3	Bomb	1	1	No	11/13/2018	Parcel 3/E28	Destroyed	3/5/2019
Blu-4	Bomb	1	1	Yes	11/13/2018	Parcel 3/E28	BIP	11/16/2018
Booster	Booster	1	1	No	11/13/2018	Parcel 3/AI27	Destroyed	1/30/2019
Booster	Booster	10	1	No	11/13/2018	Parcel 3/E28	Destroyed	1/30/2019
PD Fuze	Fuze	21	4	No	11/13/2018	Parcel 3/AI27	Destroyed	1/30/2019
Blu-4	Bomb	1	1	Yes	11/14/2018	Parcel 3/E28	BIP	11/16/2018
37mm	Projectile	5	4	No	11/15/2018	Parcel 3/AJ27	Destroyed	3/5/2019
40mm	Projectile	4	3	No	11/15/2018	Parcel 3/AJ27	Destroyed	3/5/2019
75mm	Projectile	2	7	No	11/15/2018	Parcel 3/AJ27	Destroyed	4/4/2019
90mm	Projectile	1	6	No	11/15/2018	Parcel 3/AJ27	Destroyed	8/1/2019
BD Fuze	Fuze	10	3	No	11/15/2018	Parcel 3/AJ27	Destroyed	1/30/2019
Blu-4	Bomb	1	4	Yes	11/15/2018	Parcel 3/C26	BIP	11/16/2018
Booster	Booster	1	2	No	11/15/2018	Parcel 3/AJ27	Destroyed	1/30/2019
M83 Butterfly	Bomb	1	4	No	11/15/2018	Parcel 3/AJ27	Destroyed	3/5/2019
PD Fuze	Fuze	20	4	No	11/15/2018	Parcel 3/AJ27	Destroyed	1/30/2019
37mm	Projectile	1	5	No	11/16/2018	Parcel 3/C27	Destroyed	8/14/2018
BD Fuze	Fuze	2	5	No	11/16/2018	Parcel 3/C31	Destroyed	1/30/2019
BD Fuze	Fuze	2	1	No	11/16/2018	Parcel 3/C27	Destroyed	1/30/2019
Booster	Booster	6	5	No	11/16/2018	Parcel 3/C27	Destroyed	1/30/2019
PD Fuze	Fuze	3	3	No	11/16/2018	Parcel 3/C27	Destroyed	1/30/2019
Blu-3	Bomb	1	1	Yes	11/27/2018	Parcel 3/C30	BIP	11/28/2018
Blu-3	Bomb	1	0	Yes	11/27/2018	Parcel 3/C30	BIP	11/28/2018
37mm	Projectile	1	3	No	11/28/2018	Parcel 3/AC27	Destroyed	3/5/2019
40mm	Projectile	1	3	No	11/28/2018	Parcel 3/AC27	Destroyed	3/5/2019
60mm	Projectile	1	3	No	11/28/2018	Parcel 3/AC27	Destroyed	3/5/2019
90mm	Projectile	1	5	No	11/28/2018	Parcel 3/AC27	Destroyed	8/1/2019
AN-M110	Fuze	1	1	Yes	11/28/2018	Parcel 3/AC27	BIP	11/28/2018
BD Fuze	Fuze	2	3	No	11/28/2018	Parcel 3/AC27	Destroyed	1/30/2019
Blu-3	Bomb	1	1	Yes	11/28/2018	Parcel 3/C30	BIP	11/28/2018
Blu-4	Bomb	1	1	Yes	11/28/2018	Parcel 3/C30	BIP	11/28/2018
PD Fuze	Fuze	9	5	No	11/28/2018	Parcel 3/AC27	Destroyed	1/30/2019
37mm	Projectile	6	4	No	11/29/2018	Parcel 3/AL27	Destroyed	3/5/2019
37mm	Projectile	1	3	Yes	11/29/2018	Parcel 3/AL27	Destroyed	12/10/2019
40mm	Projectile	3	3	No	11/29/2018	Parcel 3/AL27	Destroyed	3/5/2019
40mm	Projectile	2	4	No	11/29/2018	Parcel 3/AC27	Destroyed	3/5/2019
60mm	Projectile	1	2	No	11/29/2018	Parcel 3/AL27	Destroyed	3/5/2019
AN-M110	Fuze	1	0	Yes	11/29/2018	Parcel 3/AC27	BIP	12/18/2018

TABLE 3-4
MEC RECOVERED
FORT WINGATE DEPOT ACTIVITY
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Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
BD Fuze	Fuze	2	4	No	11/29/2018	Parcel 3/AL27	Destroyed	1/30/2019
BD Fuze	Fuze	1	3	No	11/29/2018	Parcel 3/AC27	Destroyed	1/30/2019
Booster	Booster	2	5	No	11/29/2018	Parcel 3/AC27	Destroyed	1/30/2019
M83 Butterfly	Bomb	1	2	No	11/29/2018	Parcel 3/AL27	Destroyed	3/5/2019
PD Fuze	Fuze	15	4	No	11/29/2018	Parcel 3/AL27	Destroyed	1/30/2019
PD Fuze	Fuze	7	5	No	11/29/2018	Parcel 3/AC27	Destroyed	1/30/2019
20mm	Projectile	1	5	No	12/5/2018	Parcel 3/AD27	Destroyed	3/5/2019
3.5" Motor	Rocket	1	4	No	12/5/2018	Parcel 3/AH26	Destroyed	3/5/2019
37mm	Projectile	2	3	No	12/5/2018	Parcel 3/AH26	Destroyed	3/5/2019
37mm	Projectile	1	2	No	12/5/2018	Parcel 3/AD27	Destroyed	3/5/2019
40mm	Projectile	1	2	No	12/5/2018	Parcel 3/AH26	Destroyed	3/5/2019
40mm	Projectile	1	2	No	12/5/2018	Parcel 3/AD27	Destroyed	3/5/2019
40mm	Projectile	1	3	Yes	12/5/2018	Parcel 3/AD27	Destroyed	11/18/2019
60mm	Projectile	1	3	No	12/5/2018	Parcel 3/AD27	Destroyed	3/5/2019
BD Fuze	Fuze	4	2	No	12/5/2018	Parcel 3/H29	Destroyed	1/30/2019
BD Fuze	Fuze	1	1	No	12/5/2018	Parcel 3/AH26	Destroyed	1/30/2019
Booster	Booster	2	1	No	12/5/2018	Parcel 3/H29	Destroyed	1/30/2019
PD Fuze	Fuze	6	2	No	12/5/2018	Parcel 3/AH26	Destroyed	1/30/2019
PD Fuze	Fuze	9	4	No	12/5/2018	Parcel 3/AD27	Destroyed	1/30/2019
37mm	Projectile	2	2	No	12/10/2018	Parcel 3/AD27	Destroyed	3/5/2019
37mm	Projectile	8	3	No	12/10/2018	Parcel 3/AH26	Destroyed	3/5/2019
37mm	Projectile	1	1	Yes	12/10/2018	Parcel 3/C29	Destroyed	12/10/2019
37mm	Projectile	1	3	Yes	12/10/2018	Parcel 3/AH26	Destroyed	12/10/2019
40mm	Projectile	2	3	No	12/10/2018	Parcel 3/C29	Destroyed	3/5/2019
40mm	Projectile	4	2	No	12/10/2018	Parcel 3/AD27	Destroyed	3/5/2019
40mm	Projectile	5	3	No	12/10/2018	Parcel 3/AH26	Destroyed	3/5/2019
60mm	Projectile	1	3	No	12/10/2018	Parcel 3/AH26	Destroyed	3/5/2019
60mm	Projectile	1	3	Yes	12/10/2018	Parcel 3/AH26	Destroyed	8/27/2019
75mm	Projectile	2	2	No	12/10/2018	Parcel 3/C29	Destroyed	4/4/2019
AN-M110	Fuze	1	1	Yes	12/10/2018	Parcel 3/AD27	BIP	12/18/2018
BD Fuze	Fuze	1	3	No	12/10/2018	Parcel 3/C29	Destroyed	1/30/2019
BD Fuze	Fuze	1	1	No	12/10/2018	Parcel 3/AD27	Destroyed	1/30/2019
BD Fuze	Fuze	1	2	No	12/10/2018	Parcel 3/AH26	Destroyed	1/30/2019
Booster	Booster	4	2	No	12/10/2018	Parcel 3/C29	Destroyed	1/30/2019
Booster	Booster	4	1	No	12/10/2018	Parcel 3/AD27	Destroyed	1/30/2019
Booster	Booster	1	3	No	12/10/2018	Parcel 3/AH26	Destroyed	1/30/2019
M83 Butterfly	Bomb	1	1	No	12/10/2018	Parcel 3/AH26	Destroyed	3/5/2019
PD Fuze	Fuze	9	2	No	12/10/2018	Parcel 3/AD27	Destroyed	1/30/2019
PD Fuze	Fuze	22	4	No	12/10/2018	Parcel 3/AH26	Destroyed	1/30/2019
37mm	Projectile	1	3	No	12/12/2018	Parcel 3/AE27	Destroyed	3/5/2019
37mm	Projectile	2	1	No	12/12/2018	Parcel 3/AI26	Destroyed	3/5/2019
40mm	Projectile	5	5	No	12/12/2018	Parcel 3/AE27	Destroyed	3/5/2019
BD Fuze	Fuze	2	2	No	12/12/2018	Parcel 3/C28	Destroyed	1/30/2019
BD Fuze	Fuze	3	2	No	12/12/2018	Parcel 3/AI26	Destroyed	1/30/2019
Booster	Booster	6	1	No	12/12/2018	Parcel 3/C28	Destroyed	1/30/2019

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Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
M83 Butterfly	Bomb	1	2	No	12/12/2018	Parcel 3/AE27	Destroyed	3/5/2019
PD Fuze	Fuze	10	3	No	12/12/2018	Parcel 3/AE27	Destroyed	1/30/2019
PD Fuze	Fuze	11	4	No	12/12/2018	Parcel 3/AI26	Destroyed	1/30/2019
37mm	Projectile	11	2	No	12/13/2018	Parcel 3/AI26	Destroyed	3/5/2019
40mm	Projectile	1	3	No	12/13/2018	Parcel 3/AI26	Destroyed	3/5/2019
BD Fuze	Fuze	1	1	No	12/13/2018	Parcel 3/AI26	Destroyed	1/30/2019
Blu-4	Bomb	1	0	Yes	12/13/2018	Parcel 3/C28	BIP	12/18/2018
Booster	Booster	1	1	No	12/13/2018	Parcel 3/AI26	Destroyed	1/30/2019
M83 Butterfly	Bomb	1	4	No	12/13/2018	Parcel 3/AI26	Destroyed	3/5/2019
PD Fuze	Fuze	7	2	No	12/13/2018	Parcel 3/AI26	Destroyed	1/30/2019
40mm	Projectile	3	5	No	12/14/2018	Parcel 3/AE27	Destroyed	3/5/2019
M83 Butterfly	Bomb	1	3	Yes	12/14/2018	Parcel 3/AI26	BIP	12/18/2018
PD Fuze	Fuze	10	4	No	12/14/2018	Parcel 3/AE27	Destroyed	1/30/2019
37mm	Projectile	1	3	No	1/21/2019	Parcel 3/B21	Destroyed	3/5/2019
Blu-4	Bomb	3	8	No	1/21/2019	Parcel 3/B21	Destroyed	3/5/2019
PD Fuze	Fuze	1	9	No	1/21/2019	Parcel 3/B21	Destroyed	1/30/2019
20mm	Projectile	2	4	No	1/23/2019	Parcel 3/B21	Destroyed	3/5/2019
40mm	Projectile	1	3	No	1/23/2019	Parcel 3/B21	Destroyed	3/5/2019
BD Fuze	Fuze	1	2	No	1/23/2019	Parcel 3/H28	Destroyed	1/30/2019
Blu-4	Bomb	1	6	Yes	1/23/2019	Parcel 3/B21	BIP	2/9/2019
Booster	Booster	1	1	No	1/23/2019	Parcel 3/H28	Destroyed	1/30/2019
40mm	Projectile	2	8	No	1/25/2019	Parcel 3/X25	Destroyed	3/5/2019
57mm	Projectile	1	7	No	1/25/2019	Parcel 3/X25	Destroyed	7/25/2019
BD Fuze	Fuze	2	2	No	1/25/2019	Parcel 3/X25	Destroyed	1/30/2019
Booster	Booster	1	2	No	1/25/2019	Parcel 3/X25	Destroyed	1/30/2019
M83 Butterfly	Bomb	1	3	No	1/25/2019	Parcel 3/X25	Destroyed	3/5/2019
PD Fuze	Fuze	6	6	No	1/25/2019	Parcel 3/X25	Destroyed	7/25/2019
37mm	Projectile	1	5	No	1/28/2019	Parcel 3/X25	Destroyed	3/5/2019
40mm	Projectile	1	6	No	1/28/2019	Parcel 3/X25	Destroyed	3/5/2019
BD Fuze	Fuze	2	4	No	1/28/2019	Parcel 3/X25	Destroyed	1/30/2019
Booster	Booster	4	7	No	1/28/2019	Parcel 3/X25	Destroyed	1/30/2019
PD Fuze	Fuze	8	6	No	1/28/2019	Parcel 3/X25	Destroyed	1/30/2019
37mm	Projectile	4	7	No	1/29/2019	Parcel 3/H27	Destroyed	3/5/2019
37mm	Projectile	2	3	No	1/29/2019	Parcel 3/X25	Destroyed	3/5/2019
40mm	Projectile	1	8	No	1/29/2019	Parcel 3/H27	Destroyed	3/5/2019
40mm	Projectile	1	3	No	1/29/2019	Parcel 3/X25	Destroyed	3/5/2019
40mm	Projectile	1	3	Yes	1/29/2019	Parcel 3/X25	Destroyed	11/18/2019
BD Fuze	Fuze	2	4	No	1/29/2019	Parcel 3/H27	Destroyed	1/30/2019
BD Fuze	Fuze	1	0	No	1/29/2019	Parcel 3/X25	Destroyed	1/30/2019
Blu-4	Bomb	1	5	Yes	1/29/2019	Parcel 3/H27	BIP	3/23/2019
PD Fuze	Fuze	1	7	No	1/29/2019	Parcel 3/H27	Destroyed	1/30/2019
PD Fuze	Fuze	6	6	No	1/29/2019	Parcel 3/X25	Destroyed	1/30/2019
M503	Fuze	1	3	Yes	1/30/2019	Parcel 3/X25	BIP	2/9/2019
20mm	Projectile	1	2	No	1/31/2019	Parcel 3/X25	Destroyed	3/5/2019
37mm	Projectile	1	5	No	1/31/2019	Parcel 3/X25	Destroyed	3/5/2019

TABLE 3-4
MEC RECOVERED
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McKINLEY COUNTY, NEW MEXICO

Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
40mm	Projectile	2	6	No	1/31/2019	Parcel 3/X25	Destroyed	3/5/2019
Blu-3	Bomb	1	1	Yes	1/31/2019	Parcel 3/H26	BIP	3/23/2019
PD Fuze	Fuze	7	5	No	1/31/2019	Parcel 3/X25	Destroyed	4/2/2019
M83 Butterfly	Bomb	1	2	Yes	2/1/2019	Parcel 3/Y25	BIP	2/9/2019
37mm	Projectile	1	3	No	2/5/2019	Parcel 3/G26	Destroyed	3/5/2019
40mm	Projectile	1	2	No	2/5/2019	Parcel 3/H26	Destroyed	3/5/2019
75mm	Projectile	1	2	No	2/5/2019	Parcel 3/H26	Destroyed	4/4/2019
BD Fuze	Fuze	1	1	No	2/5/2019	Parcel 3/H26	Destroyed	4/2/2019
Blu-3	Bomb	1	2	No	2/5/2019	Parcel 3/H26	Destroyed	3/5/2019
Booster	Booster	1	1	No	2/5/2019	Parcel 3/H26	Destroyed	4/2/2019
Booster	Booster	2	1	No	2/5/2019	Parcel 3/G26	Destroyed	4/2/2019
PD Fuze	Fuze	2	1	No	2/5/2019	Parcel 3/H26	Destroyed	4/2/2019
37mm	Projectile	1	5	No	2/7/2019	Parcel 3/Y25	Destroyed	3/5/2019
PD Fuze	Fuze	12	5	No	2/7/2019	Parcel 3/Y25	Destroyed	4/2/2019
M111	Fuze	1	1	No	2/8/2019	Parcel 3/Y25	BIP	2/9/2019
37mm	Projectile	4	3	No	2/13/2019	Parcel 3/Q26	Destroyed	3/5/2019
40mm	Projectile	2	4	No	2/13/2019	Parcel 3/Q26	Destroyed	3/5/2019
75mm	Projectile	1	4	No	2/13/2019	Parcel 3/Y25	Destroyed	8/1/2019
BD Fuze	Fuze	6	4	No	2/13/2019	Parcel 3/Q26	Destroyed	4/2/2019
Blu-4	Bomb	1	0	Yes	2/13/2019	Parcel 3/Q26	BIP	3/16/2019
Blu-4	Bomb	1	1	Yes	2/13/2019	Parcel 3/Q26	BIP	3/16/2019
Booster	Booster	2	1	No	2/13/2019	Parcel 3/Y25	Destroyed	4/2/2019
Booster	Booster	2	2	No	2/13/2019	Parcel 3/Q26	Destroyed	4/2/2019
M63	Projectile	1	3	Yes	2/13/2019	Parcel 3/Q26	BIP	3/16/2019
M83 Butterfly	Bomb	1	0	No	2/13/2019	Parcel 3/Y25	Destroyed	3/5/2019
PD Fuze	Fuze	6	2	No	2/13/2019	Parcel 3/Y25	Destroyed	4/2/2019
PD Fuze	Fuze	4	5	No	2/13/2019	Parcel 3/Q26	Destroyed	4/2/2019
105mm	Projectile	1	8	Yes	2/28/2019	Parcel 3/AF27	Destroyed	6/6/2019
37mm	Projectile	2	1	No	2/28/2019	Parcel 3/K27	Destroyed	3/5/2019
40mm	Projectile	3	2	No	2/28/2019	Parcel 3/R26	Destroyed	3/5/2019
40mm	Projectile	3	3	No	2/28/2019	Parcel 3/AF27	Destroyed	3/5/2019
60mm	Projectile	1	4	No	2/28/2019	Parcel 3/AF27	Destroyed	3/5/2019
60mm	Projectile	2	5	Yes	2/28/2019	Parcel 3/AF27	Destroyed	8/27/2019
BD Fuze	Fuze	10	5	No	2/28/2019	Parcel 3/R26	Destroyed	4/2/2019
BD Fuze	Fuze	6	3	No	2/28/2019	Parcel 3/K27	Destroyed	4/2/2019
BD Fuze	Fuze	3	1	No	2/28/2019	Parcel 3/AF27	Destroyed	4/2/2019
Blu-4	Bomb	1	2	No	2/28/2019	Parcel 3/R26	Destroyed	3/5/2019
Booster	Booster	2	1	No	2/28/2019	Parcel 3/R26	Destroyed	4/2/2019
Booster	Booster	2	1	No	2/28/2019	Parcel 3/K27	Destroyed	4/2/2019
M83 Butterfly	Bomb	1	6	No	2/28/2019	Parcel 3/AF27	Destroyed	3/5/2019
PD Fuze	Fuze	8	3	No	2/28/2019	Parcel 3/R26	Destroyed	4/2/2019
PD Fuze	Fuze	3	4	No	2/28/2019	Parcel 3/K27	Destroyed	4/2/2019
PD Fuze	Fuze	17	3	No	2/28/2019	Parcel 3/AF27	Destroyed	4/2/2019
37mm	Projectile	1	2	No	3/4/2019	Parcel 3/AF27	Destroyed	3/5/2019
37mm	Projectile	4	4	No	3/4/2019	Parcel 3/R27	Destroyed	3/5/2019

TABLE 3-4
MEC RECOVERED
FORT WINGATE DEPOT ACTIVITY
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Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
40mm	Projectile	2	2	No	3/4/2019	Parcel 3/AF27	Destroyed	3/5/2019
40mm	Projectile	2	1	No	3/4/2019	Parcel 3/L27	Destroyed	3/5/2019
40mm	Projectile	1	2	No	3/4/2019	Parcel 3/R27	Destroyed	3/5/2019
75mm	Projectile	1	8	No	3/4/2019	Parcel 3/AF27	Destroyed	8/1/2019
BD Fuze	Fuze	1	5	No	3/4/2019	Parcel 3/AF27	Destroyed	4/2/2019
BD Fuze	Fuze	4	1	No	3/4/2019	Parcel 3/L27	Destroyed	4/2/2019
BD Fuze	Fuze	2	3	No	3/4/2019	Parcel 3/R27	Destroyed	4/2/2019
Blu-3	Bomb	1	1	Yes	3/4/2019	Parcel 3/AF27	BIP	3/16/2019
Blu-4	Bomb	1	3	No	3/4/2019	Parcel 3/R27	Destroyed	3/5/2019
Blu-4	Bomb	1	0	Yes	3/4/2019	Parcel 3/L27	BIP	3/23/2019
Booster	Booster	4	1	No	3/4/2019	Parcel 3/L27	Destroyed	4/2/2019
Booster	Booster	2	1	No	3/4/2019	Parcel 3/R27	Destroyed	4/2/2019
PD Fuze	Fuze	26	5	No	3/4/2019	Parcel 3/AF27	Destroyed	4/2/2019
PD Fuze	Fuze	9	5	No	3/4/2019	Parcel 3/R27	Destroyed	4/2/2019
37mm	Projectile	2	2	No	3/5/2019	Parcel 3/M27	Destroyed	3/5/2019
37mm	Projectile	1	1	No	3/5/2019	Parcel 3/R27	Destroyed	3/5/2019
37mm	Projectile	1	2	No	3/5/2019	Parcel 3/AF27	Destroyed	3/5/2019
37mm	Projectile	1	1	Yes	3/5/2019	Parcel 3/M27	Destroyed	12/10/2019
40mm	Projectile	1	3	No	3/5/2019	Parcel 3/M27	Destroyed	6/20/2019
40mm	Projectile	3	4	No	3/5/2019	Parcel 3/R27	Destroyed	6/20/2019
40mm	Projectile	1	3	No	3/5/2019	Parcel 3/AF27	Destroyed	6/20/2019
75mm	Projectile	1	8	No	3/5/2019	Parcel 3/R27	Destroyed	8/1/2019
BD Fuze	Fuze	1	1	No	3/5/2019	Parcel 3/M27	Destroyed	4/2/2019
BD Fuze	Fuze	10	4	No	3/5/2019	Parcel 3/R27	Destroyed	4/2/2019
BD Fuze	Fuze	1	2	No	3/5/2019	Parcel 3/AF27	Destroyed	4/2/2019
Blu-4	Bomb	1	1	Yes	3/5/2019	Parcel 3/M27	BIP	3/23/2019
Blu-4	Bomb	1	0	Yes	3/5/2019	Parcel 3/R27	BIP	3/16/2019
Booster	Booster	2	1	No	3/5/2019	Parcel 3/R27	Destroyed	4/2/2019
M83 Butterfly	Bomb	1	3	Yes	3/5/2019	Parcel 3/R27	BIP	3/16/2019
M83 Butterfly	Bomb	1	0	Yes	3/5/2019	Parcel 3/R27	BIP	3/16/2019
PD Fuze	Fuze	4	3	No	3/5/2019	Parcel 3/R27	Destroyed	4/2/2019
PD Fuze	Fuze	15	4	No	3/5/2019	Parcel 3/AF27	Destroyed	4/2/2019
37mm	Projectile	1	1	No	3/6/2019	Parcel 3/M27	Destroyed	6/20/2019
37mm	Projectile	2	3	No	3/6/2019	Parcel 3/Q27	Destroyed	7/25/2019
37mm	Projectile	1	1	Yes	3/6/2019	Parcel 3/Q27	Destroyed	12/10/2019
40mm	Projectile	2	2	No	3/6/2019	Parcel 3/AG27	Destroyed	6/20/2019
BD Fuze	Fuze	1	1	No	3/6/2019	Parcel 3/M27	Destroyed	4/2/2019
BD Fuze	Fuze	6	4	No	3/6/2019	Parcel 3/Q27	Destroyed	4/2/2019
Booster	Booster	1	1	No	3/6/2019	Parcel 3/M27	Destroyed	4/2/2019
Booster	Booster	1	1	No	3/6/2019	Parcel 3/Q27	Destroyed	4/2/2019
M83 Butterfly	Bomb	1	4	No	3/6/2019	Parcel 3/Q27	Destroyed	6/20/2019
M83 Butterfly	Bomb	1	2	No	3/6/2019	Parcel 3/AG27	Destroyed	6/20/2019
M83 Butterfly	Bomb	1	0	Yes	3/6/2019	Parcel 3/AG27	BIP	3/16/2019
PD Fuze	Fuze	1	2	No	3/6/2019	Parcel 3/M27	Destroyed	4/2/2019
PD Fuze	Fuze	2	1	No	3/6/2019	Parcel 3/Q27	Destroyed	4/2/2019

TABLE 3-4
MEC RECOVERED
FORT WINGATE DEPOT ACTIVITY
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Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
PD Fuze	Fuze	17	4	No	3/6/2019	Parcel 3/AG27	Destroyed	4/2/2019
20lb Frag	Bomb	1	6	No	3/7/2019	Parcel 3/Q27	Destroyed	9/4/2019
37mm	Projectile	3	2	No	3/7/2019	Parcel 3/M26	Destroyed	6/20/2019
37mm	Projectile	1	2	No	3/7/2019	Parcel 3/AG27	Destroyed	6/20/2019
40mm	Projectile	1	1	No	3/7/2019	Parcel 3/Q27	Destroyed	6/20/2019
40mm	Projectile	1	2	No	3/7/2019	Parcel 3/M26	Destroyed	6/20/2019
40mm	Projectile	1	5	No	3/7/2019	Parcel 3/AG27	Destroyed	6/20/2019
60mm	Projectile	1	2	No	3/7/2019	Parcel 3/AG27	Destroyed	8/1/2019
75mm	Projectile	1	8	No	3/7/2019	Parcel 3/Q27	Destroyed	8/1/2019
BD Fuze	Fuze	2	1	No	3/7/2019	Parcel 3/Q27	Destroyed	4/2/2019
BD Fuze	Fuze	5	2	No	3/7/2019	Parcel 3/M26	Destroyed	4/2/2019
BD Fuze	Fuze	2	3	No	3/7/2019	Parcel 3/AG27	Destroyed	4/2/2019
Blu-4	Bomb	1	1	Yes	3/7/2019	Parcel 3/M26	BIP	3/23/2019
M83 Butterfly	Bomb	1	4	No	3/7/2019	Parcel 3/AG27	Destroyed	6/20/2019
PD Fuze	Fuze	2	3	No	3/7/2019	Parcel 3/Q27	Destroyed	4/2/2019
PD Fuze	Fuze	3	3	No	3/7/2019	Parcel 3/M26	Destroyed	4/2/2019
PD Fuze	Fuze	8	4	No	3/7/2019	Parcel 3/AG27	Destroyed	4/2/2019
37mm	Projectile	2	4	No	3/8/2019	Parcel 3/Q27	Destroyed	6/20/2019
BD Fuze	Fuze	3	2	No	3/8/2019	Parcel 3/Q27	Destroyed	4/2/2019
Blu-3	Bomb	1	2	Yes	3/8/2019	Parcel 3/Q27	BIP	3/16/2019
Blu-4	Bomb	2	3	Yes	3/8/2019	Parcel 3/Q27	BIP	3/16/2019
PD Fuze	Fuze	5	3	No	3/8/2019	Parcel 3/AG27	Destroyed	4/2/2019
Blu-3	Bomb	1	1	Yes	3/12/2019	Parcel 3/P27	BIP	3/16/2019
37mm	Projectile	3	4	No	3/14/2019	Parcel 3/P27	Destroyed	6/20/2019
40mm	Projectile	2	3	No	3/14/2019	Parcel 3/AG26	Destroyed	6/20/2019
40mm	Projectile	2	1	No	3/14/2019	Parcel 3/ L26	Destroyed	6/20/2019
40mm	Projectile	1	2	No	3/14/2019	Parcel 3/P27	Destroyed	6/20/2019
57mm	Projectile	1	5	Yes	3/14/2019	Parcel 3/P27	Destroyed	12/16/2019
BD Fuze	Fuze	6	2	No	3/14/2019	Parcel 3/L26	Destroyed	4/2/2019
BD Fuze	Fuze	6	2	No	3/14/2019	Parcel 3/P27	Destroyed	4/2/2019
Blu-4	Bomb	1	2	Yes	3/14/2019	Parcel 3/L26	BIP	3/23/2019
Booster	Booster	2	1	No	3/14/2019	Parcel 3/L26	Destroyed	4/2/2019
PD Fuze	Fuze	10	4	No	3/14/2019	Parcel 3/AG26	Destroyed	4/2/2019
PD Fuze	Fuze	1	1	No	3/14/2019	Parcel 3/L26	Destroyed	4/2/2019
PD Fuze	Fuze	5	3	No	3/14/2019	Parcel 3/P27	Destroyed	4/2/2019
37mm	Projectile	2	3	No	3/15/2019	Parcel 3/AG26	Destroyed	6/20/2019
37mm	Projectile	2	1	No	3/15/2019	Parcel 3/P27	Destroyed	6/20/2019
40mm	Projectile	2	4	No	3/15/2019	Parcel 3/AG26	Destroyed	6/20/2019
40mm	Projectile	3	3	No	3/15/2019	Parcel 3/P27	Destroyed	6/20/2019
40mm	Projectile	2	4	Yes	3/15/2019	Parcel 3/P27	Destroyed	11/18/2019
BD Fuze	Fuze	2	1	No	3/15/2019	Parcel 3/P27	Destroyed	4/2/2019
BLU-3	Bomb	1	1	Yes	3/15/2019	Parcel 3/P27	BIP	3/16/2019
M83 Butterfly	Bomb	1	2	No	3/15/2019	Parcel 3/AG26	Destroyed	6/20/2019
PD Fuze	Fuze	4	3	No	3/15/2019	Parcel 3/AG26	Destroyed	4/2/2019
PD Fuze	Fuze	5	3	No	3/15/2019	Parcel 3/P27	Destroyed	4/2/2019

TABLE 3-4
MEC RECOVERED
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Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
20mm	Projectile	1	2	No	3/18/2019	Parcel 3/K26	Destroyed	6/20/2019
37mm	Projectile	3	3	No	3/18/2019	Parcel 3/K26	Destroyed	6/20/2019
37mm	Projectile	1	1	No	3/18/2019	Parcel 3/P27	Destroyed	6/20/2019
40mm	Projectile	1	2	No	3/18/2019	Parcel 3/K26	Destroyed	6/20/2019
BD Fuze	Fuze	3	3	No	3/18/2019	Parcel 3/K26	Destroyed	4/2/2019
BD Fuze	Fuze	1	3	No	3/18/2019	Parcel 3/P27	Destroyed	4/2/2019
BLU-3	Bomb	1	1	Yes	3/18/2019	Parcel 3/K26	BIP	3/23/2019
BLU-4	Bomb	1	1	No	3/18/2019	Parcel 3/K26	Destroyed	6/20/2019
M83 Butterfly	Bomb	1	2	No	3/18/2019	Parcel 3/AG26	Destroyed	6/20/2019
PD Fuze	Fuze	5	3	No	3/18/2019	Parcel 3/K26	Destroyed	4/2/2019
PD Fuze	Fuze	1	2	No	3/18/2019	Parcel 3/P27	Destroyed	4/2/2019
PD Fuze	Fuze	5	2	No	3/18/2019	Parcel 3/AG26	Destroyed	4/2/2019
20mm	Projectile	1	2	No	3/19/2019	Parcel 3/AG26	Destroyed	6/20/2019
20mm	Projectile	1	0	Yes	3/19/2019	Parcel 3/P26	Destroyed	10/24/2019
37mm	Projectile	1	2	No	3/19/2019	Parcel 3/AG26	Destroyed	6/20/2019
37mm	Projectile	1	2	No	3/19/2019	Parcel 3/P26	Destroyed	6/20/2019
37mm	Projectile	1	0	Yes	3/19/2019	Parcel 3/P26	Destroyed	12/10/2019
40mm	Projectile	3	2	No	3/19/2019	Parcel 3/P26	Destroyed	6/20/2019
90mm	Projectile	1	2	No	3/19/2019	Parcel 3/AG26	Destroyed	4/2/2019
BD Fuze	Fuze	5	4	No	3/19/2019	Parcel 3/P26	Destroyed	4/2/2019
Booster	Booster	3	1	No	3/19/2019	Parcel 3/P26	Destroyed	4/2/2019
M83 Butterfly	Bomb	1	2	No	3/19/2019	Parcel 3/P26	Destroyed	6/20/2019
PD Fuze	Fuze	17	4	No	3/19/2019	Parcel 3/AG26	Destroyed	4/2/2019
PD Fuze	Fuze	3	3	No	3/19/2019	Parcel 3/P26	Destroyed	4/2/2019
37mm	Projectile	2	1	No	3/21/2019	Parcel 3/J26	Destroyed	6/20/2019
37mm	Projectile	1	1	No	3/21/2019	Parcel 3/AF26	Destroyed	6/20/2019
40mm	Projectile	1	1	No	3/21/2019	Parcel 3/J26	Destroyed	6/20/2019
40mm	Projectile	1	1	No	3/21/2019	Parcel 3/P26	Destroyed	6/20/2019
40mm	Projectile	3	2	No	3/21/2019	Parcel 3/AF26	Destroyed	6/20/2019
AN-M110	Fuze	1	1	Yes	3/21/2019	Parcel 3/AF26	BIP	5/1/2019
BD Fuze	Fuze	4	1	No	3/21/2019	Parcel 3/J26	Destroyed	4/2/2019
BD Fuze	Fuze	1	1	No	3/21/2019	Parcel 3/AF26	Destroyed	4/2/2019
BLU-3	Bomb	1	1	Yes	3/21/2019	Parcel 3/P26	BIP	4/13/2019
BLU-4	Bomb	1	2	No	3/21/2019	Parcel 3/P26	Destroyed	6/20/2019
Blu-4	Bomb	1	1	Yes	3/21/2019	Parcel 3/J26	BIP	3/23/2019
Blu-4	Bomb	1	1	Yes	3/21/2019	Parcel 3/J26	BIP	3/23/2019
Booster	Booster	7	1	No	3/21/2019	Parcel 3/J26	Destroyed	4/2/2019
M83 Butterfly	Bomb	1	2	No	3/21/2019	Parcel 3/P26	Destroyed	6/20/2019
PD Fuze	Fuze	4	3	No	3/21/2019	Parcel 3/P26	Destroyed	4/2/2019
PD Fuze	Fuze	5	2	No	3/21/2019	Parcel 3/AF26	Destroyed	4/2/2019
20mm	Projectile	1	1	No	3/22/2019	Parcel 3/AF26	Destroyed	6/20/2019
37mm	Projectile	2	1	No	3/22/2019	Parcel 3/AF26	Destroyed	6/20/2019
37mm	Projectile	1	2	No	3/22/2019	Parcel 3/O26	Destroyed	6/20/2019
37mm	Projectile	1	3	No	3/22/2019	Parcel 3/I26	Destroyed	6/20/2019
40mm	Projectile	3	2	No	3/22/2019	Parcel 3/AF26	Destroyed	6/20/2019

TABLE 3-4
MEC RECOVERED
FORT WINGATE DEPOT ACTIVITY
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Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
40mm	Projectile	2	4	No	3/22/2019	Parcel 3/O26	Destroyed	6/20/2019
BD Fuze	Fuze	3	2	No	3/22/2019	Parcel 3/AF26	Destroyed	4/2/2019
BD Fuze	Fuze	4	3	No	3/22/2019	Parcel 3/O26	Destroyed	4/2/2019
BD Fuze	Fuze	2	1	No	3/22/2019	Parcel 3/I26	Destroyed	4/2/2019
Blu-3	Bomb	1	1	No	3/22/2019	Parcel 3/I26	Destroyed	6/20/2019
Blu-4	Bomb	1	2	No	3/22/2019	Parcel 3/I26	Destroyed	6/20/2019
Blu-4	Bomb	1	1	Yes	3/22/2019	Parcel 3/I26	BIP	3/23/2019
Booster	Booster	1	1	No	3/22/2019	Parcel 3/AF26	Destroyed	4/2/2019
Booster	Booster	5	1	No	3/22/2019	Parcel 3/I26	Destroyed	4/2/2019
PD Fuze	Fuze	9	2	No	3/22/2019	Parcel 3/AF26	Destroyed	4/2/2019
PD Fuze	Fuze	2	3	No	3/22/2019	Parcel 3/O26	Destroyed	4/2/2019
PD Fuze	Fuze	1	2	No	3/22/2019	Parcel 3/I26	Destroyed	4/2/2019
20mm	Projectile	3	3	No	3/26/2019	Parcel 3/AF26	Destroyed	6/20/2019
20mm	Projectile	1	1	No	3/26/2019	Parcel 3/I27	Destroyed	6/20/2019
37mm	Projectile	1	2	Yes	3/26/2019	Parcel 3/AF26	Destroyed	12/10/2019
40mm	Projectile	5	2	No	3/26/2019	Parcel 3/AF26	Destroyed	6/20/2019
40mm	Projectile	3	2	No	3/26/2019	Parcel 3/O26	Destroyed	6/20/2019
AN-M110	Fuze	1	0	No	3/26/2019	Parcel 3/AF26	BIP	5/1/2019
BD Fuze	Fuze	1	2	No	3/26/2019	Parcel 3/AF26	Destroyed	4/2/2019
BD Fuze	Fuze	3	3	No	3/26/2019	Parcel 3/O26	Destroyed	4/2/2019
BD Fuze	Fuze	5	2	No	3/26/2019	Parcel 3/I27	Destroyed	4/2/2019
Blu-3	Bomb	2	1	No	3/26/2019	Parcel 3/O26	Destroyed	6/20/2019
Booster	Booster	3	3	No	3/26/2019	Parcel 3/AF26	Destroyed	4/2/2019
Booster	Booster	1	0	No	3/26/2019	Parcel 3/O26	Destroyed	4/2/2019
Booster	Booster	7	2	No	3/26/2019	Parcel 3/I27	Destroyed	4/2/2019
M131	Fuze	1	0	No	3/26/2019	Parcel 3/AF26	BIP	5/1/2019
M83 Butterfly	Bomb	1	2	Yes	3/26/2019	Parcel 3/AF26	BIP	5/1/2019
M83 Butterfly	Bomb	1	1	Yes	3/26/2019	Parcel 3/O26	BIP	6/13/2019
PD Fuze	Fuze	38	4	No	3/26/2019	Parcel 3/AF26	Destroyed	4/2/2019
PD Fuze	Fuze	4	4	No	3/26/2019	Parcel 3/O26	Destroyed	4/2/2019
PD Fuze	Fuze	3	3	No	3/26/2019	Parcel 3/I27	Destroyed	4/2/2019
20mm	Projectile	1	2	No	3/27/2019	Parcel 3/AF26	Destroyed	6/20/2019
37mm	Projectile	1	3	No	3/27/2019	Parcel 3/J27	Destroyed	6/20/2019
40mm	Projectile	2	3	No	3/27/2019	Parcel 3/AF26	Destroyed	6/20/2019
40mm	Projectile	1	3	No	3/27/2019	Parcel 3/N26	Destroyed	6/20/2019
40mm	Projectile	2	1	No	3/27/2019	Parcel 3/J27	Destroyed	6/20/2019
57mm	Projectile	1	2	No	3/27/2019	Parcel 3/N26	Destroyed	7/25/2019
BD Fuze	Fuze	1	3	No	3/27/2019	Parcel 3/N26	Destroyed	4/2/2019
BD Fuze	Fuze	2	2	No	3/27/2019	Parcel 3/J27	Destroyed	4/2/2019
BLU-4	Bomb	2	1	No	3/27/2019	Parcel 3/N26	Destroyed	6/20/2019
Booster	Booster	2	3	No	3/27/2019	Parcel 3/AF26	Destroyed	4/2/2019
Booster	Booster	7	2	No	3/27/2019	Parcel 3/J27	Destroyed	4/2/2019
M83 Butterfly	Bomb	1	2	No	3/27/2019	Parcel 3/N26	Destroyed	6/20/2019
PD Fuze	Fuze	12	3	No	3/27/2019	Parcel 3/AF26	Destroyed	4/2/2019
PD Fuze	Fuze	2	2	No	3/27/2019	Parcel 3/N26	Destroyed	4/2/2019

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MEC RECOVERED
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Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
40mm	Projectile	1	1	No	3/28/2019	Parcel 3/N26	Destroyed	6/20/2019
40mm	Projectile	1	3	No	3/28/2019	Parcel 3/J27	Destroyed	6/20/2019
BD Fuze	Fuze	1	2	No	3/28/2019	Parcel 3/N26	Destroyed	4/2/2019
BD Fuze	Fuze	4	2	No	3/28/2019	Parcel 3/J27	Destroyed	4/2/2019
BLU-4	Bomb	1	2	No	3/28/2019	Parcel 3/N26	Destroyed	6/20/2019
BLU-4	Bomb	1	3	Yes	3/28/2019	Parcel 3/J27	BIP	4/13/2019
Booster	Booster	1	2	No	3/28/2019	Parcel 3/J27	Destroyed	4/2/2019
M83 Butterfly	Bomb	1	1	Yes	3/28/2019	Parcel 3/N26	BIP	6/13/2019
PD Fuze	Fuze	2	3	No	3/28/2019	Parcel 3/J27	Destroyed	4/2/2019
PD Fuze	Fuze	8	4	No	3/28/2019	Parcel 3/AE26	Destroyed	4/2/2019
40mm	Projectile	1	2	No	3/29/2019	Parcel 3/N27	Destroyed	6/20/2019
BD Fuze	Fuze	1	3	No	3/29/2019	Parcel 3/G26	Destroyed	4/2/2019
BLU-3	Bomb	1	1	No	3/29/2019	Parcel 3/N27	Destroyed	6/20/2019
BLU-3	Bomb	1	2	No	3/29/2019	Parcel 3/G26	Destroyed	6/20/2019
BLU-4	Bomb	1	0	Yes	3/29/2019	Parcel 3/G26	BIP	4/13/2019
Booster	Booster	2	2	No	3/29/2019	Parcel 3/G26	Destroyed	4/2/2019
PD Fuze	Fuze	4	3	No	3/29/2019	Parcel 3/N27	Destroyed	4/2/2019
PD Fuze	Fuze	1	1	No	3/29/2019	Parcel 3/G26	Destroyed	4/2/2019
20mm	Projectile	2	3	No	4/1/2019	Parcel 3/AE26	Destroyed	6/20/2019
37mm	Projectile	1	2	No	4/1/2019	Parcel 3/F26	Destroyed	6/20/2019
40mm	Projectile	4	3	No	4/1/2019	Parcel 3/AE26	Destroyed	6/20/2019
60mm	Projectile	1	4	No	4/1/2019	Parcel 3/AE26	Destroyed	8/1/2019
BD Fuze	Fuze	2	3	No	4/1/2019	Parcel 3/N27	Destroyed	4/2/2019
BD Fuze	Fuze	4	2	No	4/1/2019	Parcel 3/F26	Destroyed	4/2/2019
BLU-4	Bomb	1	2	No	4/1/2019	Parcel 3/N27	Destroyed	6/20/2019
Booster	Booster	2	3	No	4/1/2019	Parcel 3/AE26	Destroyed	4/2/2019
Booster	Booster	2	3	No	4/1/2019	Parcel 3/F26	Destroyed	4/2/2019
PD Fuze	Fuze	20	4	No	4/1/2019	Parcel 3/AE26	Destroyed	4/2/2019
PD Fuze	Fuze	2	2	No	4/1/2019	Parcel 3/N27	Destroyed	4/2/2019
20mm	Projectile	1	2	No	4/2/2019	Parcel 3/AE26	Destroyed	6/20/2019
40mm	Projectile	3	4	No	4/2/2019	Parcel 3/AE26	Destroyed	6/20/2019
60mm	Projectile	1	4	No	4/2/2019	Parcel 3/AE26	Destroyed	8/1/2019
BD Fuze	Fuze	1	3	No	4/2/2019	Parcel 3/AE26	Destroyed	5/7/2019
BLU-3	Bomb	1	1	No	4/2/2019	Parcel 3/O27	Destroyed	6/20/2019
Booster	Booster	2	3	No	4/2/2019	Parcel 3/AE26	Destroyed	5/7/2019
Booster	Booster	1	1	No	4/2/2019	Parcel 3/O27	Destroyed	5/7/2019
PD Fuze	Fuze	20	3	No	4/2/2019	Parcel 3/AE26	Destroyed	5/7/2019
PD Fuze	Fuze	2	3	No	4/2/2019	Parcel 3/O27	Destroyed	5/7/2019
37mm	Projectile	1	3	No	4/3/2019	Parcel 3/AE26	Destroyed	6/20/2019
37mm	Projectile	1	2	No	4/3/2019	Parcel 3/E26	Destroyed	6/20/2019
37mm	Projectile	1	2	Yes	4/3/2019	Parcel 3/O27	Destroyed	12/10/2019
40mm	Projectile	2	2	No	4/3/2019	Parcel 3/AE26	Destroyed	6/20/2019
40mm	Projectile	1	2	No	4/3/2019	Parcel 3/O27	Destroyed	6/20/2019
BD Fuze	Fuze	1	2	No	4/3/2019	Parcel 3/AE26	Destroyed	5/7/2019
BD Fuze	Fuze	2	2	No	4/3/2019	Parcel 3/O27	Destroyed	5/7/2019

TABLE 3-4
MEC RECOVERED
FORT WINGATE DEPOT ACTIVITY
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Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
BD Fuze	Fuze	3	3	No	4/3/2019	Parcel 3/E26	Destroyed	5/7/2019
Blu-4	Bomb	2	2	No	4/3/2019	Parcel 3/E26	Destroyed	6/20/2019
Booster	Booster	1	3	No	4/3/2019	Parcel 3/AE26	Destroyed	5/7/2019
Booster	Booster	1	1	No	4/3/2019	Parcel 3/O27	Destroyed	5/7/2019
Booster	Booster	6	3	No	4/3/2019	Parcel 3/E26	Destroyed	5/7/2019
PD Fuze	Fuze	8	3	No	4/3/2019	Parcel 3/AE26	Destroyed	5/7/2019
PD Fuze	Fuze	3	3	No	4/3/2019	Parcel 3/O27	Destroyed	5/7/2019
37mm	Projectile	3	3	No	4/4/2019	Parcel 3/Y25	Destroyed	6/20/2019
37mm	Projectile	1	2	Yes	4/4/2019	Parcel 3/Y25	Destroyed	12/10/2019
40mm	Projectile	2	2	No	4/4/2019	Parcel 3/Y25	Destroyed	6/20/2019
40mm	Projectile	1	3	No	4/4/2019	Parcel 3/AD26	Destroyed	6/20/2019
90mm	Projectile	1	2	No	4/4/2019	Parcel 3/Y25	Destroyed	11/14/2019
BD Fuze	Fuze	1	2	No	4/4/2019	Parcel 3/Y25	Destroyed	5/7/2019
Blu-3	Bomb	1	3	No	4/4/2019	Parcel 3/AD26	Destroyed	6/20/2019
Blu-3	Bomb	1	1	Yes	4/4/2019	Parcel 3/AD26	BIP	4/18/2019
Booster	Booster	2	1	No	4/4/2019	Parcel 3/Y25	Destroyed	5/7/2019
Booster	Booster	1	2	No	4/4/2019	Parcel 3/AD26	Destroyed	5/7/2019
M131	Fuze	1	2	No	4/4/2019	Parcel 3/AD26	BIP	4/18/2019
M219	Fuze	1	2	No	4/4/2019	Parcel 3/AD26	BIP	4/18/2019
M83 Butterfly	Bomb	1	2	Yes	4/4/2019	Parcel 3/AD26	BIP	4/18/2019
PD Fuze	Fuze	18	4	No	4/4/2019	Parcel 3/Y25	Destroyed	5/7/2019
PD Fuze	Fuze	25	3	No	4/4/2019	Parcel 3/AD26	Destroyed	5/7/2019
2.75" Warhead	Rocket	1	3	Yes	4/5/2019	Parcel 3/AD26	Destroyed	12/16/2019
20mm	Projectile	1	3	No	4/5/2019	Parcel 3/E27	Destroyed	6/20/2019
37mm	Projectile	1	2	Yes	4/5/2019	Parcel 3/AD26	Destroyed	12/10/2019
40mm	Projectile	1	2	No	4/5/2019	Parcel 3/AD26	Destroyed	6/20/2019
BD Fuze	Fuze	1	2	No	4/5/2019	Parcel 3/E27	Destroyed	5/7/2019
Booster	Booster	3	1	No	4/5/2019	Parcel 3/E27	Destroyed	5/7/2019
M83 Butterfly	Bomb	1	1	Yes	4/5/2019	Parcel 3/E27	BIP	6/13/2019
PD Fuze	Fuze	9	3	No	4/5/2019	Parcel 3/AD26	Destroyed	5/7/2019
40mm	Projectile	2	2	No	4/8/2019	Parcel 3/AD26	Destroyed	6/20/2019
60mm	Projectile	1	2	No	4/8/2019	Parcel 3/AD26	Destroyed	8/1/2019
BD Fuze	Fuze	3	1	No	4/8/2019	Parcel 3/AD26	Destroyed	5/7/2019
Booster	Booster	1	1	No	4/8/2019	Parcel 3/Y25	Destroyed	5/7/2019
M83 Butterfly	Bomb	1	1	Yes	4/8/2019	Parcel 3/AD26	BIP	4/18/2019
PD Fuze	Fuze	5	2	No	4/8/2019	Parcel 3/AD26	Destroyed	5/7/2019
PD Fuze	Fuze	3	2	No	4/8/2019	Parcel 3/Y25	Destroyed	5/7/2019
20lb Frag	Bomb	1	2	No	4/10/2019	Parcel 3/Z25	Destroyed	9/4/2019
37mm	Projectile	1	2	No	4/10/2019	Parcel 3/Z25	Destroyed	6/20/2019
40mm	Projectile	2	2	No	4/10/2019	Parcel 3/Z25	Destroyed	6/20/2019
40mm	Projectile	1	1	No	4/10/2019	Parcel 3/AD26	Destroyed	6/20/2019
BD Fuze	Fuze	5	2	No	4/10/2019	Parcel 3/Z25	Destroyed	5/7/2019
BD Fuze	Fuze	1	1	No	4/10/2019	Parcel 3/AD26	Destroyed	5/7/2019
Blu-4	Bomb	1	1	Yes	4/10/2019	Parcel 3/Z25	BIP	4/13/2019
Booster	Booster	1	1	No	4/10/2019	Parcel 3/AD26	Destroyed	5/7/2019

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MEC RECOVERED
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Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
M131	Fuze	2	1	No	4/10/2019	Parcel 3/AD26	BIP	4/18/2019
M131	Fuze	1	1	No	4/10/2019	Parcel 3/Z25	BIP	4/13/2019
PD Fuze	Fuze	8	4	No	4/10/2019	Parcel 3/Z25	Destroyed	5/7/2019
PD Fuze	Fuze	13	2	No	4/10/2019	Parcel 3/AD26	Destroyed	5/7/2019
BLU-4	Bomb	1	0	Yes	4/11/2019	Parcel 3/F27	BIP	5/31/2019
M131	Fuze	1	1	No	4/11/2019	Parcel 3/Z25	BIP	4/13/2019
20mm	Projectile	1	1	No	4/12/2019	Parcel 3/AC26	Destroyed	6/20/2019
37mm	Projectile	1	5	No	4/12/2019	Parcel 3/F27	Destroyed	6/20/2019
40mm	Projectile	1	2	No	4/12/2019	Parcel 3/AC26	Destroyed	6/20/2019
60mm	Projectile	1	2	No	4/12/2019	Parcel 3/AC26	Destroyed	8/1/2019
BD Fuze	Fuze	5	2	No	4/12/2019	Parcel 3/AC26	Destroyed	5/7/2019
BD Fuze	Fuze	1	2	No	4/12/2019	Parcel 3/Z25	Destroyed	5/7/2019
BD Fuze	Fuze	2	2	No	4/12/2019	Parcel 3/F27	Destroyed	5/7/2019
Booster	Booster	3	3	No	4/12/2019	Parcel 3/Z25	Destroyed	5/7/2019
Booster	Booster	15	2	No	4/12/2019	Parcel 3/F27	Destroyed	5/7/2019
Booster	Booster	2	3	No	4/12/2019	Parcel 3/AC26	Destroyed	5/7/2019
M83 Butterfly	Bomb	1	1	No	4/12/2019	Parcel 3/AC26	Destroyed	6/20/2019
PD Fuze	Fuze	16	2	No	4/12/2019	Parcel 3/AC26	Destroyed	5/7/2019
PD Fuze	Fuze	7	3	No	4/12/2019	Parcel 3/Z25	Destroyed	5/7/2019
37mm	Projectile	1	2	No	4/15/2019	Parcel 3/AC26	Destroyed	6/20/2019
40mm	Projectile	1	1	No	4/15/2019	Parcel 3/AC26	Destroyed	6/20/2019
BD Fuze	Fuze	1	3	No	4/15/2019	Parcel 3/G27	Destroyed	5/7/2019
BD Fuze	Fuze	4	2	No	4/15/2019	Parcel 3/AC26	Destroyed	5/7/2019
Blu-3	Bomb	1	2	No	4/15/2019	Parcel 3/AC26	Destroyed	6/20/2019
Booster	Booster	4	1	No	4/15/2019	Parcel 3/G27	Destroyed	5/7/2019
Booster	Booster	2	1	No	4/15/2019	Parcel 3/AC26	Destroyed	5/7/2019
M110	Fuze	1	1	No	4/15/2019	Parcel 3/AC26	BIP	4/30/2019
M131	Fuze	2	1	No	4/15/2019	Parcel 3/AC26	BIP	4/30/2019
M131	Fuze	1	1	No	4/15/2019	Parcel 3/AC26	BIP	5/1/2019
M219	Fuze	1	1	No	4/15/2019	Parcel 3/AC26	BIP	4/30/2019
M83 Butterfly	Bomb	1	1	Yes	4/15/2019	Parcel 3/AC26	BIP	4/30/2019
PD Fuze	Fuze	13	2	No	4/15/2019	Parcel 3/AC26	Destroyed	5/7/2019
40mm	Projectile	2	2	No	4/16/2019	Parcel 3/AC26	Destroyed	6/20/2019
57mm	Projectile	1	1	No	4/16/2019	Parcel 3/AC26	Destroyed	7/25/2019
57mm	Projectile	1	2	Yes	4/16/2019	Parcel 3/AC26	Destroyed	12/16/2019
BD Fuze	Fuze	4	1	No	4/16/2019	Parcel 3/AC26	Destroyed	5/7/2019
Booster	Booster	1	1	No	4/16/2019	Parcel 3/AC26	Destroyed	5/7/2019
PD Fuze	Fuze	13	2	No	4/16/2019	Parcel 3/AC26	Destroyed	5/7/2019
90mm	Projectile	1	2	No	4/17/2019	Parcel 3/AC26	Destroyed	12/16/2019
BD Fuze	Fuze	3	1	No	4/17/2019	Parcel 3/AC26	Destroyed	5/7/2019
Booster	Booster	2	2	No	4/17/2019	Parcel 3/B25	Destroyed	5/7/2019
M83 Butterfly	Bomb	1	2	No	4/17/2019	Parcel 3/AC26	Destroyed	6/20/2019
PD Fuze	Fuze	37	2	No	4/17/2019	Parcel 3/AC26	Destroyed	5/7/2019
37mm	Projectile	1	1	No	4/18/2019	Parcel 3/C25	Destroyed	6/20/2019
AN-M110	Fuze	1	3	No	4/18/2019	Parcel 3/Z25	BIP	5/2/2019

TABLE 3-4
MEC RECOVERED
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
BD Fuze	Fuze	1	1	No	4/18/2019	Parcel 3/C25	Destroyed	5/7/2019
BD Fuze	Fuze	1	2	No	4/18/2019	Parcel 3/Z25	Destroyed	5/7/2019
BLU-4	Bomb	1	6	Yes	4/18/2019	Parcel 3/C25	BIP	5/31/2019
Booster	Booster	2	3	No	4/18/2019	Parcel 3/C25	Destroyed	5/7/2019
Booster	Booster	3	2	No	4/18/2019	Parcel 3/Z25	Destroyed	5/7/2019
PD Fuze	Fuze	1	1	No	4/18/2019	Parcel 3/C25	Destroyed	5/7/2019
PD Fuze	Fuze	22	4	No	4/18/2019	Parcel 3/Z25	Destroyed	5/7/2019
40mm	Projectile	1	4	No	4/19/2019	Parcel 3/Z25	Destroyed	6/20/2019
40mm	Projectile	1	1	No	4/19/2019	Parcel 3/AC25	Destroyed	6/20/2019
BD Fuze	Fuze	1	2	No	4/19/2019	Parcel 3/Z25	Destroyed	5/7/2019
BD Fuze	Fuze	3	2	No	4/19/2019	Parcel 3/AC25	Destroyed	5/7/2019
Booster	Booster	1	1	No	4/19/2019	Parcel 3/AC25	Destroyed	5/7/2019
M83 Butterfly	Bomb	1	4	No	4/19/2019	Parcel 3/Z25	Destroyed	6/20/2019
M83 Butterfly	Bomb	1	3	No	4/19/2019	Parcel 3/AC25	Destroyed	6/20/2019
PD Fuze	Fuze	10	4	No	4/19/2019	Parcel 3/Z25	Destroyed	5/7/2019
PD Fuze	Fuze	36	2	No	4/19/2019	Parcel 3/AC25	Destroyed	5/7/2019
40mm	Projectile	1	1	Yes	4/22/2019	Parcel 3/AC25	Destroyed	11/18/2019
60mm	Projectile	1	2	No	4/22/2019	Parcel 3/AC25	Destroyed	8/1/2019
BD Fuze	Fuze	2	2	No	4/22/2019	Parcel 3/AC25	Destroyed	5/7/2019
BD Fuze	Fuze	1	1	No	4/22/2019	Parcel 3/X24	Destroyed	5/7/2019
BD Fuze	Fuze	2	3	No	4/22/2019	Parcel 3/D25	Destroyed	5/7/2019
Blu-3	Bomb	1	1	Yes	4/22/2019	Parcel 3/AC25	BIP	4/30/2019
BLU-4	Bomb	2	1	No	4/22/2019	Parcel 3/D25	Destroyed	6/20/2019
M131	Fuze	1	1	No	4/22/2019	Parcel 3/AC25	BIP	4/30/2019
M131	Fuze	1	1	No	4/22/2019	Parcel 3/AC25	BIP	4/30/2019
PD Fuze	Fuze	16	2	No	4/22/2019	Parcel 3/AC25	Destroyed	5/7/2019
PD Fuze	Fuze	3	3	No	4/22/2019	Parcel 3/X24	Destroyed	5/7/2019
40mm	Projectile	2	1	No	4/23/2019	Parcel 3/AC25	Destroyed	6/20/2019
AN-M110	Fuze	1	2	No	4/23/2019	Parcel 3/X24	BIP	5/2/2019
BD Fuze	Fuze	1	2	No	4/23/2019	Parcel 3/D25	Destroyed	5/7/2019
BD Fuze	Fuze	2	3	No	4/23/2019	Parcel 3/X24	Destroyed	5/7/2019
Booster	Booster	2	1	No	4/23/2019	Parcel 3/AC25	Destroyed	5/7/2019
Booster	Booster	5	1	No	4/23/2019	Parcel 3/D25	Destroyed	5/7/2019
M131	Fuze	1	1	No	4/23/2019	Parcel 3/AC25	BIP	4/30/2019
M131	Fuze	1	1	No	4/23/2019	Parcel 3/AC25	BIP	4/30/2019
M131	Fuze	1	1	No	4/23/2019	Parcel 3/AC25	BIP	4/30/2019
M131	Fuze	1	1	No	4/23/2019	Parcel 3/X24	BIP	5/2/2019
M131	Fuze	1	1	No	4/23/2019	Parcel 3/X24	BIP	5/2/2019
M83 Butterfly	Bomb	1	2	No	4/23/2019	Parcel 3/AC25	Destroyed	6/20/2019
M83 Butterfly	Bomb	1	2	No	4/23/2019	Parcel 3/X24	Destroyed	6/20/2019
PD Fuze	Fuze	21	4	No	4/23/2019	Parcel 3/AC25	Destroyed	5/7/2019
PD Fuze	Fuze	1	2	No	4/23/2019	Parcel 3/D25	Destroyed	5/7/2019
PD Fuze	Fuze	7	2	No	4/23/2019	Parcel 3/X24	Destroyed	5/7/2019
40mm	Projectile	1	1	No	4/24/2019	Parcel 3/AC25	Destroyed	6/20/2019
60mm	Projectile	1	1	No	4/24/2019	Parcel 3/AC25	Destroyed	8/1/2019

TABLE 3-4
MEC RECOVERED
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
BD Fuze	Fuze	2	3	No	4/24/2019	Parcel 3/X24	Destroyed	5/7/2019
BD Fuze	Fuze	2	2	No	4/24/2019	Parcel 3/AC25	Destroyed	5/7/2019
BLU-3	Bomb	1	5	Yes	4/24/2019	Parcel 3/X24	BIP	5/2/2019
Booster	Booster	1	1	No	4/24/2019	Parcel 3/AC25	Destroyed	5/7/2019
M131	Fuze	1	2	No	4/24/2019	Parcel 3/X24	BIP	5/2/2019
M219	Fuze	1	0	No	4/24/2019	Parcel 3/D25	BIP	5/31/2019
PD Fuze	Fuze	6	4	No	4/24/2019	Parcel 3/X24	Destroyed	5/7/2019
PD Fuze	Fuze	17	2	No	4/24/2019	Parcel 3/AC25	Destroyed	5/7/2019
20mm	Projectile	1	1	No	4/25/2019	Parcel 3/X24	Destroyed	6/20/2019
37mm	Projectile	1	1	No	4/25/2019	Parcel 3/E25	Destroyed	6/20/2019
37mm	Projectile	1	1	No	4/25/2019	Parcel 3/X24	Destroyed	6/20/2019
40mm	Projectile	1	3	No	4/25/2019	Parcel 3/E25	Destroyed	6/20/2019
40mm	Projectile	1	1	No	4/25/2019	Parcel 3/X24	Destroyed	6/20/2019
BD Fuze	Fuze	3	1	No	4/25/2019	Parcel 3/E25	Destroyed	5/7/2019
Blu-4	Bomb	1	0	No	4/25/2019	Parcel 3/E25	Destroyed	6/20/2019
BLU-4	Bomb	1	0	Yes	4/25/2019	Parcel 3/E25	BIP	5/31/2019
Booster	Booster	1	1	No	4/25/2019	Parcel 3/E25	Destroyed	5/7/2019
Booster	Booster	2	3	No	4/25/2019	Parcel 3/X24	Destroyed	5/7/2019
Booster	Booster	1	1	No	4/25/2019	Parcel 3/AC25	Destroyed	5/7/2019
M131	Fuze	1	1	No	4/25/2019	Parcel 3/AC25	BIP	4/30/2019
M131	Fuze	1	1	No	4/25/2019	Parcel 3/AC25	BIP	4/30/2019
M83 Butterfly	Bomb	1	1	Yes	4/25/2019	Parcel 3/AC25	BIP	4/30/2019
PD Fuze	Fuze	1	1	No	4/25/2019	Parcel 3/E25	Destroyed	5/7/2019
PD Fuze	Fuze	18	2	No	4/25/2019	Parcel 3/X24	Destroyed	5/7/2019
PD Fuze	Fuze	40	1	No	4/25/2019	Parcel 3/AC25	Destroyed	5/7/2019
20mm	Projectile	1	1	No	4/26/2019	Parcel 3/X24	Destroyed	6/20/2019
37mm	Projectile	1	1	No	4/26/2019	Parcel 3/AD25	Destroyed	6/20/2019
37mm	Projectile	1	1	Yes	4/26/2019	Parcel 3/AD25	Destroyed	12/10/2019
40mm	Projectile	1	1	No	4/26/2019	Parcel 3/AD25	Destroyed	6/20/2019
40mm	Projectile	1	1	No	4/26/2019	Parcel 3/X24	Destroyed	6/20/2019
60mm	Projectile	1	1	No	4/26/2019	Parcel 3/AD25	Destroyed	8/1/2019
BD Fuze	Fuze	1	1	No	4/26/2019	Parcel 3/X24	Destroyed	5/7/2019
Booster	Booster	4	1	No	4/26/2019	Parcel 3/AD25	Destroyed	5/7/2019
Booster	Booster	4	1	No	4/26/2019	Parcel 3/X24	Destroyed	5/7/2019
PD Fuze	Fuze	15	1	No	4/26/2019	Parcel 3/AD25	Destroyed	5/7/2019
PD Fuze	Fuze	28	2	No	4/26/2019	Parcel 3/X24	Destroyed	5/7/2019
20mm	Projectile	1	2	No	4/29/2019	Parcel 3/AD25	Destroyed	6/20/2019
37mm	Projectile	1	2	No	4/29/2019	Parcel 3/AD25	Destroyed	7/25/2019
37mm	Projectile	1	1	No	4/29/2019	Parcel 3/E25	Destroyed	6/20/2019
40mm	Projectile	5	1	No	4/29/2019	Parcel 3/AD25	Destroyed	6/20/2019
BD Fuze	Fuze	1	1	No	4/29/2019	Parcel 3/AD25	Destroyed	5/7/2019
BD Fuze	Fuze	2	3	No	4/29/2019	Parcel 3/E25	Destroyed	5/7/2019
Booster	Booster	2	1	No	4/29/2019	Parcel 3/AD25	Destroyed	5/7/2019
Booster	Booster	2	2	No	4/29/2019	Parcel 3/X24	Destroyed	5/7/2019
Booster	Booster	2	3	No	4/29/2019	Parcel 3/E25	Destroyed	5/7/2019

TABLE 3-4
MEC RECOVERED
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McKINLEY COUNTY, NEW MEXICO

Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
M219	Fuze	1	0	No	4/29/2019	Parcel 3/E25	BIP	5/31/2019
PD Fuze	Fuze	13	2	No	4/29/2019	Parcel 3/AD25	Destroyed	5/7/2019
PD Fuze	Fuze	10	3	No	4/29/2019	Parcel 3/X24	Destroyed	5/7/2019
Booster	Booster	3	1	No	5/1/2019	Parcel 3/AD25	Destroyed	5/7/2019
Booster	Booster	3	3	No	5/1/2019	Parcel 3/X24	Destroyed	5/7/2019
PD Fuze	Fuze	35	1	No	5/1/2019	Parcel 3/AD25	Destroyed	5/7/2019
PD Fuze	Fuze	12	3	No	5/1/2019	Parcel 3/X24	Destroyed	5/7/2019
AN-M120	Fuze	1	1	No	5/2/2019	Parcel 3/AD25	BIP	6/1/2019
AN-M120	Fuze	1	1	No	5/2/2019	Parcel 3/X24	BIP	5/2/2019
M131	Fuze	1	1	No	5/2/2019	Parcel 3/AD25	BIP	6/1/2019
M131	Fuze	1	1	No	5/2/2019	Parcel 3/AD25	BIP	6/1/2019
M131	Fuze	1	1	No	5/2/2019	Parcel 3/AD25	BIP	6/1/2019
40mm	Projectile	3	1	No	5/3/2019	Parcel 3/AD25	Destroyed	6/20/2019
40mm	Projectile	2	3	No	5/3/2019	Parcel 3/Y24	Destroyed	6/20/2019
60mm	Projectile	1	1	No	5/3/2019	Parcel 3/AD25	Destroyed	8/1/2019
BD Fuze	Fuze	1	1	No	5/3/2019	Parcel 3/AD25	Destroyed	5/7/2019
Booster	Booster	4	1	No	5/3/2019	Parcel 3/AD25	Destroyed	5/7/2019
M83 Butterfly	Bomb	1	1	No	5/3/2019	Parcel 3/Y24	Destroyed	6/20/2019
PD Fuze	Fuze	32	1	No	5/3/2019	Parcel 3/AD25	Destroyed	5/7/2019
PD Fuze	Fuze	20	1	No	5/3/2019	Parcel 3/Y24	Destroyed	5/7/2019
20mm	Projectile	1	1	No	5/6/2019	Parcel 3/AD25	Destroyed	6/20/2019
20mm	Projectile	1	5	No	5/6/2019	Parcel 3/E24	Destroyed	6/20/2019
37mm	Projectile	1	1	No	5/6/2019	Parcel 3/E24	Destroyed	6/20/2019
40mm	Projectile	2	1	No	5/6/2019	Parcel 3/E24	Destroyed	6/20/2019
BD Fuze	Fuze	5	2	No	5/6/2019	Parcel 3/Y24	Destroyed	5/7/2019
BLU-4	Bomb	2	0	No	5/6/2019	Parcel 3/E24	Destroyed	6/20/2019
Booster	Booster	1	1	No	5/6/2019	Parcel 3/AD25	Destroyed	5/7/2019
PD Fuze	Fuze	15	1	No	5/6/2019	Parcel 3/AD25	Destroyed	5/7/2019
PD Fuze	Fuze	9	1	No	5/6/2019	Parcel 3/Y24	Destroyed	5/7/2019
20mm	Projectile	2	2	No	5/9/2019	Parcel 3/Y24	Destroyed	6/20/2019
20mm	Projectile	4	1	No	5/9/2019	Parcel 3/AE25	Destroyed	6/20/2019
37mm	Projectile	1	3	No	5/9/2019	Parcel 3/Y24	Destroyed	6/20/2019
37mm	Projectile	1	1	No	5/9/2019	Parcel 3/E24	Destroyed	6/20/2019
37mm	Projectile	1	1	No	5/9/2019	Parcel 3/AE25	Destroyed	6/20/2019
40mm	Projectile	2	3	No	5/9/2019	Parcel 3/Y24	Destroyed	6/20/2019
40mm	Projectile	2	1	No	5/9/2019	Parcel 3/E24	Destroyed	6/20/2019
75mm	Projectile	2	1	No	5/9/2019	Parcel 3/AE25	Destroyed	8/1/2019
BD Fuze	Fuze	1	1	No	5/9/2019	Parcel 3/Y24	Destroyed	7/18/2019
BD Fuze	Fuze	3	1	No	5/9/2019	Parcel 3/AE25	Destroyed	7/18/2019
Blu-3	Projectile	1	1	Yes	5/9/2019	Parcel 3/AD25	BIP	6/1/2019
Booster	Booster	1	1	No	5/9/2019	Parcel 3/Y24	Destroyed	7/18/2019
Booster	Booster	5	5	No	5/9/2019	Parcel 3/E24	Destroyed	7/18/2019
Booster	Booster	2	1	No	5/9/2019	Parcel 3/AE25	Destroyed	7/18/2019
M131	Fuze	1	1	No	5/9/2019	Parcel 3/AD25	BIP	6/1/2019
M131	Fuze	1	1	No	5/9/2019	Parcel 3/AD25	BIP	6/1/2019

TABLE 3-4
MEC RECOVERED
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Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
M131	Fuze	1	1	No	5/9/2019	Parcel 3/AE25	BIP	6/1/2019
M83 Butterfly	Bomb	1	1	No	5/9/2019	Parcel 3/AE25	Destroyed	6/20/2019
PD Fuze	Fuze	56	1	No	5/9/2019	Parcel 3/Y24	Destroyed	7/18/2019
PD Fuze	Fuze	1	1	No	5/9/2019	Parcel 3/E24	Destroyed	7/18/2019
PD Fuze	Fuze	41	1	No	5/9/2019	Parcel 3/AE25	Destroyed	7/18/2019
20mm	Projectile	1	1	No	5/13/2019	Parcel 3/AE25	Destroyed	6/20/2019
37mm	Projectile	1	5	No	5/13/2019	Parcel 3/D24	Destroyed	6/20/2019
40mm	Projectile	1	1	No	5/13/2019	Parcel 3/AE25	Destroyed	6/20/2019
40mm	Projectile	2	2	No	5/13/2019	Parcel 3/Y24	Destroyed	6/20/2019
40mm	Projectile	1	1	Yes	5/13/2019	Parcel 3/AE25	Destroyed	11/18/2019
BD Fuze	Fuze	1	1	No	5/13/2019	Parcel 3/Y24	Destroyed	7/18/2019
BLU-4	Bomb	2	1	No	5/13/2019	Parcel 3/D24	Destroyed	6/20/2019
Booster	Booster	4	1	No	5/13/2019	Parcel 3/D24	Destroyed	7/18/2019
PD Fuze	Fuze	21	2	No	5/13/2019	Parcel 3/AE25	Destroyed	7/18/2019
PD Fuze	Fuze	7	2	No	5/13/2019	Parcel 3/Y24	Destroyed	7/18/2019
20mm	Projectile	1	1	No	5/14/2019	Parcel 3/AE25	Destroyed	6/20/2019
37mm	Projectile	1	1	No	5/14/2019	Parcel 3/AE25	Destroyed	6/20/2019
37mm	Projectile	1	1	No	5/14/2019	Parcel 3/D24	Destroyed	6/20/2019
40mm	Projectile	1	2	No	5/14/2019	Parcel 3/AE25	Destroyed	6/20/2019
40mm	Projectile	1	3	No	5/14/2019	Parcel 3/D24	Destroyed	6/20/2019
40mm	Projectile	1	2	No	5/14/2019	Parcel 3/Y24	Destroyed	6/20/2019
40mm	Projectile	1	3	Yes	5/14/2019	Parcel 3/Y24	Destroyed	11/18/2019
BD Fuze	Fuze	1	2	No	5/14/2019	Parcel 3/Y24	Destroyed	7/18/2019
BLU-4	Bomb	2	0	Yes	5/14/2019	Parcel 3/D24	BIP	5/31/2019
Booster	Booster	1	1	No	5/14/2019	Parcel 3/AE25	Destroyed	7/18/2019
Booster	Booster	1	1	No	5/14/2019	Parcel 3/D24	Destroyed	7/18/2019
Booster	Booster	1	3	No	5/14/2019	Parcel 3/Y24	Destroyed	7/18/2019
M131	Fuze	1	1	No	5/14/2019	Parcel 3/Y24	BIP	6/1/2019
PD Fuze	Fuze	16	1	No	5/14/2019	Parcel 3/AE25	Destroyed	7/18/2019
PD Fuze	Fuze	17	1	No	5/14/2019	Parcel 3/Y24	Destroyed	7/18/2019
37mm	Projectile	1	1	No	5/15/2019	Parcel 3/AE25	Destroyed	6/20/2019
37mm	Projectile	1	5	Yes	5/15/2019	Parcel 3/D24	Destroyed	12/10/2019
40mm	Projectile	1	2	No	5/15/2019	Parcel 3/Y24	Destroyed	6/20/2019
40mm	Projectile	2	1	No	5/15/2019	Parcel 3/AE25	Destroyed	6/20/2019
Blu-3	Bomb	1	1	No	5/15/2019	Parcel 3/D24	Destroyed	6/20/2019
Blu-4	Bomb	1	1	No	5/15/2019	Parcel 3/D24	Destroyed	6/20/2019
Booster	Booster	1	3	No	5/15/2019	Parcel 3/Y24	Destroyed	7/18/2019
Booster	Booster	1	1	No	5/15/2019	Parcel 3/AE25	Destroyed	7/18/2019
Booster	Booster	3	1	No	5/15/2019	Parcel 3/D24	Destroyed	7/18/2019
M131	Fuze	1	1	No	5/15/2019	Parcel 3/AE25	BIP	6/1/2019
M131	Fuze	1	1	No	5/15/2019	Parcel 3/AE25	BIP	6/1/2019
M131	Fuze	1	1	No	5/15/2019	Parcel 3/AE25	BIP	6/1/2019
M131	Fuze	1	1	No	5/15/2019	Parcel 3/Y24	BIP	6/1/2019
PD Fuze	Fuze	15	3	No	5/15/2019	Parcel 3/Y24	Destroyed	7/18/2019
PD Fuze	Fuze	14	2	No	5/15/2019	Parcel 3/AE25	Destroyed	7/18/2019

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MEC RECOVERED
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
Blu-3	Bomb	1	1	Yes	5/16/2019	Parcel 3/D24	BIP	5/31/2019
Blu-4	Bomb	1	0	Yes	5/16/2019	Parcel 3/C24	BIP	5/31/2019
Booster	Booster	1	2	No	5/16/2019	Parcel 3/Y24	Destroyed	7/18/2019
M131	Fuze	1	1	No	5/16/2019	Parcel 3/Y24	BIP	6/1/2019
M219	Fuze	1	0	No	5/16/2019	Parcel 3/C24	BIP	5/31/2019
PD Fuze	Fuze	24	2	No	5/16/2019	Parcel 3/Y24	Destroyed	7/18/2019
20mm	Projectile	1	1	No	5/21/2019	Parcel 3/AF25	Destroyed	6/20/2019
20mm	Projectile	3	3	No	5/21/2019	Parcel 3/Y24	Destroyed	6/20/2019
37mm	Projectile	1	1	No	5/21/2019	Parcel 3/AF25	Destroyed	6/20/2019
37mm	Projectile	1	5	No	5/21/2019	Parcel 3/C24	Destroyed	6/20/2019
40mm	Projectile	1	2	Yes	5/21/2019	Parcel 3/Y24	Destroyed	11/18/2019
BD Fuze	Fuze	5	1	No	5/21/2019	Parcel 3/AF25	Destroyed	7/18/2019
BD Fuze	Fuze	3	1	No	5/21/2019	Parcel 3/C24	Destroyed	7/18/2019
BLU-3	Bomb	1	1	No	5/21/2019	Parcel 3/AF25	Destroyed	6/20/2019
BLU-3	Bomb	1	1	No	5/21/2019	Parcel 3/C24	Destroyed	6/20/2019
Booster	Booster	10	1	No	5/21/2019	Parcel 3/AF25	Destroyed	7/18/2019
Booster	Booster	8	3	No	5/21/2019	Parcel 3/C24	Destroyed	7/18/2019
Booster	Booster	1	1	No	5/21/2019	Parcel 3/Y24	Destroyed	7/18/2019
M83 Butterfly	Bomb	2	2	No	5/21/2019	Parcel 3/AF25	Destroyed	6/20/2019
M83 Butterfly	Bomb	1	1	Yes	5/21/2019	Parcel 3/AF25	BIP	6/12/2019
M83 Butterfly	Bomb	1	1	Yes	5/21/2019	Parcel 3/AF25	BIP	6/12/2019
PD Fuze	Fuze	57	3	No	5/21/2019	Parcel 3/AF25	Destroyed	7/18/2019
PD Fuze	Fuze	40	2	No	5/21/2019	Parcel 3/Y24	Destroyed	7/18/2019
37mm	Projectile	1	5	No	5/22/2019	Parcel 3/B24	Destroyed	6/20/2019
37mm	Projectile	2	1	No	5/22/2019	Parcel 3/AF25	Destroyed	6/20/2019
40mm	Projectile	1	3	No	5/22/2019	Parcel 3/B24	Destroyed	6/20/2019
40mm	Projectile	2	1	No	5/22/2019	Parcel 3/AF25	Destroyed	6/20/2019
40mm	Projectile	1	1	No	5/22/2019	Parcel 3/Z24	Destroyed	6/20/2019
57mm	Projectile	1	1	No	5/22/2019	Parcel 3/AF25	Destroyed	7/25/2019
75mm	Projectile	1	1	No	5/22/2019	Parcel 3/AF25	Destroyed	8/1/2019
75mm	Projectile	1	6	No	5/22/2019	Parcel 3/Z24	Destroyed	8/1/2019
75mm	Projectile	1	3	Yes	5/22/2019	Parcel 3/B24	Destroyed	12/16/2019
BD Fuze	Fuze	1	3	No	5/22/2019	Parcel 3/B24	Destroyed	7/18/2019
BD Fuze	Fuze	2	3	No	5/22/2019	Parcel 3/Z24	Destroyed	7/18/2019
BLU-4	Bomb	2	1	No	5/22/2019	Parcel 3/B24	Destroyed	6/20/2019
Booster	Booster	5	2	No	5/22/2019	Parcel 3/B24	Destroyed	7/18/2019
Booster	Booster	2	2	No	5/22/2019	Parcel 3/Z24	Destroyed	7/18/2019
M131	Fuze	1	2	No	5/22/2019	Parcel 3/Z24	BIP	6/11/2019
M56	Fuze	1	1	No	5/22/2019	Parcel 3/Z24	BIP	6/11/2019
PD Fuze	Fuze	25	1	No	5/22/2019	Parcel 3/AF25	Destroyed	7/18/2019
PD Fuze	Fuze	27	2	No	5/22/2019	Parcel 3/Z24	Destroyed	7/18/2019
20mm	Projectile	2	2	No	5/24/2019	Parcel 3/Z24	Destroyed	6/20/2019
40mm	Projectile	1	1	No	5/24/2019	Parcel 3/AF25	Destroyed	6/20/2019
AN-M110	Fuze	1	1	No	5/24/2019	Parcel 3/AF25	BIP	6/12/2019
BD Fuze	Fuze	2	2	No	5/24/2019	Parcel 3/Z24	Destroyed	7/18/2019

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MEC RECOVERED
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
Booster	Booster	3	1	No	5/24/2019	Parcel 3/AF25	Destroyed	7/18/2019
Booster	Booster	1	2	No	5/24/2019	Parcel 3/Z24	Destroyed	7/18/2019
M52	Fuze	1	2	No	5/24/2019	Parcel 3/Z24	BIP	6/11/2019
PD Fuze	Fuze	7	5	No	5/24/2019	Parcel 3/AF25	Destroyed	7/18/2019
PD Fuze	Fuze	23	2	No	5/24/2019	Parcel 3/Z24	Destroyed	7/18/2019
20mm	Projectile	1	2	No	5/28/2019	Parcel 3/AF25	Destroyed	6/20/2019
40mm	Projectile	2	2	No	5/28/2019	Parcel 3/Z24	Destroyed	6/20/2019
BD Fuze	Fuze	1	1	No	5/28/2019	Parcel 3/Z24	Destroyed	7/18/2019
BD Fuze	Fuze	1	1	No	5/28/2019	Parcel 3/AF25	Destroyed	7/18/2019
BD Fuze	Fuze	2	5	No	5/28/2019	Parcel 3/J25	Destroyed	7/18/2019
Booster	Booster	1	1	No	5/28/2019	Parcel 3/AF25	Destroyed	7/18/2019
Booster	Booster	2	1	No	5/28/2019	Parcel 3/J25	Destroyed	7/18/2019
M131	Fuze	1	1	No	5/28/2019	Parcel 3/Z24	BIP	6/11/2019
M83 Butterfly	Bomb	1	1	No	5/28/2019	Parcel 3/Z24	Destroyed	6/20/2019
PD Fuze	Fuze	9	1	No	5/28/2019	Parcel 3/Z24	Destroyed	7/18/2019
PD Fuze	Fuze	5	1	No	5/28/2019	Parcel 3/AF25	Destroyed	7/18/2019
20lb Frag	Bomb	1	1	No	5/29/2019	Parcel 3/Z24	Destroyed	9/4/2019
BD Fuze	Fuze	1	1	No	5/29/2019	Parcel 3/Z24	Destroyed	7/18/2019
Booster	Booster	2	1	No	5/29/2019	Parcel 3/Z24	Destroyed	7/18/2019
Booster	Booster	1	1	No	5/29/2019	Parcel 3/AF25	Destroyed	7/18/2019
PD Fuze	Fuze	15	1	No	5/29/2019	Parcel 3/Z24	Destroyed	7/18/2019
PD Fuze	Fuze	37	1	No	5/29/2019	Parcel 3/AF25	Destroyed	7/18/2019
M131	Fuze	1	1	No	5/30/2019	Parcel 3/AF25	BIP	6/12/2019
20mm	Projectile	2	1	No	5/31/2019	Parcel 3/Z24	Destroyed	6/20/2019
37mm	Projectile	2	3	No	5/31/2019	Parcel 3/J24	Destroyed	6/20/2019
40mm	Projectile	1	1	No	5/31/2019	Parcel 3/Z24	Destroyed	6/20/2019
BD Fuze	Fuze	1	1	No	5/31/2019	Parcel 3/Z24	Destroyed	7/18/2019
BD Fuze	Fuze	1	2	No	5/31/2019	Parcel 3/J24	Destroyed	7/18/2019
Blu-3	Bomb	1	0	Yes	5/31/2019	Parcel 3/J24	BIP	8/24/2019
Booster	Booster	1	2	No	5/31/2019	Parcel 3/AG25	Destroyed	7/18/2019
Booster	Booster	1	1	No	5/31/2019	Parcel 3/Z24	Destroyed	7/18/2019
Booster	Booster	6	1	No	5/31/2019	Parcel 3/J24	Destroyed	7/18/2019
M131	Fuze	1	1	No	5/31/2019	Parcel 3/AG25	BIP	6/12/2019
M131	Fuze	2	1	No	5/31/2019	Parcel 3/Z24	BIP	6/11/2019
PD Fuze	Fuze	31	1	No	5/31/2019	Parcel 3/AG25	Destroyed	7/18/2019
PD Fuze	Fuze	50	1	No	5/31/2019	Parcel 3/Z24	Destroyed	7/18/2019
PD Fuze	Fuze	2	2	No	5/31/2019	Parcel 3/J24	Destroyed	7/18/2019
40mm	Projectile	1	1	No	6/3/2019	Parcel 3/AG25	Destroyed	6/20/2019
40mm	Projectile	1	2	No	6/3/2019	Parcel 3/Z24	Destroyed	6/20/2019
BD Fuze	Fuze	2	2	No	6/3/2019	Parcel 3/Z24	Destroyed	7/18/2019
Booster	Booster	2	1	No	6/3/2019	Parcel 3/AG25	Destroyed	7/18/2019
M131	Fuze	1	2	No	6/3/2019	Parcel 3/Z24	BIP	6/11/2019
M131	Fuze	1	1	No	6/3/2019	Parcel 3/Z24	BIP	6/11/2019
M52	Fuze	1	2	No	6/3/2019	Parcel 3/Z24	BIP	6/11/2019
PD Fuze	Fuze	9	1	No	6/3/2019	Parcel 3/AG25	Destroyed	7/18/2019

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MEC RECOVERED
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
PD Fuze	Fuze	14	3	No	6/3/2019	Parcel 3/Z24	Destroyed	7/18/2019
M110	Fuze	1	1	No	6/4/2019	Parcel 3/AG25	BIP	6/13/2019
M131	Fuze	1	1	No	6/4/2019	Parcel 3/Z24	BIP	6/11/2019
M131	Fuze	1	1	No	6/4/2019	Parcel 3/Z24	BIP	6/11/2019
M131	Fuze	1	2	No	6/4/2019	Parcel 3/Z24	BIP	6/11/2019
M404	Fuze	1	1	No	6/4/2019	Parcel 3/AG25	BIP	6/12/2019
20mm	Projectile	1	1	No	6/5/2019	Parcel 3/AG25	Destroyed	7/25/2019
37mm	Projectile	1	4	No	6/5/2019	Parcel 3/S25	Destroyed	6/20/2019
40mm	Projectile	4	1	No	6/5/2019	Parcel 3/AG25	Destroyed	6/20/2019
40mm	Projectile	1	1	No	6/5/2019	Parcel 3/Z24	Destroyed	6/20/2019
60mm	Projectile	1	2	No	6/5/2019	Parcel 3/Z24	Destroyed	8/1/2019
BD Fuze	Fuze	6	1	No	6/5/2019	Parcel 3/AG25	Destroyed	7/18/2019
BD Fuze	Fuze	2	1	No	6/5/2019	Parcel 3/Z24	Destroyed	7/18/2019
BD Fuze	Fuze	1	6	No	6/5/2019	Parcel 3/S25	Destroyed	7/18/2019
Booster	Booster	6	1	No	6/5/2019	Parcel 3/AG25	Destroyed	7/18/2019
M131	Fuze	1	1	No	6/5/2019	Parcel 3/AG25	BIP	6/12/2019
M83 butterfly	Bomb	1	1	No	6/5/2019	Parcel 3/AG25	Destroyed	7/25/2019
PD Fuze	Fuze	32	1	No	6/5/2019	Parcel 3/AG25	Destroyed	7/18/2019
PD Fuze	Fuze	19	2	No	6/5/2019	Parcel 3/Z24	Destroyed	7/18/2019
PD Fuze	Fuze	1	4	No	6/5/2019	Parcel 3/S25	Destroyed	7/18/2019
37mm	Projectile	2	3	No	6/6/2019	Parcel 3/J24	Destroyed	6/20/2019
40mm	Projectile	2	5	No	6/6/2019	Parcel 3/J24	Destroyed	6/20/2019
40mm	Projectile	2	1	No	6/6/2019	Parcel 3/AG25	Destroyed	6/20/2019
60mm	Projectile	1	2	No	6/6/2019	Parcel 3/S25	Destroyed	8/1/2019
60mm	Projectile	1	1	No	6/6/2019	Parcel 3/AG25	Destroyed	8/1/2019
BD Fuze	Fuze	3	4	No	6/6/2019	Parcel 3/J24	Destroyed	7/18/2019
BD Fuze	Fuze	1	1	No	6/6/2019	Parcel 3/AG25	Destroyed	7/18/2019
Blu-3	Bomb	1	1	Yes	6/6/2019	Parcel 3/S25	BIP	6/18/2019
Booster	Booster	3	1	No	6/6/2019	Parcel 3/J24	Destroyed	7/18/2019
PD Fuze	Fuze	1	1	No	6/6/2019	Parcel 3/S25	Destroyed	7/18/2019
PD Fuze	Fuze	9	1	No	6/6/2019	Parcel 3/AG25	Destroyed	7/18/2019
BD Fuze	Fuze	1	1	No	6/7/2019	Parcel 3/AG25	Destroyed	7/18/2019
Booster	Booster	1	1	No	6/7/2019	Parcel 3/AG25	Destroyed	7/18/2019
M83 butterfly	Bomb	1	2	No	6/7/2019	Parcel 3/S25	Destroyed	7/25/2019
PD Fuze	Fuze	2	1	No	6/7/2019	Parcel 3/S25	Destroyed	7/18/2019
PD Fuze	Fuze	20	1	No	6/7/2019	Parcel 3/AG25	Destroyed	7/18/2019
20mm	Projectile	1	3	No	6/10/2019	Parcel 3/J24	Destroyed	7/25/2019
37mm	Projectile	3	4	No	6/10/2019	Parcel 3/J24	Destroyed	7/25/2019
40mm	Projectile	1	1	No	6/10/2019	Parcel 3/J24	Destroyed	6/20/2019
Booster	Booster	1	1	No	6/10/2019	Parcel 3/J24	Destroyed	7/18/2019
PD Fuze	Fuze	63	1	No	6/10/2019	Parcel 3/AG25	Destroyed	7/18/2019
40mm	Projectile	1	2	No	6/11/2019	Parcel 3/S25	Destroyed	7/25/2019
60mm	Projectile	1	3	No	6/11/2019	Parcel 3/S25	Destroyed	8/1/2019
Booster	Booster	1	1	No	6/11/2019	Parcel 3/S25	Destroyed	7/18/2019
M83 butterfly	Bomb	1	4	No	6/11/2019	Parcel 3/S25	Destroyed	7/25/2019

TABLE 3-4
MEC RECOVERED
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
PD Fuze	Fuze	8	2	No	6/11/2019	Parcel 3/M25	Destroyed	7/18/2019
PD Fuze	Fuze	2	3	No	6/11/2019	Parcel 3/S25	Destroyed	7/18/2019
Blu-3	Bomb	1	1	Yes	6/13/2019	Parcel 3/M25	BIP	6/18/2019
40mm	Projectile	1	3	No	6/14/2019	Parcel 3/S25	Destroyed	7/25/2019
40mm	Projectile	5	1	No	6/14/2019	Parcel 3/M25	Destroyed	7/25/2019
40mm	Projectile	1	2	Yes	6/14/2019	Parcel 3/S25	Destroyed	11/18/2019
BD Fuze	Fuze	1	2	No	6/14/2019	Parcel 3/S25	Destroyed	7/18/2019
BD Fuze	Fuze	2	1	No	6/14/2019	Parcel 3/M25	Destroyed	7/18/2019
Blu-4	Bomb	4	1	No	6/14/2019	Parcel 3/M25	Destroyed	7/25/2019
Blu-4	Bomb	1	2	Yes	6/14/2019	Parcel 3/S25	BIP	6/18/2019
Booster	Booster	2	3	No	6/14/2019	Parcel 3/S25	Destroyed	7/18/2019
Booster	Booster	2	1	No	6/14/2019	Parcel 3/M25	Destroyed	7/18/2019
PD Fuze	Fuze	19	3	No	6/14/2019	Parcel 3/S25	Destroyed	7/18/2019
PD Fuze	Fuze	1	1	No	6/14/2019	Parcel 3/M25	Destroyed	7/18/2019
PD Fuze	Fuze	5	1	No	6/17/2019	Parcel 3/M25	Destroyed	7/18/2019
BD Fuze	Fuze	1	1	No	6/17/2019	Parcel 3/M25	Destroyed	7/18/2019
Booster	Booster	1	2	No	6/17/2019	Parcel 3/M25	Destroyed	7/18/2019
PD Fuze	Fuze	2	3	No	6/17/2019	Parcel 3/S25	Destroyed	7/18/2019
Booster	Booster	1	1	No	6/17/2019	Parcel 3/S25	Destroyed	7/18/2019
M83 butterfly	Bomb	1	3	No	6/17/2019	Parcel 3/S25	Destroyed	7/25/2019
Blu-3	Bomb	1	1	Yes	6/17/2019	Parcel 3/M25	BIP	6/18/2019
M120	Fuze	1	1	No	6/18/2019	Parcel 3/T25	BIP	8/24/2019
PD Fuze	Fuze	6	1	No	6/18/2019	Parcel 3/S25	Destroyed	7/18/2019
20mm	Projectile	1	1	No	6/18/2019	Parcel 3/T25	Destroyed	7/25/2019
37mm	Projectile	2	1	No	6/18/2019	Parcel 3/T25	Destroyed	7/25/2019
PD Fuze	Fuze	1	1	No	6/18/2019	Parcel 3/T25	Destroyed	7/18/2019
PD Fuze	Fuze	5	1	No	6/19/2019	Parcel 3/T25	Destroyed	7/18/2019
Booster	Booster	2	2	No	6/19/2019	Parcel 3/T25	Destroyed	7/18/2019
37mm	Projectile	1	2	No	6/19/2019	Parcel 3/I25	Destroyed	7/25/2019
60mm	Projectile	1	4	No	6/19/2019	Parcel 3/I25	Destroyed	8/1/2019
2.75" Warhead	Rocket	1	7	No	6/19/2019	Parcel 3/I25	Destroyed	12/16/2019
PD Fuze	Fuze	2	1	No	6/19/2019	Parcel 3/I25	Destroyed	7/18/2019
BD Fuze	Fuze	4	1	No	6/19/2019	Parcel 3/I25	Destroyed	7/18/2019
60mm	Projectile	1	2	No	6/19/2019	Parcel 3/L25	Destroyed	8/1/2019
PD Fuze	Fuze	3	1	No	6/19/2019	Parcel 3/L25	Destroyed	7/18/2019
BD Fuze	Fuze	1	1	No	6/19/2019	Parcel 3/L25	Destroyed	7/18/2019
Booster	Booster	2	1	No	6/19/2019	Parcel 3/L25	Destroyed	7/18/2019
Blu-4	Bomb	3	2	No	6/19/2019	Parcel 3/L25	Destroyed	7/25/2019
M63	Projectile	1	1	Yes	6/19/2019	Parcel 3/T25	BIP	8/24/2019
Blu-4	Bomb	1	1	Yes	6/20/2019	Parcel 3/T25	BIP	8/24/2019
Blu-4	Bomb	1	1	Yes	6/20/2019	Parcel 3/L25	BIP	8/24/2019
Blu-4	Bomb	1	1	Yes	6/21/2019	Parcel 3/T25	BIP	8/24/2019
Blu-3	Bomb	2	1	Yes	6/24/2019	Parcel 3/K25	BIP	8/24/2019
Blu-4	Bomb	1	1	Yes	6/24/2019	Parcel 3/K25	BIP	8/24/2019
M83 Butterfly	Bomb	1	10	Yes	6/24/2019	Parcel 3/I25	BIP	9/21/2019

TABLE 3-4
MEC RECOVERED
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
Blu-3	Bomb	1	1	Yes	6/25/2019	Parcel 3/K25	BIP	8/24/2019
M61	Projectile	1	1	Yes	6/26/2019	Parcel 3/K25	BIP	8/24/2019
PD Fuze	Fuze	6	1	No	6/27/2019	Parcel 3/K24	Destroyed	7/18/2019
BD Fuze	Fuze	1	1	No	6/27/2019	Parcel 3/K24	Destroyed	7/18/2019
Booster	Booster	2	2	No	6/27/2019	Parcel 3/K24	Destroyed	7/18/2019
Blu-3	Bomb	3	1	No	6/27/2019	Parcel 3/K24	Destroyed	7/25/2019
Blu-4	Bomb	1	1	No	6/27/2019	Parcel 3/K24	Destroyed	7/25/2019
20mm	Projectile	2	1	No	6/27/2019	Parcel 3/U25	Destroyed	7/25/2019
37mm	Projectile	3	1	No	6/27/2019	Parcel 3/U25	Destroyed	7/25/2019
PD Fuze	Fuze	9	1	No	6/27/2019	Parcel 3/U25	Destroyed	7/18/2019
BD Fuze	Fuze	1	2	No	6/27/2019	Parcel 3/U25	Destroyed	7/18/2019
20mm	Projectile	1	3	No	6/27/2019	Parcel 3/T25	Destroyed	7/25/2019
40mm	Projectile	1	1	Yes	6/27/2019	Parcel 3/T25	Destroyed	11/18/2019
40mm	Projectile	4	3	No	6/27/2019	Parcel 3/T25	Destroyed	7/25/2019
75mm	Projectile	1	1	No	6/27/2019	Parcel 3/T25	Destroyed	8/1/2019
PD Fuze	Fuze	14	2	No	6/27/2019	Parcel 3/T25	Destroyed	7/18/2019
BD Fuze	Fuze	1	2	No	6/27/2019	Parcel 3/T25	Destroyed	7/18/2019
Booster	Booster	3	2	No	6/27/2019	Parcel 3/T25	Destroyed	7/18/2019
37mm	Projectile	1	5	No	6/27/2019	Parcel 3/H25	Destroyed	7/25/2019
40mm	Projectile	1	6	No	6/27/2019	Parcel 3/H25	Destroyed	7/25/2019
PD Fuze	Fuze	1	1	No	6/27/2019	Parcel 3/H25	Destroyed	7/18/2019
BD Fuze	Fuze	3	1	No	6/27/2019	Parcel 3/H25	Destroyed	7/18/2019
Booster	Booster	5	1	No	6/27/2019	Parcel 3/H25	Destroyed	7/18/2019
Blu-4	Bomb	1	3	No	6/27/2019	Parcel 3/H25	Destroyed	7/25/2019
M503	Fuze	1	1	No	7/8/2019	Parcel 3/K24	BIP	8/24/2019
M503	Fuze	1	1	No	7/8/2019	Parcel 3/K24	BIP	8/24/2019
AN-M110	Fuze	1	1	No	7/8/2019	Parcel 3/U25	BIP	8/24/2019
20mm	Projectile	1	1	No	7/8/2019	Parcel 3/U25	Destroyed	7/25/2019
37mm	Projectile	1	1	No	7/8/2019	Parcel 3/U25	Destroyed	7/25/2019
40mm	Projectile	2	2	No	7/8/2019	Parcel 3/U25	Destroyed	7/25/2019
PD Fuze	Fuze	9	1	No	7/8/2019	Parcel 3/U25	Destroyed	7/18/2019
20lb Frag	Bomb	1	1	No	7/8/2019	Parcel 3/U25	Destroyed	9/4/2019
Blu-4	Bomb	1	1	No	7/8/2019	Parcel 3/U25	Destroyed	7/25/2019
40mm	Projectile	3	1	No	7/10/2019	Parcel 3/U25	Destroyed	7/25/2019
60mm	Projectile	1	1	No	7/10/2019	Parcel 3/U25	Destroyed	8/1/2019
PD Fuze	Fuze	16	1	No	7/10/2019	Parcel 3/U25	Destroyed	7/18/2019
BD Fuze	Fuze	3	1	No	7/10/2019	Parcel 3/U25	Destroyed	7/18/2019
Booster	Booster	2	1	No	7/10/2019	Parcel 3/U25	Destroyed	7/18/2019
BD Fuze	Fuze	2	5	No	7/10/2019	Parcel 3/H25	Destroyed	7/18/2019
Booster	Booster	4	1	No	7/10/2019	Parcel 3/H25	Destroyed	7/18/2019
Blu-4	Bomb	1	3	No	7/10/2019	Parcel 3/H25	Destroyed	7/25/2019
AN-M110	Fuze	1	1	No	7/11/2019	Parcel 3/L24	BIP	8/24/2019
M56	Fuze	1	2	No	7/11/2019	Parcel 3/U25	BIP	8/24/2019
37mm	Projectile	1	1	No	7/12/2019	Parcel 3/L24	Destroyed	7/25/2019
37mm	Projectile	1	4	No	7/12/2019	Parcel 3/V25	Destroyed	7/25/2019

TABLE 3-4
MEC RECOVERED
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
40mm	Projectile	2	5	No	7/12/2019	Parcel 3/V25	Destroyed	7/25/2019
40mm	Projectile	1	3	Yes	7/12/2019	Parcel 3/V25	Destroyed	11/18/2019
BD Fuze	Fuze	2	1	No	7/12/2019	Parcel 3/L24	Destroyed	7/18/2019
BD Fuze	Fuze	1	2	No	7/12/2019	Parcel 3/V25	Destroyed	7/18/2019
Booster	Booster	12	1	No	7/12/2019	Parcel 3/L24	Destroyed	7/18/2019
Booster	Booster	3	6	No	7/12/2019	Parcel 3/V25	Destroyed	7/18/2019
M503	Fuze	1	1	No	7/12/2019	Parcel 3/L24	BIP	8/24/2019
PD Fuze	Fuze	6	2	No	7/12/2019	Parcel 3/L24	Destroyed	7/18/2019
PD Fuze	Fuze	23	3	No	7/12/2019	Parcel 3/V25	Destroyed	7/18/2019
M131	Fuze	1	1	No	7/15/2019	Parcel 3/V25	BIP	8/24/2019
M503	Fuze	1	1	No	7/15/2019	Parcel 3/L24	BIP	8/24/2019
M503	Fuze	1	2	No	7/15/2019	Parcel 3/V25	BIP	8/24/2019
M503	Fuze	1	1	No	7/15/2019	Parcel 3/V25	BIP	8/24/2019
37mm	Projectile	1	2	No	7/16/2019	Parcel 3/V25	Destroyed	7/25/2019
60mm	Projectile	1	2	No	7/16/2019	Parcel 3/V25	Destroyed	8/1/2019
Blu-3	Bomb	1	1	No	7/16/2019	Parcel 3/L24	Destroyed	7/25/2019
Blu-3	Bomb	1	1	Yes	7/16/2019	Parcel 3/V25	BIP	8/24/2019
Booster	Booster	1	2	No	7/16/2019	Parcel 3/V25	Destroyed	7/18/2019
Booster	Booster	2	2	No	7/16/2019	Parcel 3/L24	Destroyed	7/18/2019
PD Fuze	Fuze	16	2	No	7/16/2019	Parcel 3/V25	Destroyed	7/18/2019
PD Fuze	Fuze	1	2	No	7/16/2019	Parcel 3/L24	Destroyed	7/18/2019
20mm	Projectile	1	2	No	7/17/2019	Parcel 3/V25	Destroyed	7/25/2019
37mm	Projectile	1	2	No	7/17/2019	Parcel 3/V25	Destroyed	7/25/2019
40mm	Projectile	2	2	No	7/17/2019	Parcel 3/V25	Destroyed	7/25/2019
75mm	Projectile	1	2	Yes	7/17/2019	Parcel 3/V25	Destroyed	12/16/2019
BD Fuze	Fuze	2	2	No	7/17/2019	Parcel 3/V25	Destroyed	10/24/2019
Blu-4	Bomb	1	1	No	7/17/2019	Parcel 3/M24	Destroyed	7/25/2019
Blu-4	Bomb	1	1	Yes	7/17/2019	Parcel 3/M24	BIP	8/24/2019
Booster	Booster	1	2	No	7/17/2019	Parcel 3/V25	Destroyed	10/24/2019
M83 Butterfly	Bomb	1	1	No	7/17/2019	Parcel 3/M24	Destroyed	7/25/2019
PD Fuze	Fuze	1	2	No	7/17/2019	Parcel 3/M24	Destroyed	10/24/2019
PD Fuze	Fuze	11	2	No	7/17/2019	Parcel 3/V25	Destroyed	10/24/2019
40mm	Projectile	1	2	No	7/19/2019	Parcel 3/V25	Destroyed	7/25/2019
60mm	Projectile	1	2	No	7/19/2019	Parcel 3/V25	Destroyed	8/1/2019
BD Fuze	Fuze	2	2	No	7/19/2019	Parcel 3/V25	Destroyed	10/24/2019
Blu-4	Bomb	1	1	No	7/19/2019	Parcel 3/M24	Destroyed	7/25/2019
Booster	Booster	1	2	No	7/19/2019	Parcel 3/V25	Destroyed	10/24/2019
M503	Fuze	1	1	No	7/19/2019	Parcel 3/V25	BIP	8/24/2019
M503	Fuze	1	1	No	7/19/2019	Parcel 3/V25	BIP	8/24/2019
M503	Fuze	1	1	No	7/19/2019	Parcel 3/V25	BIP	8/24/2019
PD Fuze	Fuze	22	2	No	7/19/2019	Parcel 3/V25	Destroyed	10/24/2019
PD Fuze	Fuze	2	1	No	7/19/2019	Parcel 3/M24	Destroyed	10/24/2019
20mm	Projectile	1	3	No	7/22/2019	Parcel 3/V25	Destroyed	7/25/2019
40mm	Projectile	1	3	No	7/22/2019	Parcel 3/W25	Destroyed	7/25/2019
M503	Fuze	1	1	No	7/22/2019	Parcel 3/M24	BIP	8/24/2019

TABLE 3-4
MEC RECOVERED
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
M503	Fuze	1	1	No	7/22/2019	Parcel 3/M24	BIP	8/24/2019
M503	Fuze	1	1	No	7/22/2019	Parcel 3/M24	BIP	8/24/2019
M503	Fuze	1	1	No	7/22/2019	Parcel 3/M24	BIP	8/24/2019
M503	Fuze	1	1	No	7/22/2019	Parcel 3/M24	BIP	8/24/2019
M503	Fuze	1	1	No	7/22/2019	Parcel 3/M24	BIP	8/24/2019
M503	Fuze	1	12	No	7/22/2019	Parcel 3/V25	BIP	8/24/2019
M83 Butterfly	Bomb	1	2	Yes	7/22/2019	Parcel 3/W25	BIP	8/24/2019
PD Fuze	Fuze	2	2	No	7/22/2019	Parcel 3/W25	Destroyed	10/24/2019
PD Fuze	Fuze	1	2	No	7/22/2019	Parcel 3/V25	Destroyed	10/24/2019
Blu-3	Bomb	1	0	Yes	7/23/2019	Parcel 3/M23	BIP	8/24/2019
Blu-3	Bomb	1	0	Yes	7/23/2019	Parcel 3/M23	BIP	8/24/2019
Blu-3	Bomb	1	1	Yes	7/23/2019	Parcel 3/W25	BIP	8/24/2019
M503	Fuze	1	1	No	7/23/2019	Parcel 3/M23	BIP	8/24/2019
M503	Fuze	1	2	No	7/23/2019	Parcel 3/W25	BIP	8/24/2019
M503	Fuze	1	1	No	7/23/2019	Parcel 3/W25	BIP	8/24/2019
M503	Fuze	1	3	No	7/23/2019	Parcel 3/W25	BIP	8/24/2019
40mm	Projectile	1	1	No	7/24/2019	Parcel 3/W25	Destroyed	11/11/2019
40mm	Projectile	1	1	No	7/24/2019	Parcel 3/L23	Destroyed	11/11/2019
60mm	Projectile	1	2	Yes	7/24/2019	Parcel 3/L23	Destroyed	8/27/2019
60mm	Projectile	1	1	Yes	7/24/2019	Parcel 3/L23	Destroyed	8/27/2019
AN-M110	Fuze	1	2	No	7/24/2019	Parcel 3/W25	BIP	8/24/2019
AN-M110	Fuze	1	1	No	7/24/2019	Parcel 3/W25	BIP	8/24/2019
AN-M110	Fuze	1	1	No	7/24/2019	Parcel 3/W25	BIP	8/24/2019
BD Fuze	Fuze	2	1	No	7/24/2019	Parcel 3/W25	Destroyed	10/24/2019
Blu-4	Bomb	1	1	Yes	7/24/2019	Parcel 3/L23	BIP	8/24/2019
Booster	Booster	1	1	No	7/24/2019	Parcel 3/L23	Destroyed	10/24/2019
M503	Fuze	1	2	No	7/24/2019	Parcel 3/W25	BIP	8/24/2019
M83 Butterfly	Bomb	1	1	No	7/24/2019	Parcel 3/L23	Destroyed	11/11/2019
PD Fuze	Fuze	12	1	No	7/24/2019	Parcel 3/W25	Destroyed	10/24/2019
PD Fuze	Fuze	2	1	No	7/24/2019	Parcel 3/L23	Destroyed	10/24/2019
37mm	Projectile	2	2	No	7/26/2019	Parcel 3/W25	Destroyed	11/11/2019
60mm	Projectile	1	2	Yes	7/26/2019	Parcel 3/W25	Destroyed	8/27/2019
Booster	Booster	2	1	No	7/26/2019	Parcel 3/L23	Destroyed	10/24/2019
M83 Butterfly	Bomb	1	2	No	7/26/2019	Parcel 3/W25	Destroyed	11/11/2019
M83 Butterfly	Bomb	1	2	No	7/26/2019	Parcel 3/L23	Destroyed	11/11/2019
PD Fuze	Fuze	20	2	No	7/26/2019	Parcel 3/W25	Destroyed	10/24/2019
PD Fuze	Fuze	2	1	No	7/26/2019	Parcel 3/L23	Destroyed	10/24/2019
37mm	Projectile	1	1	No	7/30/2019	Parcel 3/M22	Destroyed	11/11/2019
40mm	Projectile	3	3	No	7/30/2019	Parcel 3/W25	Destroyed	11/11/2019
40mm	Projectile	1	1	No	7/30/2019	Parcel 3/M22	Destroyed	11/11/2019
BD Fuze	Fuze	1	1	No	7/30/2019	Parcel 3/W25	Destroyed	10/24/2019
BD Fuze	Fuze	2	2	No	7/30/2019	Parcel 3/M22	Destroyed	10/24/2019
Blu-4	Bomb	1	1	No	7/30/2019	Parcel 3/M22	Destroyed	11/11/2019
Booster	Booster	2	1	No	7/30/2019	Parcel 3/W25	Destroyed	10/24/2019
PD Fuze	Fuze	11	3	No	7/30/2019	Parcel 3/W25	Destroyed	10/24/2019

TABLE 3-4
MEC RECOVERED
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
PD Fuze	Fuze	1	1	No	7/30/2019	Parcel 3/M22	Destroyed	10/24/2019
37mm	Projectile	1	1	Yes	8/1/2019	Parcel 3/M22	Destroyed	12/10/2019
BD Fuze	Fuze	1	2	No	8/1/2019	Parcel 3/W25	Destroyed	10/24/2019
BD Fuze	Fuze	1	3	No	8/1/2019	Parcel 3/W24	Destroyed	10/24/2019
Blu-3	Bomb	4	1	No	8/1/2019	Parcel 3/M22	Destroyed	11/11/2019
Blu-4	Bomb	1	2	No	8/1/2019	Parcel 3/W24	Destroyed	11/11/2019
Blu-4	Bomb	1	1	No	8/1/2019	Parcel 3/M22	Destroyed	11/11/2019
Booster	Booster	1	2	No	8/1/2019	Parcel 3/W25	Destroyed	10/24/2019
M83 Butterfly	Bomb	2	2	No	8/1/2019	Parcel 3/W24	Destroyed	11/11/2019
M83 Butterfly	Bomb	1	1	No	8/1/2019	Parcel 3/M22	Destroyed	11/11/2019
PD Fuze	Fuze	15	3	No	8/1/2019	Parcel 3/W25	Destroyed	10/24/2019
PD Fuze	Fuze	8	3	No	8/1/2019	Parcel 3/W24	Destroyed	10/24/2019
PD Fuze	Fuze	1	1	No	8/1/2019	Parcel 3/M22	Destroyed	10/24/2019
Blu-3	Bomb	1	1	No	8/2/2019	Parcel 3/M22	BIP	8/24/2019
20mm	Projectile	1	1	No	8/5/2019	Parcel 3/M22	Destroyed	10/24/2019
40mm	Projectile	2	1	No	8/5/2019	Parcel 3/M22	Destroyed	11/11/2019
40mm	Projectile	1	2	No	8/5/2019	Parcel 3/W24	Destroyed	11/11/2019
60mm	Projectile	1	1	No	8/5/2019	Parcel 3/M22	Destroyed	11/14/2019
BD Fuze	Fuze	1	1	No	8/5/2019	Parcel 3/M22	Destroyed	10/24/2019
BD Fuze	Fuze	2	2	No	8/5/2019	Parcel 3/W24	Destroyed	10/24/2019
Blu-3	Bomb	6	1	No	8/5/2019	Parcel 3/M22	Destroyed	11/11/2019
Blu-4	Bomb	3	1	No	8/5/2019	Parcel 3/M22	Destroyed	11/11/2019
Blu-4	Bomb	1	1	Yes	8/5/2019	Parcel 3/M22	BIP	8/24/2019
Booster	Booster	26	1	No	8/5/2019	Parcel 3/M22	Destroyed	10/24/2019
Booster	Booster	3	3	No	8/5/2019	Parcel 3/W24	Destroyed	10/24/2019
PD Fuze	Fuze	4	2	No	8/5/2019	Parcel 3/M22	Destroyed	10/24/2019
PD Fuze	Fuze	16	3	No	8/5/2019	Parcel 3/W24	Destroyed	10/24/2019
M83 Butterfly	Bomb	1	2	Yes	8/6/2019	Parcel 3/M22	BIP	8/24/2019
37mm	Projectile	2	1	No	8/8/2019	Parcel 3/M22	Destroyed	11/11/2019
40mm	Projectile	3	2	No	8/8/2019	Parcel 3/W24	Destroyed	11/11/2019
40mm	Projectile	1	1	No	8/8/2019	Parcel 3/M22	Destroyed	11/11/2019
BD Fuze	Fuze	4	3	No	8/8/2019	Parcel 3/W24	Destroyed	10/24/2019
BD Fuze	Fuze	1	1	No	8/8/2019	Parcel 3/M22	Destroyed	10/24/2019
Blu-3	Bomb	3	1	No	8/8/2019	Parcel 3/M22	Destroyed	11/11/2019
Blu-4	Bomb	3	1	No	8/8/2019	Parcel 3/M22	Destroyed	11/11/2019
Booster	Booster	1	2	No	8/8/2019	Parcel 3/W24	Destroyed	10/24/2019
M83 Butterfly	Bomb	2	3	No	8/8/2019	Parcel 3/W24	Destroyed	11/11/2019
PD Fuze	Fuze	36	3	No	8/8/2019	Parcel 3/W24	Destroyed	10/24/2019
PD Fuze	Fuze	8	1	No	8/8/2019	Parcel 3/M22	Destroyed	10/24/2019
37mm	Projectile	1	1	No	8/12/2019	Parcel 3/W24	Destroyed	11/11/2019
40mm	Projectile	1	3	No	8/12/2019	Parcel 3/W24	Destroyed	11/11/2019
40mm	Projectile	1	1	Yes	8/12/2019	Parcel 3/W24	Destroyed	11/18/2019
60mm	Projectile	1	3	No	8/12/2019	Parcel 3/W24	Destroyed	11/14/2019
BD Fuze	Fuze	1	3	No	8/12/2019	Parcel 3/M22	Destroyed	10/24/2019
BD Fuze	Fuze	1	1	No	8/12/2019	Parcel 3/W24	Destroyed	10/24/2019

TABLE 3-4
MEC RECOVERED
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
Blu-3	Bomb	8	2	No	8/12/2019	Parcel 3/M22	Destroyed	11/11/2019
Blu-4	Bomb	2	2	No	8/12/2019	Parcel 3/M22	Destroyed	11/11/2019
Booster	Booster	3	3	No	8/12/2019	Parcel 3/W24	Destroyed	10/24/2019
PD Fuze	Fuze	7	1	No	8/12/2019	Parcel 3/M22	Destroyed	10/24/2019
PD Fuze	Fuze	11	3	No	8/12/2019	Parcel 3/W24	Destroyed	10/24/2019
20mm	Projectile	1	3	No	8/13/2019	Parcel 3/W24	Destroyed	10/24/2019
37mm	Projectile	1	1	Yes	8/13/2019	Parcel 3/L22	Destroyed	12/10/2019
40mm	Projectile	1	2	No	8/13/2019	Parcel 3/L22	Destroyed	11/11/2019
40mm	Projectile	2	6	No	8/13/2019	Parcel 3/W24	Destroyed	11/11/2019
BD Fuze	Fuze	5	2	No	8/13/2019	Parcel 3/L22	Destroyed	10/24/2019
BD Fuze	Fuze	1	3	No	8/13/2019	Parcel 3/W24	Destroyed	10/24/2019
Blu-3	Bomb	5	1	No	8/13/2019	Parcel 3/L22	Destroyed	11/11/2019
Blu-4	Bomb	3	1	No	8/13/2019	Parcel 3/L22	Destroyed	11/11/2019
Booster	Booster	2	1	No	8/13/2019	Parcel 3/L22	Destroyed	10/24/2019
Booster	Booster	2	3	No	8/13/2019	Parcel 3/W24	Destroyed	10/24/2019
M83 Butterfly	Bomb	1	2	No	8/13/2019	Parcel 3/W24	Destroyed	11/11/2019
PD Fuze	Fuze	2	2	No	8/13/2019	Parcel 3/L22	Destroyed	10/24/2019
PD Fuze	Fuze	18	3	No	8/13/2019	Parcel 3/W24	Destroyed	10/24/2019
20mm	Projectile	1	1	No	8/14/2019	Parcel 3/L22	Destroyed	10/24/2019
37mm	Projectile	1	1	No	8/14/2019	Parcel 3/V24	Destroyed	11/11/2019
40mm	Projectile	1	3	No	8/14/2019	Parcel 3/V24	Destroyed	11/11/2019
BD Fuze	Fuze	1	2	No	8/14/2019	Parcel 3/V24	Destroyed	10/24/2019
BD Fuze	Fuze	1	1	No	8/14/2019	Parcel 3/L22	Destroyed	10/24/2019
Blu-3	Bomb	3	1	No	8/14/2019	Parcel 3/L22	Destroyed	11/11/2019
Blu-4	Bomb	4	1	No	8/14/2019	Parcel 3/L22	Destroyed	11/11/2019
Booster	Booster	3	2	No	8/14/2019	Parcel 3/V24	Destroyed	10/24/2019
Booster	Booster	1	1	No	8/14/2019	Parcel 3/L22	Destroyed	10/24/2019
M83 Butterfly	Bomb	1	1	No	8/14/2019	Parcel 3/V24	Destroyed	11/11/2019
PD Fuze	Fuze	2	1	No	8/14/2019	Parcel 3/V24	Destroyed	10/24/2019
20mm	Projectile	1	2	No	8/15/2019	Parcel 3/V24	Destroyed	10/24/2019
40mm	Projectile	1	2	No	8/15/2019	Parcel 3/V24	Destroyed	11/11/2019
BD Fuze	Fuze	1	2	No	8/15/2019	Parcel 3/V24	Destroyed	10/24/2019
BD Fuze	Fuze	1	1	No	8/15/2019	Parcel 3/L22	Destroyed	10/24/2019
Blu-4	Bomb	2	2	No	8/15/2019	Parcel 3/L22	Destroyed	11/11/2019
Booster	Booster	1	2	No	8/15/2019	Parcel 3/V24	Destroyed	10/24/2019
PD Fuze	Fuze	5	3	No	8/15/2019	Parcel 3/V24	Destroyed	10/24/2019
20mm	Projectile	1	3	No	8/16/2019	Parcel 3/V24	Destroyed	10/24/2019
40mm	Projectile	1	1	No	8/16/2019	Parcel 3/L22	Destroyed	11/11/2019
60mm	Projectile	1	1	No	8/16/2019	Parcel 3/L22	Destroyed	11/14/2019
BD Fuze	Fuze	1	1	No	8/16/2019	Parcel 3/L22	Destroyed	10/24/2019
M83 Butterfly	Bomb	1	3	Yes	8/16/2019	Parcel 3/V24	BIP	8/24/2019
PD Fuze	Fuze	15	2	No	8/16/2019	Parcel 3/V24	Destroyed	10/24/2019
37mm	Projectile	1	5	Yes	8/19/2019	Parcel 3/V24	Destroyed	12/10/2019
60mm	Projectile	1	6	No	8/19/2019	Parcel 3/V24	Destroyed	11/14/2019
BD Fuze	Fuze	1	4	No	8/19/2019	Parcel 3/V24	Destroyed	10/24/2019

TABLE 3-4
MEC RECOVERED
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
BD Fuze	Fuze	1	2	No	8/19/2019	Parcel 3/L22	Destroyed	10/24/2019
PD Fuze	Fuze	4	3	No	8/19/2019	Parcel 3/V24	Destroyed	10/24/2019
40mm	Projectile	1	2	No	8/20/2019	Parcel 3/V24	Destroyed	11/11/2019
57mm	Projectile	1	4	No	8/20/2019	Parcel 3/V24	Destroyed	11/11/2019
BD Fuze	Fuze	1	2	No	8/20/2019	Parcel 3/V24	Destroyed	10/24/2019
Blu-3	Bomb	1	2	No	8/20/2019	Parcel 3/V24	Destroyed	11/11/2019
Blu-4	Bomb	1	2	No	8/20/2019	Parcel 3/V24	Destroyed	11/11/2019
Booster	Booster	1	1	No	8/20/2019	Parcel 3/V24	Destroyed	10/24/2019
PD Fuze	Fuze	12	4	No	8/20/2019	Parcel 3/V24	Destroyed	10/24/2019
90mm	Projectile	1	5	No	8/22/2019	Parcel 3/V24	Destroyed	12/16/2019
BD Fuze	Fuze	1	8	No	8/22/2019	Parcel 3/V24	Destroyed	10/24/2019
Blu-3	Bomb	3	1	No	8/22/2019	Parcel 3/L22	Destroyed	11/11/2019
Blu-3	Bomb	1	0	Yes	8/22/2019	Parcel 3/L22	BIP	8/24/2019
Booster	Booster	2	5	No	8/22/2019	Parcel 3/V24	Destroyed	10/24/2019
PD Fuze	Fuze	14	6	No	8/22/2019	Parcel 3/V24	Destroyed	10/24/2019
PD Fuze	Fuze	7	1	No	8/22/2019	Parcel 3/L22	Destroyed	10/24/2019
Blu-3	Bomb	1	1	Yes	8/23/2019	Parcel 3/N22	BIP	9/21/2019
BD Fuze	Fuze	1	4	No	8/26/2019	Parcel 3/V24	Destroyed	10/24/2019
Blu-4	Bomb	1	2	No	8/26/2019	Parcel 3/V24	Destroyed	11/11/2019
PD Fuze	Fuze	16	5	No	8/26/2019	Parcel 3/V24	Destroyed	10/24/2019
37mm	Projectile	1	3	No	8/27/2019	Parcel 3/U24	Destroyed	11/11/2019
40mm	Projectile	2	4	No	8/27/2019	Parcel 3/U24	Destroyed	11/11/2019
40mm	Projectile	1	1	No	8/27/2019	Parcel 3/N22	Destroyed	11/11/2019
40mm	Projectile	2	2	Yes	8/27/2019	Parcel 3/U24	Destroyed	11/18/2019
BD Fuze	Fuze	1	3	No	8/27/2019	Parcel 3/U24	Destroyed	10/24/2019
BD Fuze	Fuze	1	1	No	8/27/2019	Parcel 3/N22	Destroyed	10/24/2019
Blu-3	Bomb	1	1	No	8/27/2019	Parcel 3/U24	Destroyed	11/11/2019
Blu-3	Bomb	2	1	No	8/27/2019	Parcel 3/N22	Destroyed	11/11/2019
Booster	Booster	1	1	No	8/27/2019	Parcel 3/U24	Destroyed	10/24/2019
Booster	Booster	1	1	No	8/27/2019	Parcel 3/N22	Destroyed	10/24/2019
M83 Butterfly	Bomb	1	3	No	8/27/2019	Parcel 3/U24	Destroyed	11/11/2019
PD Fuze	Fuze	9	2	No	8/27/2019	Parcel 3/U24	Destroyed	10/24/2019
PD Fuze	Fuze	6	1	No	8/27/2019	Parcel 3/N22	Destroyed	10/24/2019
40mm	Projectile	1	1	No	8/28/2019	Parcel 3/N22	Destroyed	11/11/2019
BD Fuze	Fuze	1	2	No	8/28/2019	Parcel 3/N22	Destroyed	10/24/2019
Blu-3	Bomb	1	1	No	8/28/2019	Parcel 3/N22	Destroyed	11/11/2019
40mm	Projectile	1	2	No	8/29/2019	Parcel 3/N22	Destroyed	11/11/2019
BD Fuze	Fuze	3	1	No	8/29/2019	Parcel 3/U24	Destroyed	10/24/2019
PD Fuze	Fuze	7	1	No	8/29/2019	Parcel 3/N22	Destroyed	10/24/2019
PD Fuze	Fuze	10	4	No	8/29/2019	Parcel 3/U24	Destroyed	10/24/2019
20mm	Projectile	1	1	Yes	9/3/2019	Parcel 3/N22	Destroyed	10/24/2019
37mm	Projectile	1	3	Yes	9/3/2019	Parcel 3/G25	Destroyed	12/10/2019
40mm	Projectile	1	1	No	9/3/2019	Parcel 3/R22	Destroyed	11/11/2019
40mm	Projectile	2	1	Yes	9/3/2019	Parcel 3/R22	Destroyed	11/18/2019
60mm	Projectile	4	4	No	9/3/2019	Parcel 3/U24	Destroyed	11/14/2019

TABLE 3-4
MEC RECOVERED
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
75mm	Projectile	1	1	No	9/3/2019	Parcel 3/R22	Destroyed	11/14/2019
BD Fuze	Fuze	2	1	No	9/3/2019	Parcel 3/R22	Destroyed	10/24/2019
BD Fuze	Fuze	1	2	No	9/3/2019	Parcel 3/U24	Destroyed	10/24/2019
M83 Butterfly	Bomb	1	6	No	9/3/2019	Parcel 3/U24	Destroyed	11/11/2019
PD Fuze	Fuze	5	1	No	9/3/2019	Parcel 3/R22	Destroyed	10/24/2019
PD Fuze	Fuze	4	1	No	9/3/2019	Parcel 3/N22	Destroyed	10/24/2019
PD Fuze	Fuze	21	6	No	9/3/2019	Parcel 3/U24	Destroyed	10/24/2019
20mm	Projectile	1	2	No	9/4/2019	Parcel 3/T24	Destroyed	10/24/2019
37mm	Projectile	1	1	No	9/4/2019	Parcel 3/T24	Destroyed	11/11/2019
40mm	Projectile	1	1	No	9/4/2019	Parcel 3/T24	Destroyed	11/11/2019
40mm	Projectile	2	1	No	9/4/2019	Parcel 3/R22	Destroyed	11/11/2019
BD Fuze	Fuze	1	4	No	9/4/2019	Parcel 3/U24	Destroyed	10/24/2019
BD Fuze	Fuze	3	1	No	9/4/2019	Parcel 3/R22	Destroyed	10/24/2019
Blu-4	Bomb	1	3	No	9/4/2019	Parcel 3/T24	Destroyed	11/11/2019
Blu-4	Bomb	3	1	No	9/4/2019	Parcel 3/R22	Destroyed	11/11/2019
Booster	Booster	1	1	No	9/4/2019	Parcel 3/R22	Destroyed	10/24/2019
M83 Butterfly	Bomb	1	1	Yes	9/4/2019	Parcel 3/R22	BIP	9/21/2019
PD Fuze	Fuze	12	3	No	9/4/2019	Parcel 3/U24	Destroyed	10/24/2019
PD Fuze	Fuze	1	1	No	9/4/2019	Parcel 3/T24	Destroyed	10/24/2019
PD Fuze	Fuze	3	1	No	9/4/2019	Parcel 3/R22	Destroyed	10/24/2019
37mm	Projectile	1	1	No	9/5/2019	Parcel 3/Q22	Destroyed	11/11/2019
37mm	Projectile	1	2	No	9/5/2019	Parcel 3/T24	Destroyed	11/11/2019
40mm	Projectile	1	1	No	9/5/2019	Parcel 3/Q22	Destroyed	11/11/2019
40mm	Projectile	1	2	Yes	9/5/2019	Parcel 3/T24	Destroyed	11/18/2019
BD Fuze	Fuze	1	1	No	9/5/2019	Parcel 3/T24	Destroyed	10/24/2019
Blu-3	Bomb	2	1	No	9/5/2019	Parcel 3/Q22	Destroyed	11/11/2019
Blu-4	Bomb	1	1	No	9/5/2019	Parcel 3/Q22	Destroyed	11/11/2019
Blu-4	Bomb	1	1	No	9/5/2019	Parcel 3/T24	Destroyed	11/11/2019
Booster	Booster	1	1	No	9/5/2019	Parcel 3/Q22	Destroyed	10/24/2019
Booster	Booster	1	3	No	9/5/2019	Parcel 3/T24	Destroyed	10/24/2019
PD Fuze	Fuze	13	4	No	9/5/2019	Parcel 3/Q22	Destroyed	10/24/2019
PD Fuze	Fuze	6	4	No	9/5/2019	Parcel 3/T24	Destroyed	10/24/2019
60mm	Projectile	1	1	No	9/6/2019	Parcel 3/Q22	Destroyed	11/14/2019
BD Fuze	Fuze	7	7	No	9/6/2019	Parcel 3/Q22	Destroyed	10/24/2019
BD Fuze	Fuze	1	1	No	9/6/2019	Parcel 3/T24	Destroyed	10/24/2019
Blu-3	Bomb	1	1	No	9/6/2019	Parcel 3/Q22	Destroyed	11/11/2019
Blu-3	Bomb	1	1	Yes	9/6/2019	Parcel 3/Q22	BIP	9/21/2019
Blu-4	Bomb	2	1	No	9/6/2019	Parcel 3/Q22	Destroyed	11/11/2019
Booster	Booster	1	1	No	9/6/2019	Parcel 3/Q22	Destroyed	10/24/2019
M131	Fuze	1	1	No	9/6/2019	Parcel 3/T24	BIP	9/21/2019
M404	Fuze	1	1	No	9/6/2019	Parcel 3/T24	BIP	9/21/2019
M83 Butterfly	Bomb	2	1	No	9/6/2019	Parcel 3/Q22	Destroyed	11/11/2019
PD Fuze	Fuze	3	1	No	9/6/2019	Parcel 3/Q22	Destroyed	10/24/2019
PD Fuze	Fuze	13	4	No	9/6/2019	Parcel 3/T24	Destroyed	10/24/2019
37mm	Projectile	1	1	Yes	9/9/2019	Parcel 3/Q22	Destroyed	12/10/2019

TABLE 3-4
MEC RECOVERED
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
40mm	Projectile	1	1	No	9/9/2019	Parcel 3/Q22	Destroyed	11/11/2019
BD Fuze	Fuze	1	3	No	9/9/2019	Parcel 3/T24	Destroyed	10/24/2019
BD Fuze	Fuze	7	3	No	9/9/2019	Parcel 3/Q22	Destroyed	10/24/2019
Blu-4	Bomb	1	1	No	9/9/2019	Parcel 3/S24	Destroyed	11/11/2019
Blu-4	Bomb	1	3	No	9/9/2019	Parcel 3/Q22	Destroyed	11/11/2019
PD Fuze	Fuze	7	4	No	9/9/2019	Parcel 3/T24	Destroyed	10/24/2019
PD Fuze	Fuze	1	5	No	9/9/2019	Parcel 3/S24	Destroyed	10/24/2019
PD Fuze	Fuze	10	7	No	9/9/2019	Parcel 3/Q22	Destroyed	10/24/2019
M83 Butterfly	Bomb	1	6	Yes	9/10/2019	Parcel 3/S24	BIP	9/21/2019
20mm	Projectile	1	1	No	9/12/2019	Parcel 3/S24	Destroyed	10/24/2019
75mm	Projectile	1	1	No	9/12/2019	Parcel 3/S24	Destroyed	11/14/2019
BD Fuze	Fuze	3	1	No	9/12/2019	Parcel 3/S24	Destroyed	10/24/2019
Blu-3	Bomb	1	1	No	9/12/2019	Parcel 3/P22	Destroyed	11/11/2019
Blu-4	Bomb	4	1	No	9/12/2019	Parcel 3/P22	Destroyed	11/11/2019
Blu-4	Bomb	2	1	No	9/12/2019	Parcel 3/S24	Destroyed	11/11/2019
Booster	Booster	1	1	No	9/12/2019	Parcel 3/S24	Destroyed	10/24/2019
M83 Butterfly	Bomb	1	2	Yes	9/12/2019	Parcel 3/P22	BIP	9/21/2019
PD Fuze	Fuze	21	1	No	9/12/2019	Parcel 3/P22	Destroyed	10/24/2019
PD Fuze	Fuze	9	1	No	9/12/2019	Parcel 3/S24	Destroyed	10/24/2019
20lb Frag	Bomb	1	2	No	9/13/2019	Parcel 3/AQ12	Destroyed	11/14/2019
40mm	Projectile	1	1	Yes	9/13/2019	Parcel 3/P22	Destroyed	11/18/2019
BD Fuze	Fuze	1	1	No	9/13/2019	Parcel 3/AQ12	Destroyed	10/24/2019
BD Fuze	Fuze	2	1	No	9/13/2019	Parcel 3/P22	Destroyed	10/24/2019
Blu-3	Bomb	5	1	No	9/13/2019	Parcel 3/P22	Destroyed	11/11/2019
Blu-4	Bomb	4	1	No	9/13/2019	Parcel 3/P22	Destroyed	11/11/2019
Booster	Booster	3	3	No	9/13/2019	Parcel 3/P22	Destroyed	10/24/2019
M120	Fuze	1	1	Yes	9/13/2019	Parcel 3/P22	BIP	9/21/2019
M83 Butterfly	Bomb	1	3	No	9/13/2019	Parcel 3/AQ12	Destroyed	11/11/2019
M83 Butterfly	Bomb	1	1	Yes	9/13/2019	Parcel 3/P22	BIP	9/21/2019
PD Fuze	Fuze	8	1	No	9/13/2019	Parcel 3/P22	Destroyed	10/24/2019
AN-M110	Fuze	1	2	Yes	9/17/2019	Parcel 3/AQ12	BIP	10/25/2019
37mm	Projectile	1	1	No	9/18/2019	Parcel 3/AQ12	Destroyed	11/11/2019
40mm	Projectile	2	4	No	9/18/2019	Parcel 3/AQ12	Destroyed	11/11/2019
60mm	Projectile	1	4	No	9/18/2019	Parcel 3/AQ12	Destroyed	11/14/2019
BD Fuze	Fuze	2	2	No	9/18/2019	Parcel 3/AQ12	Destroyed	10/24/2019
Blu-3	Bomb	1	0	Yes	9/18/2019	Parcel 3/O22	BIP	10/26/2019
Blu-3	Bomb	1	0	Yes	9/18/2019	Parcel 3/O22	BIP	10/26/2019
Booster	Booster	1	2	No	9/18/2019	Parcel 3/AQ12	Destroyed	10/24/2019
M83 Butterfly	Bomb	2	2	No	9/18/2019	Parcel 3/AQ12	Destroyed	11/11/2019
PD Fuze	Fuze	11	3	No	9/18/2019	Parcel 3/AQ12	Destroyed	10/24/2019
40mm	Projectile	1	1	No	9/19/2019	Parcel 3/O22	Destroyed	11/11/2019
60mm	Projectile	1	1	No	9/19/2019	Parcel 3/O22	Destroyed	11/14/2019
75mm	Projectile	1	1	No	9/19/2019	Parcel 3/O22	Destroyed	11/14/2019
AN-M110	Fuze	1	1	No	9/19/2019	Parcel 3/AQ12	BIP	10/25/2019
BD Fuze	Fuze	1	1	No	9/19/2019	Parcel 3/AQ12	Destroyed	10/24/2019

TABLE 3-4
MEC RECOVERED
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
BD Fuze	Fuze	2	1	No	9/19/2019	Parcel 3/O22	Destroyed	10/24/2019
Blu-4	Bomb	1	1	No	9/19/2019	Parcel 3/O22	Destroyed	11/11/2019
Booster	Booster	1	1	No	9/19/2019	Parcel 3/O22	Destroyed	10/24/2019
PD Fuze	Fuze	29	2	No	9/19/2019	Parcel 3/AQ12	Destroyed	10/24/2019
PD Fuze	Fuze	3	1	No	9/19/2019	Parcel 3/O22	Destroyed	10/24/2019
37mm	Projectile	1	4	No	9/25/2019	Parcel 3/AQ12	Destroyed	11/11/2019
37mm	Projectile	1	2	No	9/25/2019	Parcel 3/S27	Destroyed	11/11/2019
40mm	Projectile	1	3	No	9/25/2019	Parcel 3/S27	Destroyed	11/11/2019
75mm	Projectile	1	3	No	9/25/2019	Parcel 3/S27	Destroyed	11/14/2019
Blu-4	Bomb	1	2	Yes	9/25/2019	Parcel 3/S27	BIP	10/26/2019
PD Fuze	Fuze	31	3	No	9/25/2019	Parcel 3/AQ12	Destroyed	10/24/2019
PD Fuze	Fuze	3	3	No	9/25/2019	Parcel 3/S27	Destroyed	10/24/2019
37mm	Projectile	1	2	No	9/26/2019	Parcel 3/K23	Destroyed	11/11/2019
40mm	Projectile	2	3	No	9/26/2019	Parcel 3/J23	Destroyed	11/11/2019
40mm	Projectile	1	1	Yes	9/26/2019	Parcel 3/N23	Destroyed	11/18/2019
57mm	Projectile	1	1	No	9/26/2019	Parcel 3/S27	Destroyed	12/16/2019
75mm	Projectile	1	1	No	9/26/2019	Parcel 3/N23	Destroyed	11/14/2019
BD Fuze	Fuze	1	2	No	9/26/2019	Parcel 3/S27	Destroyed	10/24/2019
BD Fuze	Fuze	1	1	No	9/26/2019	Parcel 3/K23	Destroyed	10/24/2019
Blu-3	Bomb	1	1	No	9/26/2019	Parcel 3/N23	Destroyed	11/11/2019
Blu-4	Bomb	2	1	No	9/26/2019	Parcel 3/N23	Destroyed	11/11/2019
Booster	Booster	2	1	No	9/26/2019	Parcel 3/N23	Destroyed	10/24/2019
M404	Fuze	1	0	Yes	9/26/2019	Parcel 3/N23	BIP	10/26/2019
M83 Butterfly	Bomb	1	2	No	9/26/2019	Parcel 3/S27	Destroyed	11/11/2019
M83 Butterfly	Bomb	2	2	No	9/26/2019	Parcel 3/N23	Destroyed	11/11/2019
PD Fuze	Fuze	12	2	No	9/26/2019	Parcel 3/S27	Destroyed	10/24/2019
PD Fuze	Fuze	1	3	No	9/26/2019	Parcel 3/K23	Destroyed	10/24/2019
PD Fuze	Fuze	2	1	No	9/26/2019	Parcel 3/J23	Destroyed	10/24/2019
PD Fuze	Fuze	13	1	No	9/26/2019	Parcel 3/N23	Destroyed	10/24/2019
20mm	Projectile	1	1	No	10/1/2019	Parcel 3/O23	Destroyed	10/24/2019
37mm	Projectile	1	3	No	10/1/2019	Parcel 3/U27	Destroyed	11/11/2019
37mm	Projectile	2	3	No	10/1/2019	Parcel 3/T27	Destroyed	11/11/2019
37mm	Projectile	1	1	No	10/1/2019	Parcel 3/O23	Destroyed	11/11/2019
37mm	Projectile	1	4	Yes	10/1/2019	Parcel 3/U27	Destroyed	12/10/2019
37mm	Projectile	1	3	Yes	10/1/2019	Parcel 3/T27	Destroyed	12/10/2019
40mm	Projectile	2	1	No	10/1/2019	Parcel 3/O23	Destroyed	11/11/2019
57mm	Projectile	1	3	Yes	10/1/2019	Parcel 3/T27	Destroyed	12/16/2019
60mm	Projectile	1	3	No	10/1/2019	Parcel 3/U27	Destroyed	11/14/2019
60mm	Projectile	1	1	No	10/1/2019	Parcel 3/O23	Destroyed	11/14/2019
75mm	Projectile	1	1	No	10/1/2019	Parcel 3/P23	Destroyed	11/14/2019
BD Fuze	Fuze	1	3	No	10/1/2019	Parcel 3/U27	Destroyed	10/24/2019
BD Fuze	Fuze	3	2	No	10/1/2019	Parcel 3/T27	Destroyed	10/24/2019
BD Fuze	Fuze	1	2	No	10/1/2019	Parcel 3/P23	Destroyed	10/24/2019
Blu-3	Bomb	1	1	No	10/1/2019	Parcel 3/O23	Destroyed	11/11/2019
Blu-3	Bomb	1	1	No	10/1/2019	Parcel 3/P23	Destroyed	11/11/2019

TABLE 3-4
MEC RECOVERED
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
Blu-4	Bomb	5	1	No	10/1/2019	Parcel 3/O23	Destroyed	11/11/2019
Booster	Booster	1	2	No	10/1/2019	Parcel 3/U27	Destroyed	10/24/2019
Booster	Booster	1	1	No	10/1/2019	Parcel 3/P23	Destroyed	10/24/2019
PD Fuze	Fuze	4	3	No	10/1/2019	Parcel 3/U27	Destroyed	10/24/2019
PD Fuze	Fuze	20	3	No	10/1/2019	Parcel 3/T27	Destroyed	10/24/2019
PD Fuze	Fuze	18	3	No	10/1/2019	Parcel 3/O23	Destroyed	10/24/2019
PD Fuze	Fuze	6	1	No	10/1/2019	Parcel 3/P23	Destroyed	10/24/2019
M83 Butterfly	Bomb	1	1	Yes	10/2/2019	Parcel 3/R23	BIP	10/25/2019
M83 Butterfly	Bomb	1	1	Yes	10/2/2019	Parcel 3/V27	BIP	10/25/2019
M83 Butterfly	Bomb	1	3	Yes	10/2/2019	Parcel 3/V27	BIP	10/25/2019
20mm	Projectile	1	3	No	10/3/2019	Parcel 3/V27	Destroyed	10/24/2019
37mm	Projectile	2	3	No	10/3/2019	Parcel 3/K22	Destroyed	11/11/2019
37mm	Projectile	2	3	Yes	10/3/2019	Parcel 3/V27	Destroyed	12/10/2019
40mm	Projectile	3	2	No	10/3/2019	Parcel 3/V27	Destroyed	11/11/2019
40mm	Projectile	3	5	No	10/3/2019	Parcel 3/K22	Destroyed	11/11/2019
40mm	Projectile	1	2	Yes	10/3/2019	Parcel 3/V27	Destroyed	11/18/2019
60mm	Projectile	1	3	No	10/3/2019	Parcel 3/R23	Destroyed	11/14/2019
75mm	Projectile	1	4	No	10/3/2019	Parcel 3/V27	Destroyed	11/14/2019
BD Fuze	Fuze	5	3	No	10/3/2019	Parcel 3/V27	Destroyed	10/24/2019
BD Fuze	Fuze	3	1	No	10/3/2019	Parcel 3/R23	Destroyed	10/24/2019
PD Fuze	Fuze	15	2	No	10/3/2019	Parcel 3/V27	Destroyed	10/24/2019
PD Fuze	Fuze	2	1	No	10/3/2019	Parcel 3/K22	Destroyed	10/24/2019
PD Fuze	Fuze	20	2	No	10/3/2019	Parcel 3/R23	Destroyed	10/24/2019
M83 Butterfly	Bomb	1	0	Yes	10/4/2019	Parcel 3/W27	BIP	10/25/2019
20lb Frag	Bomb	1	1	No	10/7/2019	Parcel 3/AJ26	Destroyed	11/14/2019
20mm	Projectile	1	1	No	10/7/2019	Parcel 3/AJ26	Destroyed	10/24/2019
37mm	Projectile	1	3	No	10/7/2019	Parcel 3/W27	Destroyed	11/11/2019
37mm	Projectile	1	2	No	10/7/2019	Parcel 3/AJ26	Destroyed	11/11/2019
37mm	Projectile	1	3	Yes	10/7/2019	Parcel 3/W27	Destroyed	12/10/2019
37mm	Projectile	1	2	Yes	10/7/2019	Parcel 3/AJ26	Destroyed	12/10/2019
40mm	Projectile	1	2	No	10/7/2019	Parcel 3/AJ26	Destroyed	11/11/2019
40mm	Projectile	1	2	Yes	10/7/2019	Parcel 3/W27	Destroyed	11/18/2019
60mm	Projectile	1	6	No	10/7/2019	Parcel 3/W27	Destroyed	11/14/2019
60mm	Projectile	2	4	Yes	10/7/2019	Parcel 3/W27	Destroyed	12/16/2019
BD Fuze	Fuze	2	2	No	10/7/2019	Parcel 3/W27	Destroyed	10/24/2019
BD Fuze	Fuze	3	1	No	10/7/2019	Parcel 3/AJ26	Destroyed	10/24/2019
Blu-3	Bomb	1	1	No	10/7/2019	Parcel 3/AJ26	Destroyed	11/11/2019
Blu-4	Bomb	1	1	No	10/7/2019	Parcel 3/AJ26	Destroyed	11/11/2019
Booster	Booster	5	1	No	10/7/2019	Parcel 3/AJ26	Destroyed	10/24/2019
PD Fuze	Fuze	14	3	No	10/7/2019	Parcel 3/W27	Destroyed	10/24/2019
PD Fuze	Fuze	55	1	No	10/7/2019	Parcel 3/AJ26	Destroyed	10/24/2019
40mm	Projectile	3	1	No	10/8/2019	Parcel 3/AK26	Destroyed	11/11/2019
60mm	Projectile	1	1	No	10/8/2019	Parcel 3/AK26	Destroyed	11/14/2019
BD Fuze	Fuze	1	2	No	10/8/2019	Parcel 3/W26	Destroyed	10/24/2019
BD Fuze	Fuze	6	1	No	10/8/2019	Parcel 3/AK26	Destroyed	10/24/2019

TABLE 3-4
MEC RECOVERED
FORT WINGATE DEPOT ACTIVITY
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Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
Blu-3	Bomb	1	1	No	10/8/2019	Parcel 3/AK26	Destroyed	11/11/2019
Booster	Booster	3	1	No	10/8/2019	Parcel 3/AK26	Destroyed	10/24/2019
PD Fuze	Fuze	15	3	No	10/8/2019	Parcel 3/W26	Destroyed	10/24/2019
PD Fuze	Fuze	38	1	No	10/8/2019	Parcel 3/AK26	Destroyed	10/24/2019
37mm	Projectile	1	4	No	10/9/2019	Parcel 3/W26	Destroyed	11/11/2019
37mm	Projectile	1	1	No	10/9/2019	Parcel 3/AK26	Destroyed	11/11/2019
37mm	Projectile	1	3	Yes	10/9/2019	Parcel 3/W26	Destroyed	12/10/2019
40mm	Projectile	2	4	No	10/9/2019	Parcel 3/W26	Destroyed	11/11/2019
BD Fuze	Fuze	1	3	No	10/9/2019	Parcel 3/W26	Destroyed	10/24/2019
BD Fuze	Fuze	2	1	No	10/9/2019	Parcel 3/AK26	Destroyed	10/24/2019
Booster	Booster	5	2	No	10/9/2019	Parcel 3/AK26	Destroyed	10/24/2019
PD Fuze	Fuze	8	2	No	10/9/2019	Parcel 3/W26	Destroyed	10/24/2019
PD Fuze	Fuze	14	3	No	10/9/2019	Parcel 3/AK26	Destroyed	10/24/2019
60mm	Projectile	1	3	Yes	10/10/2019	Parcel 3/V26	Destroyed	12/16/2019
BD Fuze	Fuze	1	1	No	10/10/2019	Parcel 3/V26	Destroyed	10/24/2019
BD Fuze	Fuze	2	2	No	10/10/2019	Parcel 3/AL26	Destroyed	10/24/2019
M83 Butterfly	Bomb	2	3	No	10/10/2019	Parcel 3/V26	Destroyed	11/11/2019
M83 Butterfly	Bomb	1	2	Yes	10/10/2019	Parcel 3/AL26	BIP	10/25/2019
M83 Butterfly	Bomb	1	4	Yes	10/10/2019	Parcel 3/V26	BIP	10/25/2019
PD Fuze	Fuze	11	3	No	10/10/2019	Parcel 3/V26	Destroyed	10/24/2019
PD Fuze	Fuze	42	1	No	10/10/2019	Parcel 3/AL26	Destroyed	10/24/2019
20mm	Projectile	1	1	No	10/11/2019	Parcel 3/V26	Destroyed	10/24/2019
37mm	Projectile	2	3	No	10/11/2019	Parcel 3/V26	Destroyed	11/11/2019
37mm	Projectile	1	2	No	10/11/2019	Parcel 3/AL26	Destroyed	11/11/2019
37mm	Projectile	1	3	Yes	10/11/2019	Parcel 3/V26	Destroyed	12/10/2019
40mm	Projectile	1	3	No	10/11/2019	Parcel 3/AL26	Destroyed	11/11/2019
40mm	Projectile	1	2	Yes	10/11/2019	Parcel 3/V26	Destroyed	12/12/2019
81mm	Projectile	1	4	Yes	10/11/2019	Parcel 3/V26	Destroyed	12/16/2019
BD Fuze	Fuze	4	3	No	10/11/2019	Parcel 3/V26	Destroyed	10/24/2019
BD Fuze	Fuze	1	1	No	10/11/2019	Parcel 3/AL26	Destroyed	10/24/2019
Booster	Booster	1	1	No	10/11/2019	Parcel 3/AL26	Destroyed	10/24/2019
M83 Butterfly	Bomb	1	1	No	10/11/2019	Parcel 3/AL26	Destroyed	11/11/2019
PD Fuze	Fuze	4	3	No	10/11/2019	Parcel 3/V26	Destroyed	10/24/2019
PD Fuze	Fuze	22	1	No	10/11/2019	Parcel 3/AL26	Destroyed	10/24/2019
40mm	Projectile	1	2	No	10/14/2019	Parcel 3/AL25	Destroyed	11/11/2019
AN-M110	Fuze	1	0	No	10/14/2019	Parcel 3/U26	BIP	10/26/2019
BD Fuze	Fuze	2	4	No	10/14/2019	Parcel 3/U26	Destroyed	10/24/2019
Blu-3	Bomb	1	1	Yes	10/14/2019	Parcel 3/K22	BIP	10/26/2019
PD Fuze	Fuze	20	1	No	10/14/2019	Parcel 3/AL25	Destroyed	10/24/2019
PD Fuze	Fuze	15	3	No	10/14/2019	Parcel 3/U26	Destroyed	10/24/2019
20lb Frag	Bomb	1	2	No	10/15/2019	Parcel 3/U26	Destroyed	11/14/2019
20mm	Projectile	1	1	No	10/15/2019	Parcel 3/AL25	Destroyed	10/24/2019
37mm	Projectile	2	2	Yes	10/15/2019	Parcel 3/AL25	Destroyed	12/10/2019
40mm	Projectile	1	3	No	10/15/2019	Parcel 3/U26	Destroyed	11/11/2019
40mm	Projectile	1	2	No	10/15/2019	Parcel 3/AL25	Destroyed	11/11/2019

TABLE 3-4
MEC RECOVERED
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Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
40mm	Projectile	1	2	Yes	10/15/2019	Parcel 3/AL25	Destroyed	12/12/2019
BD Fuze	Fuze	1	3	No	10/15/2019	Parcel 3/U26	Destroyed	10/24/2019
BD Fuze	Fuze	3	1	No	10/15/2019	Parcel 3/AL25	Destroyed	10/24/2019
Blu-3	Bomb	2	2	No	10/15/2019	Parcel 3/K22	Destroyed	11/11/2019
Blu-3	Bomb	1	0	Yes	10/15/2019	Parcel 3/U26	BIP	10/26/2019
Booster	Booster	1	1	No	10/15/2019	Parcel 3/AL25	Destroyed	10/24/2019
PD Fuze	Fuze	1	1	No	10/15/2019	Parcel 3/K22	Destroyed	10/24/2019
PD Fuze	Fuze	2	3	No	10/15/2019	Parcel 3/U26	Destroyed	10/24/2019
PD Fuze	Fuze	21	1	No	10/15/2019	Parcel 3/AL25	Destroyed	10/24/2019
37mm	Projectile	1	2	No	10/16/2019	Parcel 3/J22	Destroyed	11/11/2019
40mm	Projectile	1	2	No	10/16/2019	Parcel 3/J22	Destroyed	11/11/2019
40mm	Projectile	1	1	No	10/16/2019	Parcel 3/AK25	Destroyed	11/11/2019
BD Fuze	Fuze	2	1	No	10/16/2019	Parcel 3/AK25	Destroyed	10/24/2019
BD Fuze	Fuze	2	3	No	10/16/2019	Parcel 3/T26	Destroyed	10/24/2019
Blu-3	Bomb	2	1	No	10/16/2019	Parcel 3/J22	Destroyed	11/11/2019
Blu-4	Bomb	2	1	No	10/16/2019	Parcel 3/J22	Destroyed	11/11/2019
Booster	Booster	1	1	No	10/16/2019	Parcel 3/AK25	Destroyed	10/24/2019
M83 Butterfly	Bomb	1	2	Yes	10/16/2019	Parcel 3/AK25	BIP	10/25/2019
PD Fuze	Fuze	25	1	No	10/16/2019	Parcel 3/AK25	Destroyed	10/24/2019
PD Fuze	Fuze	8	2	No	10/16/2019	Parcel 3/T26	Destroyed	10/24/2019
20mm	Projectile	2	1	No	10/17/2019	Parcel 3/AK25	Destroyed	10/24/2019
3.5" Motor	Rocket	1	0	No	10/17/2019	Parcel 3/T26	Destroyed	2/15/2020
37mm	Projectile	2	2	No	10/17/2019	Parcel 3/AK25	Destroyed	11/11/2019
37mm	Projectile	2	3	No	10/17/2019	Parcel 3/T26	Destroyed	11/11/2019
40mm	Projectile	1	1	No	10/17/2019	Parcel 3/AK25	Destroyed	11/11/2019
40mm	Projectile	3	4	No	10/17/2019	Parcel 3/T26	Destroyed	11/11/2019
40mm	Projectile	1	1	Yes	10/17/2019	Parcel 3/AK25	Destroyed	12/12/2019
40mm	Projectile	1	3	Yes	10/17/2019	Parcel 3/T26	Destroyed	12/12/2019
60mm	Projectile	1	1	No	10/17/2019	Parcel 3/AK25	Destroyed	11/14/2019
60mm	Projectile	1	2	No	10/17/2019	Parcel 3/T26	Destroyed	11/14/2019
BD Fuze	Fuze	1	3	No	10/17/2019	Parcel 3/AK25	Destroyed	10/24/2019
BD Fuze	Fuze	6	2	No	10/17/2019	Parcel 3/T26	Destroyed	10/24/2019
Booster	Booster	1	3	No	10/17/2019	Parcel 3/AK25	Destroyed	10/24/2019
M63	Projectile	1	1	Yes	10/17/2019	Parcel 3/AK25	BIP	10/25/2019
M63	Projectile	1	2	Yes	10/17/2019	Parcel 3/AK25	BIP	10/25/2019
PD Fuze	Fuze	32	1	No	10/17/2019	Parcel 3/AK25	Destroyed	10/24/2019
PD Fuze	Fuze	9	2	No	10/17/2019	Parcel 3/T26	Destroyed	10/24/2019
BD Fuze	Fuze	1	1	No	10/18/2019	Parcel 3/AJ25	Destroyed	10/24/2019
PD Fuze	Fuze	6	3	No	10/18/2019	Parcel 3/S26	Destroyed	10/24/2019
PD Fuze	Fuze	34	2	No	10/18/2019	Parcel 3/AJ25	Destroyed	10/24/2019
37mm	Projectile	2	2	No	10/22/2019	Parcel 3/AJ25	Destroyed	11/11/2019
40mm	Projectile	2	1	No	10/22/2019	Parcel 3/AJ25	Destroyed	11/11/2019
BD Fuze	Fuze	3	2	No	10/22/2019	Parcel 3/X27	Destroyed	10/24/2019
BD Fuze	Fuze	5	2	No	10/22/2019	Parcel 3/AJ25	Destroyed	10/24/2019
Blu-3	Bomb	1	1	Yes	10/22/2019	Parcel 3/AI25	BIP	10/25/2019

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MEC RECOVERED
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Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
Booster	Booster	2	1	No	10/22/2019	Parcel 3/AJ25	Destroyed	10/24/2019
M83 Butterfly	Bomb	1	2	No	10/22/2019	Parcel 3/AJ25	Destroyed	11/11/2019
M83 Butterfly	Bomb	1	0	Yes	10/22/2019	Parcel 3/X27	BIP	10/25/2019
M83 Butterfly	Bomb	1	3	Yes	10/22/2019	Parcel 3/AI25	BIP	10/25/2019
PD Fuze	Fuze	6	2	No	10/22/2019	Parcel 3/X27	Destroyed	10/24/2019
PD Fuze	Fuze	41	2	No	10/22/2019	Parcel 3/AJ25	Destroyed	10/24/2019
40mm	Projectile	1	2	No	10/23/2019	Parcel 3/X27	Destroyed	11/11/2019
40mm	Projectile	1	1	No	10/23/2019	Parcel 3/AI25	Destroyed	11/11/2019
AN-M110	Fuze	1	1	No	10/23/2019	Parcel 3/AI25	BIP	10/25/2019
BD Fuze	Fuze	1	2	No	10/23/2019	Parcel 3/X27	Destroyed	10/24/2019
BD Fuze	Fuze	2	1	No	10/23/2019	Parcel 3/AI25	Destroyed	10/24/2019
Blu-4	Bomb	1	2	No	10/23/2019	Parcel 3/X27	Destroyed	11/11/2019
Booster	Booster	1	1	No	10/23/2019	Parcel 3/AI25	Destroyed	10/24/2019
M83 Butterfly	Bomb	1	1	No	10/23/2019	Parcel 3/AI25	Destroyed	11/11/2019
PD Fuze	Fuze	11	3	No	10/23/2019	Parcel 3/X27	Destroyed	10/24/2019
PD Fuze	Fuze	47	1	No	10/23/2019	Parcel 3/AI25	Destroyed	10/24/2019
20mm	Projectile	1	1	No	10/24/2019	Parcel 3/Y27	Destroyed	11/11/2019
37mm	Projectile	1	3	No	10/24/2019	Parcel 3/Y27	Destroyed	11/11/2019
40mm	Projectile	2	1	No	10/24/2019	Parcel 3/AI25	Destroyed	11/11/2019
BD Fuze	Fuze	2	2	No	10/24/2019	Parcel 3/Y27	Destroyed	2/5/2020
BD Fuze	Fuze	5	1	No	10/24/2019	Parcel 3/AI25	Destroyed	2/5/2020
Booster	Booster	2	1	No	10/24/2019	Parcel 3/AI25	Destroyed	2/5/2020
PD Fuze	Fuze	8	2	No	10/24/2019	Parcel 3/Y27	Destroyed	2/5/2020
PD Fuze	Fuze	66	1	No	10/24/2019	Parcel 3/AI25	Destroyed	2/5/2020
37mm	Projectile	1	1	No	10/25/2019	Parcel 3/AH25	Destroyed	11/11/2019
40mm	Projectile	3	2	No	10/25/2019	Parcel 3/Y27	Destroyed	11/11/2019
40mm	Projectile	2	1	No	10/25/2019	Parcel 3/AH25	Destroyed	11/11/2019
PD Fuze	Fuze	9	3	No	10/25/2019	Parcel 3/Y27	Destroyed	2/5/2020
PD Fuze	Fuze	33	2	No	10/25/2019	Parcel 3/AH25	Destroyed	2/5/2020
3.5" Motor	Rocket	1	1	No	10/29/2019	Parcel 3/AH25	Destroyed	2/15/2020
37mm	Projectile	1	1	No	10/29/2019	Parcel 3/AH25	Destroyed	11/11/2019
37mm	Projectile	1	1	Yes	10/29/2019	Parcel 3/AH25	Destroyed	12/10/2019
40mm	Projectile	3	3	No	10/29/2019	Parcel 3/Z27	Destroyed	11/11/2019
40mm	Projectile	1	4	Yes	10/29/2019	Parcel 3/Z27	Destroyed	12/12/2019
40mm	Projectile	1	1	Yes	10/29/2019	Parcel 3/AH25	Destroyed	12/12/2019
BD Fuze	Fuze	2	5	No	10/29/2019	Parcel 3/Z27	Destroyed	2/5/2020
BD Fuze	Fuze	2	1	No	10/29/2019	Parcel 3/AH25	Destroyed	2/5/2020
Blu-4	Bomb	1	2	No	10/29/2019	Parcel 3/C23	Destroyed	11/11/2019
M83 Butterfly	Bomb	2	1	No	10/29/2019	Parcel 3/Z27	Destroyed	11/11/2019
M83 Butterfly	Bomb	1	3	Yes	10/29/2019	Parcel 3/AH25	BIP	11/7/2019
PD Fuze	Fuze	32	4	No	10/29/2019	Parcel 3/Z27	Destroyed	2/5/2020
PD Fuze	Fuze	14	2	No	10/29/2019	Parcel 3/AH25	Destroyed	2/5/2020
20mm	Projectile	1	3	No	10/30/2019	Parcel 3/AA27	Destroyed	11/11/2019
37mm	Projectile	2	3	No	10/30/2019	Parcel 3/AA27	Destroyed	11/11/2019
37mm	Projectile	1	2	Yes	10/30/2019	Parcel 3/AA27	Destroyed	12/10/2019

TABLE 3-4
MEC RECOVERED
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Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
40mm	Projectile	3	3	No	10/30/2019	Parcel 3/AA27	Destroyed	11/11/2019
60mm	Projectile	1	4	No	10/30/2019	Parcel 3/AA27	Destroyed	11/14/2019
AN-M110	Fuze	1	1	No	10/30/2019	Parcel 3/AA27	BIP	11/7/2019
BD Fuze	Fuze	3	2	No	10/30/2019	Parcel 3/AH24	Destroyed	2/5/2020
Blu-4	Bomb	1	0	Yes	10/30/2019	Parcel 3/D23	BIP	11/7/2019
M83 Butterfly	Bomb	1	0	Yes	10/30/2019	Parcel 3/AA27	BIP	11/7/2019
PD Fuze	Fuze	23	3	No	10/30/2019	Parcel 3/AA27	Destroyed	2/5/2020
PD Fuze	Fuze	58	1	No	10/30/2019	Parcel 3/AH24	Destroyed	2/5/2020
20lb Frag	Bomb	1	4	No	10/31/2019	Parcel 3/AA27	Destroyed	2/15/2020
37mm	Projectile	3	1	No	10/31/2019	Parcel 3/AH24	Destroyed	11/11/2019
37mm	Projectile	2	3	No	10/31/2019	Parcel 3/AA27	Destroyed	11/11/2019
37mm	Projectile	1	1	Yes	10/31/2019	Parcel 3/AH24	Destroyed	12/10/2019
40mm	Projectile	2	1	No	10/31/2019	Parcel 3/AH24	Destroyed	11/11/2019
AN-M110	Fuze	1	1	No	10/31/2019	Parcel 3/AA27	BIP	11/7/2019
AN-M110	Fuze	1	1	No	10/31/2019	Parcel 3/AH24	BIP	11/7/2019
BD Fuze	Fuze	5	2	No	10/31/2019	Parcel 3/AH24	Destroyed	2/5/2020
BD Fuze	Fuze	1	3	No	10/31/2019	Parcel 3/AA27	Destroyed	2/5/2020
Blu-3	Bomb	1	1	Yes	10/31/2019	Parcel 3/AH24	BIP	11/7/2019
Blu-4	Bomb	4	2	No	10/31/2019	Parcel 3/D23	Destroyed	11/11/2019
M131	Fuze	1	1	No	10/31/2019	Parcel 3/AA27	BIP	11/7/2019
M83 Butterfly	Bomb	1	2	No	10/31/2019	Parcel 3/AH24	Destroyed	11/11/2019
M83 Butterfly	Bomb	1	2	No	10/31/2019	Parcel 3/AA27	Destroyed	11/11/2019
PD Fuze	Fuze	45	1	No	10/31/2019	Parcel 3/AH24	Destroyed	2/5/2020
PD Fuze	Fuze	16	2	No	10/31/2019	Parcel 3/AA27	Destroyed	2/5/2020
40mm	Projectile	1	2	No	11/1/2019	Parcel 3/AB27	Destroyed	11/11/2019
PD Fuze	Fuze	8	3	No	11/1/2019	Parcel 3/AI24	Destroyed	2/5/2020
PD Fuze	Fuze	12	3	No	11/1/2019	Parcel 3/AB27	Destroyed	2/5/2020
37mm	Projectile	1	2	No	11/4/2019	Parcel 3/AB27	Destroyed	2/15/2020
40mm	Projectile	3	4	No	11/4/2019	Parcel 3/AB27	Destroyed	2/15/2020
60mm	Projectile	1	2	No	11/4/2019	Parcel 3/AB27	Destroyed	11/14/2019
BD Fuze	Fuze	1	2	No	11/4/2019	Parcel 3/AI24	Destroyed	2/5/2020
BD Fuze	Fuze	1	1	No	11/4/2019	Parcel 3/AB27	Destroyed	2/5/2020
Booster	Booster	2	1	No	11/4/2019	Parcel 3/AI24	Destroyed	2/5/2020
PD Fuze	Fuze	22	1	No	11/4/2019	Parcel 3/AI24	Destroyed	2/5/2020
PD Fuze	Fuze	13	3	No	11/4/2019	Parcel 3/AB27	Destroyed	2/5/2020
37mm	Projectile	1	2	No	11/5/2019	Parcel 3/AB26	Destroyed	2/15/2020
40mm	Projectile	1	3	No	11/5/2019	Parcel 3/AB26	Destroyed	2/15/2020
40mm	Projectile	2	1	No	11/5/2019	Parcel 3/AI24	Destroyed	2/15/2020
AN-M110	Fuze	1	1	No	11/5/2019	Parcel 3/AI24	BIP	11/7/2019
BD Fuze	Fuze	2	1	No	11/5/2019	Parcel 3/AI24	Destroyed	2/5/2020
Booster	Booster	2	1	No	11/5/2019	Parcel 3/AI24	Destroyed	2/5/2020
M131	Fuze	1	1	No	11/5/2019	Parcel 3/AI24	BIP	11/7/2019
M83 Butterfly	Bomb	2	1	No	11/5/2019	Parcel 3/AI24	Destroyed	2/15/2020
M83 Butterfly	Bomb	1	1	Yes	11/5/2019	Parcel 3/AI24	BIP	11/7/2019
PD Fuze	Fuze	14	2	No	11/5/2019	Parcel 3/AB26	Destroyed	2/5/2020

TABLE 3-4
MEC RECOVERED
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Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
PD Fuze	Fuze	39	1	No	11/5/2019	Parcel 3/AI24	Destroyed	2/5/2020
20mm	Projectile	1	2	No	11/6/2019	Parcel 3/AB26	Destroyed	2/5/2020
37mm	Projectile	2	4	No	11/6/2019	Parcel 3/AB26	Destroyed	2/15/2020
40mm	Projectile	4	6	No	11/6/2019	Parcel 3/AB26	Destroyed	2/15/2020
40mm	Projectile	2	3	Yes	11/6/2019	Parcel 3/AB26	Destroyed	12/12/2019
57mm	Projectile	1	5	No	11/6/2019	Parcel 3/AB26	Destroyed	2/15/2020
BD Fuze	Fuze	4	2	No	11/6/2019	Parcel 3/AB26	Destroyed	2/5/2020
Blu-3	Bomb	1	1	No	11/6/2019	Parcel 3/AJ24	Destroyed	2/13/2020
Blu-4	Bomb	1	3	Yes	11/6/2019	Parcel 3/AB26	BIP	11/7/2019
Booster	Booster	2	1	No	11/6/2019	Parcel 3/AJ24	Destroyed	2/5/2020
Booster	Booster	1	4	No	11/6/2019	Parcel 3/AB26	Destroyed	2/5/2020
M83 Butterfly	Bomb	1	5	No	11/6/2019	Parcel 3/AB26	Destroyed	2/15/2020
PD Fuze	Fuze	52	1	No	11/6/2019	Parcel 3/AJ24	Destroyed	2/5/2020
PD Fuze	Fuze	14	5	No	11/6/2019	Parcel 3/AB26	Destroyed	2/5/2020
20mm	Projectile	1	3	No	11/8/2019	Parcel 3/AA26	Destroyed	2/5/2020
20mm	Projectile	3	1	No	11/8/2019	Parcel 3/AJ24	Destroyed	2/5/2020
37mm	Projectile	1	3	Yes	11/8/2019	Parcel 3/AA26	Destroyed	12/10/2019
37mm	Projectile	1	1	Yes	11/8/2019	Parcel 3/AJ24	Destroyed	12/10/2019
40mm	Projectile	1	5	No	11/8/2019	Parcel 3/AA26	Destroyed	2/15/2020
40mm	Projectile	6	1	No	11/8/2019	Parcel 3/AJ24	Destroyed	2/15/2020
57mm	Projectile	1	1	No	11/8/2019	Parcel 3/AJ24	Destroyed	2/15/2020
60mm	Projectile	2	1	No	11/8/2019	Parcel 3/AJ24	Destroyed	11/14/2019
AN-M110	Fuze	1	1	No	11/8/2019	Parcel 3/AJ24	BIP	11/23/2019
BD Fuze	Fuze	2	1	No	11/8/2019	Parcel 3/AJ24	Destroyed	2/5/2020
Booster	Booster	3	1	No	11/8/2019	Parcel 3/AJ24	Destroyed	2/5/2020
M83 Butterfly	Bomb	1	6	No	11/8/2019	Parcel 3/AA26	Destroyed	2/15/2020
M83 Butterfly	Bomb	1	1	No	11/8/2019	Parcel 3/AJ24	Destroyed	2/15/2020
PD Fuze	Fuze	23	4	No	11/8/2019	Parcel 3/AA26	Destroyed	2/5/2020
PD Fuze	Fuze	47	1	No	11/8/2019	Parcel 3/AJ24	Destroyed	2/5/2020
20mm	Projectile	2	2	No	11/11/2019	Parcel/AK24	Destroyed	2/5/2020
37mm	Projectile	1	4	No	11/11/2019	Parcel/AA26	Destroyed	2/15/2020
AN-M110	Fuze	1	1	No	11/11/2019	Parcel 3/Z26	BIP	11/23/2019
Blu-3	Bomb	2	4	No	11/11/2019	Parcel/AA26	Destroyed	2/13/2020
M83 Butterfly	Bomb	1	2	Yes	11/11/2019	Parcel/AK24	BIP	11/23/2019
M83 Butterfly	Bomb	1	2	Yes	11/11/2019	Parcel/AK24	BIP	11/23/2019
PD Fuze	Fuze	34	3	No	11/11/2019	Parcel/AK24	Destroyed	2/5/2020
PD Fuze	Fuze	33	4	No	11/11/2019	Parcel/AA26	Destroyed	2/5/2020
37mm	Projectile	2	3	No	11/12/2019	Parcel 3/Z26	Destroyed	2/15/2020
37mm	Projectile	1	1	No	11/12/2019	Parcel/AK24	Destroyed	2/15/2020
40mm	Projectile	5	3	No	11/12/2019	Parcel 3/Z26	Destroyed	2/15/2020
40mm	Projectile	2	4	Yes	11/12/2019	Parcel 3/Z26	Destroyed	12/12/2019
60mm	Projectile	1	1	Yes	11/12/2019	Parcel/AK24	Destroyed	12/16/2019
AN-M110	Fuze	1	1	No	11/12/2019	Parcel/AK24	BIP	11/23/2019
AN-M110	Fuze	1	1	No	11/12/2019	Parcel/AK24	BIP	11/23/2019
AN-M110	Fuze	1	1	No	11/12/2019	Parcel 3/Z26	BIP	11/23/2019

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MEC RECOVERED
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Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
Booster	Booster	2	1	No	11/12/2019	Parcel/AK24	Destroyed	2/5/2020
M83 Butterfly	Bomb	2	3	No	11/12/2019	Parcel 3/Z26	Destroyed	2/15/2020
M83 Butterfly	Bomb	1	1	No	11/12/2019	Parcel/AK24	Destroyed	2/15/2020
PD Fuze	Fuze	11	4	No	11/12/2019	Parcel 3/Z26	Destroyed	2/5/2020
PD Fuze	Fuze	20	1	No	11/12/2019	Parcel/AK24	Destroyed	2/5/2020
37mm	Projectile	1	3	No	11/13/2019	Parcel 3/Y26	Destroyed	2/15/2020
40mm	Projectile	4	4	No	11/13/2019	Parcel 3/Y26	Destroyed	2/15/2020
40mm	Projectile	1	1	No	11/13/2019	Parcel 3/AL24	Destroyed	2/15/2020
60mm	Projectile	2	2	No	11/13/2019	Parcel 3/Y26	Destroyed	11/14/2019
BD Fuze	Fuze	2	2	No	11/13/2019	Parcel 3/Y26	Destroyed	2/5/2020
BD Fuze	Fuze	1	1	No	11/13/2019	Parcel 3/AL24	Destroyed	2/5/2020
Booster	Booster	3	1	No	11/13/2019	Parcel 3/AL24	Destroyed	2/5/2020
M83 Butterfly	Bomb	1	2	No	11/13/2019	Parcel 3/Y26	Destroyed	2/15/2020
M83 Butterfly	Bomb	1	0	Yes	11/13/2019	Parcel 3/Y26	BIP	11/23/2019
PD Fuze	Fuze	16	4	No	11/13/2019	Parcel 3/Y26	Destroyed	2/5/2020
PD Fuze	Fuze	57	1	No	11/13/2019	Parcel 3/AL24	Destroyed	2/5/2020
20mm	Projectile	2	3	No	11/14/2019	Parcel 3/Y26	Destroyed	2/5/2020
37mm	Projectile	1	1	No	11/14/2019	Parcel 3/AL24	Destroyed	2/15/2020
37mm	Projectile	1	1	Yes	11/14/2019	Parcel 3/AL24	Destroyed	12/10/2019
40mm	Projectile	4	3	No	11/14/2019	Parcel 3/Y26	Destroyed	2/15/2020
BD Fuze	Fuze	1	2	No	11/14/2019	Parcel 3/Y26	Destroyed	2/5/2020
BD Fuze	Fuze	2	1	No	11/14/2019	Parcel 3/AL24	Destroyed	2/5/2020
Booster	Booster	5	1	No	11/14/2019	Parcel 3/AL24	Destroyed	2/5/2020
M111	Fuze	1	2	No	11/14/2019	Parcel 3/AL24	BIP	11/23/2019
M83 Butterfly	Bomb	1	2	No	11/14/2019	Parcel 3/Y26	Destroyed	2/15/2020
PD Fuze	Fuze	28	3	No	11/14/2019	Parcel 3/Y26	Destroyed	2/5/2020
PD Fuze	Fuze	29	1	No	11/14/2019	Parcel 3/AL24	Destroyed	2/5/2020
Blu-4	Bomb	1	0	Yes	11/15/2019	Parcel 3/AA25	BIP	11/23/2019
20mm	Projectile	1	1	No	11/18/2019	Parcel 3/AA25	Destroyed	2/5/2020
37mm	Projectile	1	1	Yes	11/18/2019	Parcel 3/AL23	Destroyed	12/10/2019
40mm	Projectile	5	4	No	11/18/2019	Parcel 3/AA25	Destroyed	2/15/2020
40mm	Projectile	1	1	No	11/18/2019	Parcel 3/AL23	Destroyed	2/15/2020
BD Fuze	Fuze	2	2	No	11/18/2019	Parcel 3/AA25	Destroyed	2/5/2020
M83 Butterfly	Bomb	1	3	No	11/18/2019	Parcel 3/AA25	Destroyed	2/15/2020
PD Fuze	Fuze	19	5	No	11/18/2019	Parcel 3/AA25	Destroyed	2/5/2020
PD Fuze	Fuze	15	1	No	11/18/2019	Parcel 3/AL23	Destroyed	2/5/2020
37mm	Projectile	1	3	No	11/19/2019	Parcel 3/AA25	Destroyed	2/15/2020
37mm	Projectile	1	1	Yes	11/19/2019	Parcel 3/AL23	Destroyed	12/10/2019
40mm	Projectile	3	2	No	11/19/2019	Parcel 3/AA25	Destroyed	2/15/2020
40mm	Projectile	1	1	No	11/19/2019	Parcel 3/E23	Destroyed	2/15/2020
40mm	Projectile	2	1	No	11/19/2019	Parcel 3/AL23	Destroyed	2/15/2020
40mm	Projectile	1	3	Yes	11/19/2019	Parcel 3/AA25	Destroyed	12/12/2019
BD Fuze	Fuze	1	3	No	11/19/2019	Parcel 3/AA25	Destroyed	2/5/2020
BD Fuze	Fuze	2	1	No	11/19/2019	Parcel 3/AL23	Destroyed	2/5/2020
M111	Fuze	1	1	No	11/19/2019	Parcel 3/AB25	BIP	11/23/2019

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Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
M83 Butterfly	Bomb	1	2	No	11/19/2019	Parcel 3/AA25	Destroyed	2/15/2020
M83 Butterfly	Bomb	1	1	Yes	11/19/2019	Parcel 3/AK23	BIP	11/23/2019
PD Fuze	Fuze	34	4	No	11/19/2019	Parcel 3/AA25	Destroyed	2/5/2020
PD Fuze	Fuze	38	1	No	11/19/2019	Parcel 3/AL23	Destroyed	2/5/2020
20mm	Projectile	2	3	No	11/22/2019	Parcel 3/AB25	Destroyed	2/5/2020
37mm	Projectile	2	2	No	11/22/2019	Parcel 3/AB25	Destroyed	2/15/2020
40mm	Projectile	5	4	No	11/22/2019	Parcel 3/AB25	Destroyed	2/15/2020
40mm	Projectile	2	3	Yes	11/22/2019	Parcel 3/AB25	Destroyed	12/12/2019
60mm	Projectile	1	3	Yes	11/22/2019	Parcel 3/AB25	Destroyed	12/16/2019
BD Fuze	Fuze	3	4	No	11/22/2019	Parcel 3/AB25	Destroyed	2/5/2020
BD Fuze	Fuze	2	1	No	11/22/2019	Parcel 3/AK23	Destroyed	2/5/2020
Blu-3	Bomb	1	1	No	11/22/2019	Parcel 3/AK23	Destroyed	2/15/2020
Blu-4	Bomb	2	3	No	11/22/2019	Parcel 3/E23	Destroyed	2/15/2020
Booster	Booster	5	1	No	11/22/2019	Parcel 3/AK23	Destroyed	2/5/2020
M83 Butterfly	Bomb	1	2	No	11/22/2019	Parcel 3/AB25	Destroyed	2/15/2020
PD Fuze	Fuze	18	4	No	11/22/2019	Parcel 3/AB25	Destroyed	2/5/2020
PD Fuze	Fuze	29	1	No	11/22/2019	Parcel 3/AK23	Destroyed	2/5/2020
20mm	Projectile	1	1	No	11/25/2019	Parcel 3/AB25	Destroyed	2/5/2020
40mm	Projectile	1	2	No	11/25/2019	Parcel 3/AB25	Destroyed	2/15/2020
40mm	Projectile	1	2	Yes	11/25/2019	Parcel 3/AB25	Destroyed	12/12/2019
AN-M110	Fuze	1	1	No	11/25/2019	Parcel 3/AB25	BIP	12/14/2019
M83 Butterfly	Bomb	1	0.5	Yes	11/25/2019	Parcel 3/E22	BIP	12/7/2019
PD Fuze	Fuze	25	2	No	11/25/2019	Parcel 3/AB25	Destroyed	2/5/2020
20mm	Projectile	1	1	No	12/3/2019	Parcel 3/AJ23	Destroyed	2/5/2020
AN-M110	Fuze	1	1	Yes	12/3/2019	Parcel 3/AJ23	BIP	12/14/2019
Blu-4	Bomb	2	3	No	12/3/2019	Parcel 3/E22	Destroyed	2/15/2020
Blu-4	Bomb	1	1	Yes	12/3/2019	Parcel 3/E22	BIP	12/7/2019
PD Fuze	Fuze	88	1	No	12/3/2019	Parcel 3/AJ23	Destroyed	2/5/2020
20mm	Projectile	1	2	No	12/6/2019	Parcel 3/AB24	Destroyed	2/5/2020
37mm	Projectile	1	3	No	12/6/2019	Parcel 3/AB24	Destroyed	2/15/2020
37mm	Projectile	1	1	Yes	12/6/2019	Parcel 3/D22	Destroyed	12/10/2019
40mm	Projectile	4	3	No	12/6/2019	Parcel 3/AB24	Destroyed	2/15/2020
40mm	Projectile	2	3	No	12/6/2019	Parcel 3/AJ23	Destroyed	2/15/2020
57mm	Projectile	1	2	No	12/6/2019	Parcel 3/AB24	Destroyed	2/15/2020
60mm	Projectile	1	4	No	12/6/2019	Parcel 3/AB24	Destroyed	2/15/2020
AN-M110	Fuze	1	2	No	12/6/2019	Parcel 3/AJ23	BIP	12/14/2019
BD Fuze	Fuze	3	3	No	12/6/2019	Parcel 3/AB24	Destroyed	2/5/2020
BD Fuze	Fuze	1	0	No	12/6/2019	Parcel 3/D22	Destroyed	2/5/2020
Blu-3	Bomb	1	0	No	12/6/2019	Parcel 3/D22	Destroyed	2/15/2020
Blu-4	Bomb	1	0	No	12/6/2019	Parcel 3/D22	Destroyed	2/15/2020
M83 Butterfly	Bomb	1	1	Yes	12/6/2019	Parcel 3/AJ23	BIP	12/14/2019
PD Fuze	Fuze	18	2	No	12/6/2019	Parcel 3/AB24	Destroyed	2/5/2020
PD Fuze	Fuze	29	1	No	12/6/2019	Parcel 3/AJ23	Destroyed	2/5/2020
40mm	Projectile	5	4	No	12/7/2019	Parcel 3/AB24	Destroyed	2/15/2020
40mm	Projectile	2	1	No	12/7/2019	Parcel 3/AJ23	Destroyed	2/15/2020

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Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
PD Fuze	Fuze	56	4	No	12/7/2019	Parcel 3/AB24	Destroyed	2/5/2020
PD Fuze	Fuze	27	1	No	12/7/2019	Parcel 3/AJ23	Destroyed	2/5/2020
M131	Fuze	1	1	No	12/9/2019	Parcel 3/AJ23	BIP	12/14/2019
M83 Butterfly	Bomb	1	1	Yes	12/9/2019	Parcel 3/AP22	BIP	12/14/2019
M83 Butterfly	Bomb	1	2	Yes	12/9/2019	Parcel 3/AP22	BIP	12/14/2019
20mm	Projectile	1	2	No	12/10/2019	Parcel 3/AP22	Destroyed	2/5/2020
20mm	Projectile	2	2	No	12/10/2019	Parcel 3/AA24	Destroyed	2/5/2020
37mm	Projectile	2	1	No	12/10/2019	Parcel 3/AP22	Destroyed	2/15/2020
37mm	Projectile	1	3	No	12/10/2019	Parcel 3/AA24	Destroyed	2/15/2020
37mm	Projectile	1	1	Yes	12/10/2019	Parcel 3/AP22	Destroyed	12/12/2019
40mm	Projectile	3	1	No	12/10/2019	Parcel 3/AP22	Destroyed	2/15/2020
40mm	Projectile	4	4	No	12/10/2019	Parcel 3/AA24	Destroyed	2/15/2020
40mm	Projectile	1	1	Yes	12/10/2019	Parcel 3/AP22	Destroyed	12/12/2019
60mm	Projectile	1	2	No	12/10/2019	Parcel 3/AP22	Destroyed	2/15/2020
60mm	Projectile	2	3	No	12/10/2019	Parcel 3/AA24	Destroyed	2/15/2020
60mm	Projectile	1	1	Yes	12/10/2019	Parcel 3/AP22	Destroyed	12/16/2019
BD Fuze	Fuze	2	1	No	12/10/2019	Parcel 3/AP22	Destroyed	2/5/2020
BD Fuze	Fuze	1	2	No	12/10/2019	Parcel 3/AA24	Destroyed	2/5/2020
BD Fuze	Fuze	1	1	No	12/10/2019	Parcel 3/AI23	Destroyed	2/5/2020
Blu-3	Bomb	1	0	Yes	12/10/2019	Parcel 3/AA24	BIP	12/14/2019
M53	Fuze	1	0	No	12/10/2019	Parcel 3/AA24	BIP	12/14/2019
M53	Fuze	1	2	No	12/10/2019	Parcel 3/AA24	BIP	12/14/2019
M63	Projectile	1	0	Yes	12/10/2019	Parcel 3/AA24	BIP	12/14/2019
PD Fuze	Fuze	6	1	No	12/10/2019	Parcel 3/AP22	Destroyed	2/5/2020
PD Fuze	Fuze	8	2	No	12/10/2019	Parcel 3/AA24	Destroyed	2/5/2020
PD Fuze	Fuze	73	1	No	12/10/2019	Parcel 3/AI23	Destroyed	2/5/2020
20mm	Projectile	3	1	No	12/11/2019	Parcel 3/AI23	Destroyed	2/5/2020
20mm	Projectile	1	1	No	12/11/2019	Parcel 3/AA24	Destroyed	2/5/2020
37mm	Projectile	1	1	No	12/11/2019	Parcel 3/AP22	Destroyed	2/15/2020
40mm	Projectile	2	1	No	12/11/2019	Parcel 3/AP21	Destroyed	2/15/2020
40mm	Projectile	1	2	No	12/11/2019	Parcel 3/AA24	Destroyed	2/15/2020
40mm	Projectile	1	1	Yes	12/11/2019	Parcel 3/AP21	Destroyed	12/12/2019
AN-M110	Fuze	1	1	No	12/11/2019	Parcel 3/AA24	BIP	12/14/2019
BD Fuze	Fuze	1	1	No	12/11/2019	Parcel 3/AI23	Destroyed	2/5/2020
BD Fuze	Fuze	1	1	No	12/11/2019	Parcel 3/AP21	Destroyed	2/5/2020
BD Fuze	Fuze	1	2	No	12/11/2019	Parcel 3/AA24	Destroyed	2/5/2020
M83 Butterfly	Bomb	1	1	Yes	12/11/2019	Parcel 3/AA24	BIP	12/14/2019
M83 Butterfly	Bomb	1	1	Yes	12/11/2019	Parcel 3/AP21	BIP	12/14/2019
M83 Butterfly	Bomb	1	2	Yes	12/11/2019	Parcel 3/AP21	BIP	12/14/2019
PD Fuze	Fuze	25	1	No	12/11/2019	Parcel 3/AP22	Destroyed	2/5/2020
PD Fuze	Fuze	12	1	No	12/11/2019	Parcel 3/AI23	Destroyed	2/5/2020
PD Fuze	Fuze	12	1	No	12/11/2019	Parcel 3/AP21	Destroyed	2/5/2020
PD Fuze	Fuze	30	3	No	12/11/2019	Parcel 3/AA24	Destroyed	2/5/2020
40mm	Projectile	1	1	No	12/12/2019	Parcel 3/AI23	Destroyed	2/15/2020
40mm	Projectile	1	1	Yes	12/12/2019	Parcel 3/AI23	Destroyed	2/13/2020

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Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
M131	Fuze	1	3	No	12/12/2019	Parcel 3/AB23	BIP	12/14/2019
PD Fuze	Fuze	33	3	No	12/12/2019	Parcel 3/AB23	Destroyed	2/5/2020
PD Fuze	Fuze	5	1	No	12/12/2019	Parcel 3/AI23	Destroyed	2/5/2020
40mm	Projectile	1	2	No	12/13/2019	Parcel 3/D22	Destroyed	2/15/2020
40mm	Projectile	3	2	No	12/13/2019	Parcel 3/AB23	Destroyed	2/15/2020
60mm	Projectile	1	1	No	12/13/2019	Parcel 3/D22	Destroyed	2/15/2020
60mm	Projectile	1	3	No	12/13/2019	Parcel 3/AB23	Destroyed	2/15/2020
AN-M110	Fuze	1	0	No	12/13/2019	Parcel 3/AB23	BIP	12/14/2019
BD Fuze	Fuze	9	1	No	12/13/2019	Parcel 3/AP21	Destroyed	2/5/2020
Blu-3	Bomb	1	1	No	12/13/2019	Parcel 3/D22	Destroyed	2/15/2020
Blu-4	Bomb	6	1	No	12/13/2019	Parcel 3/D22	Destroyed	2/15/2020
Booster	Booster	1	1	No	12/13/2019	Parcel 3/AP21	Destroyed	2/5/2020
PD Fuze	Fuze	35	1	No	12/13/2019	Parcel 3/AP21	Destroyed	2/5/2020
PD Fuze	Fuze	4	2	No	12/13/2019	Parcel 3/AB23	Destroyed	2/5/2020
37mm	Projectile	1	2	No	12/16/2019	Parcel 3/AB23	Destroyed	2/15/2020
37mm	Projectile	1	2	Yes	12/16/2019	Parcel 3/AB23	Destroyed	2/13/2020
40mm	Projectile	4	2	No	12/16/2019	Parcel 3/AB23	Destroyed	2/15/2020
60mm	Projectile	2	3	No	12/16/2019	Parcel 3/AB23	Destroyed	2/15/2020
AN-M110	Fuze	1	1	No	12/16/2019	Parcel 3/AB23	BIP	12/18/2019
BD Fuze	Fuze	1	2	No	12/16/2019	Parcel 3/AB23	Destroyed	2/5/2020
Blu-3	Bomb	1	0	Yes	12/16/2019	Parcel 3/AB23	BIP	12/18/2019
M83 Butterfly	Bomb	4	3	No	12/16/2019	Parcel 3/AB23	Destroyed	2/15/2020
PD Fuze	Fuze	7	3	No	12/16/2019	Parcel 3/AB23	Destroyed	2/5/2020
20mm	Projectile	2	1	No	12/17/2019	Parcel 3/AI23	Destroyed	2/5/2020
40mm	Projectile	2	1	No	12/17/2019	Parcel 3/AI23	Destroyed	2/15/2020
60mm	Projectile	1	2	No	12/17/2019	Parcel 3/AB23	Destroyed	2/15/2020
BD Fuze	Fuze	1	1	No	12/17/2019	Parcel 3/AI23	Destroyed	2/5/2020
Booster	Booster	1	2	No	12/17/2019	Parcel 3/AB23	Destroyed	2/5/2020
PD Fuze	Fuze	74	3	No	12/17/2019	Parcel 3/AB23	Destroyed	2/5/2020
PD Fuze	Fuze	59	1	No	12/17/2019	Parcel 3/AP21	Destroyed	2/5/2020
PD Fuze	Fuze	117	1	No	12/17/2019	Parcel 3/AI23	Destroyed	2/5/2020
20mm	Projectile	1	1	No	2/6/2020	Parcel 3/AQ11	Destroyed	2/15/2020
40mm	Projectile	6	2	No	2/6/2020	Parcel 3/AQ11	Destroyed	2/15/2020
M83 Butterfly	Bomb	1	1	Yes	2/6/2020	Parcel 3/AQ11	BIP	2/15/2020
37mm	Projectile	1	2	No	2/8/2020	Parcel 3/AQ11	Destroyed	2/15/2020
Booster	Booster	1	2	No	2/8/2020	Parcel 3/AQ11	Destroyed	2/15/2020
PD Fuze	Fuze	1	4	No	2/8/2020	Parcel 3/AQ11	Destroyed	2/15/2020
37mm	Projectile	1	1	No	2/17/2020	Parcel 3/AQ11	Destroyed	2/29/2020
37mm	Projectile	1	3	Yes	2/17/2020	Parcel 3/AQ11	Destroyed	2/29/2020
40mm	Projectile	4	3	No	2/17/2020	Parcel 3/AQ11	Destroyed	2/29/2020
40mm	Projectile	1	3	Yes	2/17/2020	Parcel 3/AQ11	Destroyed	2/29/2020
AN-M110	Fuze	1	2	Yes	2/17/2020	Parcel 3/AQ11	Destroyed	2/29/2020
Blu-4	Bomb	1	4	No	2/17/2020	Parcel 3/B20	Destroyed	2/29/2020
M83 Butterfly	Bomb	1	3	Yes	2/17/2020	Parcel 3/AQ11	BIP	2/29/2020
PD Fuze	Fuze	6	4	No	2/17/2020	Parcel 3/AQ11	Destroyed	2/29/2020

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Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
40mm	Projectile	1	2	No	2/18/2020	Parcel 3/AQ11	Destroyed	2/29/2020
PD Fuze	Fuze	10	1	No	2/18/2020	Parcel 3/AQ11	Destroyed	2/29/2020
37mm	Projectile	1	2	No	2/19/2020	Parcel 3/AQ11	Destroyed	2/29/2020
40mm	Projectile	7	3	No	2/19/2020	Parcel 3/AQ11	Destroyed	2/29/2020
Booster	Booster	3	2	No	2/19/2020	Parcel 3/AQ11	Destroyed	2/29/2020
M120	Fuze	1	1	Yes	2/19/2020	Parcel 3/AQ11	BIP	2/29/2020
PD Fuze	Fuze	13	2	No	2/19/2020	Parcel 3/AQ11	Destroyed	2/29/2020
20mm	Projectile	1	1	No	2/20/2020	Parcel 3/AQ11	Destroyed	2/29/2020
40mm	Projectile	3	2	No	2/20/2020	Parcel 3/AQ11	Destroyed	2/29/2020
PD Fuze	Fuze	13	2	No	2/20/2020	Parcel 3/AQ11	Destroyed	2/29/2020
40mm	Projectile	2	2	No	2/21/2020	Parcel 3/AQ11	Destroyed	2/29/2020
AN-M110	Fuze	1	2	No	2/21/2020	Parcel 3/AQ11	BIP	2/29/2020
BD Fuze	Fuze	2	2	No	2/21/2020	Parcel 3/AQ11	Destroyed	2/29/2020
M83 Butterfly	Bomb	1	1	No	2/21/2020	Parcel 3/AQ11	Destroyed	2/29/2020
PD Fuze	Fuze	20	2	No	2/21/2020	Parcel 3/AQ11	Destroyed	2/29/2020
40mm	Projectile	1	2	No	2/26/2020	Parcel 3/AP12	Destroyed	2/29/2020
PD Fuze	Fuze	6	3	No	2/26/2020	Parcel 3/AP12	Destroyed	2/29/2020
20mm	Projectile	1	1	No	2/27/2020	Parcel 3/AP12	Destroyed	2/29/2020
37mm	Projectile	1	1	No	2/27/2020	Parcel 3/AP12	Destroyed	2/29/2020
40mm	Projectile	2	2	No	2/27/2020	Parcel 3/AP12	Destroyed	2/29/2020
AN-M110	Fuze	1	1	No	2/27/2020	Parcel 3/AP12	BIP	2/29/2020
BD Fuze	Fuze	1	2	No	2/27/2020	Parcel 3/AP12	Destroyed	2/29/2020
PD Fuze	Fuze	2	1	No	2/27/2020	Parcel 3/AP12	Destroyed	2/29/2020
20mm	Projectile	1	2	No	3/2/2020	Parcel 3/AP12	Destroyed	8/6/2020
37mm	Projectile	1	1	No	3/2/2020	Parcel 3/AP12	Destroyed	8/6/2020
40mm	Projectile	8	3	No	3/2/2020	Parcel 3/AP12	Destroyed	8/6/2020
40mm	Projectile	1	0	Yes	3/2/2020	Parcel 3/AP12	Destroyed	8/6/2020
M83 Butterfly	Bomb	1	2	No	3/2/2020	Parcel 3/AP12	Destroyed	8/12/2020
PD Fuze	Fuze	12	1	No	3/2/2020	Parcel 3/AP12	Destroyed	6/4/2020
20mm	Projectile	1	2	No	3/3/2020	Parcel 3/AP12	Destroyed	8/6/2020
40mm	Projectile	4	1	No	3/3/2020	Parcel 3/AP12	Destroyed	8/6/2020
BD Fuze	Fuze	2	3	No	3/3/2020	Parcel 3/AP12	Destroyed	6/4/2020
PD Fuze	Fuze	5	2	No	3/3/2020	Parcel 3/AP12	Destroyed	6/4/2020
20mm	Projectile	1	1	No	3/4/2020	Parcel 3/AP12	Destroyed	8/6/2020
M58	Fuze	1	2	Yes	3/4/2020	Parcel 3/AP12	BIP	4/4/2020
PD Fuze	Fuze	36	1	No	3/4/2020	Parcel 3/AP12	Destroyed	6/4/2020
BD Fuze	Fuze	2	2	No	3/5/2020	Parcel 3/AP12	Destroyed	6/4/2020
M130	Fuze	1	1	No	3/5/2020	Parcel 3/AP12	BIP	4/4/2020
PD Fuze	Fuze	62	1	No	3/5/2020	Parcel 3/AP12	Destroyed	6/4/2020
20mm	Projectile	1	3	No	3/17/2020	Parcel 3/AP11	Destroyed	8/6/2020
37mm	Projectile	1	1	No	3/17/2020	Parcel 3/AP11	Destroyed	8/6/2020
40mm	Projectile	14	2	No	3/17/2020	Parcel 3/AP11	Destroyed	8/6/2020
40mm	Projectile	2	1	Yes	3/17/2020	Parcel 3/AP11	Destroyed	8/6/2020
BD Fuze	Fuze	5	2	No	3/17/2020	Parcel 3/AP11	Destroyed	6/4/2020
M83 Butterfly	Bomb	2	1	No	3/17/2020	Parcel 3/AP11	Destroyed	8/12/2020

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Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
PD Fuze	Fuze	21	2	No	3/17/2020	Parcel 3/AP11	Destroyed	6/4/2020
AN-M110	Fuze	1	1	No	3/18/2020	Parcel 3/AP11	BIP	4/4/2020
20mm	Projectile	7	2	No	3/23/2020	Parcel 3/AP11	Destroyed	8/6/2020
40mm	Projectile	10	2	No	3/23/2020	Parcel 3/AP11	Destroyed	8/6/2020
Booster	Booster	1	1	No	3/23/2020	Parcel 3/AP11	Destroyed	6/4/2020
PD Fuze	Fuze	28	1	No	3/23/2020	Parcel 3/AP11	Destroyed	6/4/2020
20mm	Projectile	1	1	No	3/24/2020	Parcel 3/AP11	Destroyed	8/6/2020
40mm	Projectile	1	2	No	3/24/2020	Parcel 3/AP11	Destroyed	8/6/2020
Booster	Booster	1	3	No	3/24/2020	Parcel 3/AP11	Destroyed	6/4/2020
PD Fuze	Fuze	27	1	No	3/24/2020	Parcel 3/AP11	Destroyed	6/4/2020
AN-M110	Fuze	1	1	No	3/25/2020	Parcel 3/AP10	BIP	4/4/2020
20mm	Projectile	2	3	No	3/26/2020	Parcel 3/AP10	Destroyed	8/6/2020
20mm	Projectile	1	4	Yes	3/26/2020	Parcel 3/AP10	Destroyed	8/6/2020
40mm	Projectile	10	4	No	3/26/2020	Parcel 3/AP10	Destroyed	8/6/2020
BD Fuze	Fuze	1	2	No	3/26/2020	Parcel 3/AP10	Destroyed	6/4/2020
Booster	Booster	2	2	No	3/26/2020	Parcel 3/AP10	Destroyed	6/4/2020
PD Fuze	Fuze	7	1	No	3/26/2020	Parcel 3/AP10	Destroyed	6/4/2020
M131	Fuze	1	0	No	3/27/2020	Parcel 3/AP10	BIP	4/4/2020
20mm	Projectile	4	4	No	3/31/2020	Parcel 3/AP10	Destroyed	8/6/2020
37mm	Projectile	2	7	No	3/31/2020	Parcel 3/AP10	Destroyed	8/6/2020
40mm	Projectile	27	18	No	3/31/2020	Parcel 3/AP10	Destroyed	8/6/2020
AN-M110	Fuze	1	1	No	3/31/2020	Parcel 3/AP10	BIP	4/4/2020
BD Fuze	Fuze	4	5	No	3/31/2020	Parcel 3/AP10	Destroyed	6/4/2020
Booster	Booster	5	10	No	3/31/2020	Parcel 3/AP10	Destroyed	6/4/2020
PD Fuze	Fuze	21	2	No	3/31/2020	Parcel 3/AP10	Destroyed	6/4/2020
AN-M110	Fuze	1	4	No	4/1/2020	Parcel 3/AP10	BIP	4/4/2020
AN-M111	Fuze	1	3	No	4/1/2020	Parcel 3/AP10	BIP	4/4/2020
AN-M111	Fuze	1	1	No	4/1/2020	Parcel 3/AP10	BIP	4/4/2020
20mm	Projectile	3	3	No	4/2/2020	Parcel 3/AP10	Destroyed	8/6/2020
40mm	Projectile	6	6	No	4/2/2020	Parcel 3/AP10	Destroyed	8/6/2020
BD Fuze	Fuze	4	6	No	4/2/2020	Parcel 3/AP10	Destroyed	6/4/2020
Booster	Booster	6	3	No	4/2/2020	Parcel 3/AP10	Destroyed	6/4/2020
PD Fuze	Fuze	44	1	No	4/2/2020	Parcel 3/AP10	Destroyed	6/4/2020
20mm	Projectile	4	2	No	4/7/2020	Parcel 3/AQ10	Destroyed	8/6/2020
37mm	Projectile	2	4	No	4/7/2020	Parcel 3/AQ10	Destroyed	8/6/2020
40mm	Projectile	12	6	No	4/7/2020	Parcel 3/AQ10	Destroyed	8/6/2020
40mm	Projectile	1	3	Yes	4/7/2020	Parcel 3/AQ10	Destroyed	8/6/2020
BD Fuze	Fuze	10	5	No	4/7/2020	Parcel 3/AQ10	Destroyed	6/4/2020
Booster	Booster	4	3	No	4/7/2020	Parcel 3/AQ10	Destroyed	6/4/2020
M83 Butterfly	Bomb	2	5	No	4/7/2020	Parcel 3/AQ10	Destroyed	8/12/2020
M83 Butterfly	Bomb	1	5	Yes	4/7/2020	Parcel 3/AQ9	BIP	5/27/2020
PD Fuze	Fuze	38	2	No	4/7/2020	Parcel 3/AQ10	Destroyed	6/4/2020
20mm	Projectile	3	4	No	4/9/2020	Parcel 3/AQ9	Destroyed	8/6/2020
40mm	Projectile	4	5	No	4/9/2020	Parcel 3/AQ9	Destroyed	8/6/2020
AN-M110	Fuze	1	2	No	4/9/2020	Parcel 3/AQ9	BIP	5/27/2020

TABLE 3-4
MEC RECOVERED
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
BD Fuze	Fuze	3	7	No	4/9/2020	Parcel 3/AQ9	Destroyed	6/4/2020
Blu-4	Bomb	1	3	No	4/9/2020	Parcel 3/AQ9	Destroyed	8/12/2020
PD Fuze	Fuze	15	4	No	4/9/2020	Parcel 3/AQ9	Destroyed	6/4/2020
20mm	Projectile	3	3	No	4/15/2020	Parcel 3/AQ8	Destroyed	8/6/2020
37mm	Projectile	2	4	No	4/15/2020	Parcel 3/AQ8	Destroyed	8/6/2020
40mm	Projectile	15	5	No	4/15/2020	Parcel 3/AQ8	Destroyed	8/6/2020
40mm	Projectile	1	3	Yes	4/15/2020	Parcel 3/AQ8	Destroyed	8/6/2020
57mm	Projectile	1	4	Yes	4/15/2020	Parcel 3/AQ8	Destroyed	11/17/2020
60mm	Projectile	1	5	No	4/15/2020	Parcel 3/AQ8	Destroyed	8/12/2020
75mm Smoke	Projectile	7	18	No	4/15/2020	Parcel 3/AQ8	Destroyed	2/25/2021
AN-M110	Fuze	1	4	No	4/15/2020	Parcel 3/AQ8	BIP	5/27/2020
BD Fuze	Fuze	2	6	No	4/15/2020	Parcel 3/AQ8	Destroyed	6/4/2020
M83 Butterfly	Bomb	1	2	No	4/15/2020	Parcel 3/AQ8	Destroyed	8/12/2020
PD Fuze	Fuze	17	3	No	4/15/2020	Parcel 3/AQ8	Destroyed	6/4/2020
AN-M110	Fuze	1	2	No	4/16/2020	Parcel 3/AQ8	BIP	5/27/2020
37mm	Projectile	1	6	No	4/17/2020	Parcel 3/AP8	Destroyed	8/6/2020
40mm	Projectile	9	8	No	4/17/2020	Parcel 3/AP8	Destroyed	8/6/2020
BD Fuze	Fuze	5	3	No	4/17/2020	Parcel 3/AP8	Destroyed	6/4/2020
Booster	Booster	1	3	No	4/17/2020	Parcel 3/AP8	Destroyed	6/4/2020
M83 Butterfly	Bomb	1	9	No	4/17/2020	Parcel 3/AP8	Destroyed	8/12/2020
PD Fuze	Fuze	32	1	No	4/17/2020	Parcel 3/AP8	Destroyed	6/4/2020
AN-M110	Fuze	1	2	No	4/20/2020	Parcel 3/AP9	BIP	5/27/2020
AN-M110	Fuze	1	3	No	4/20/2020	Parcel 3/AP9	BIP	5/27/2020
20mm	Projectile	5	2	No	4/22/2020	Parcel 3/AP9	Destroyed	8/6/2020
37mm	Projectile	5	4	No	4/22/2020	Parcel 3/AP9	Destroyed	8/6/2020
40mm	Projectile	21	4	No	4/22/2020	Parcel 3/AP9	Destroyed	8/6/2020
40mm	Projectile	1	2	Yes	4/22/2020	Parcel 3/AP9	Destroyed	8/6/2020
BD Fuze	Fuze	5	2	No	4/22/2020	Parcel 3/AP9	Destroyed	6/4/2020
Booster	Booster	3	2	No	4/22/2020	Parcel 3/AP9	Destroyed	6/4/2020
M83 Butterfly	Bomb	6	5	No	4/22/2020	Parcel 3/AP9	Destroyed	8/12/2020
PD Fuze	Fuze	11	3	No	4/22/2020	Parcel 3/AP9	Destroyed	6/4/2020
20mm	Projectile	3	2	No	4/24/2020	Parcel 3/AP9	Destroyed	8/6/2020
37mm	Projectile	1	2	No	4/24/2020	Parcel 3/AP9	Destroyed	8/6/2020
40mm	Projectile	12	3	No	4/24/2020	Parcel 3/AP9	Destroyed	8/6/2020
AN-M110	Fuze	1	2	No	4/24/2020	Parcel 3/AP9	BIP	5/27/2020
AN-M110	Fuze	1	1	No	4/24/2020	Parcel 3/AP9	BIP	5/27/2020
BD Fuze	Fuze	2	5	No	4/24/2020	Parcel 3/AP9	Destroyed	6/4/2020
Booster	Booster	2	2	No	4/24/2020	Parcel 3/AP9	Destroyed	6/4/2020
PD Fuze	Fuze	32	3	No	4/24/2020	Parcel 3/AP9	Destroyed	6/4/2020
40mm	Projectile	3	2	No	4/28/2020	Parcel 3/AM15	Destroyed	8/6/2020
AN-M110	Fuze	1	1	No	4/28/2020	Parcel 3/AM15	BIP	7/23/2020
BD Fuze	Fuze	2	3	No	4/28/2020	Parcel 3/AM15	Destroyed	6/4/2020
Booster	Booster	3	1	No	4/28/2020	Parcel 3/AM15	Destroyed	6/4/2020
PD Fuze	Fuze	20	1	No	4/28/2020	Parcel 3/AM15	Destroyed	6/4/2020
20mm	Projectile	4	2	No	4/30/2020	Parcel 3/AM15	Destroyed	8/6/2020

TABLE 3-4
MEC RECOVERED
FORT WINGATE DEPOT ACTIVITY
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Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
40mm	Projectile	12	2	No	4/30/2020	Parcel 3/AM15	Destroyed	8/6/2020
60mm	Projectile	2	2	Yes	4/30/2020	Parcel 3/AM15	Destroyed	2/23/2021
BD Fuze	Fuze	26	3	No	4/30/2020	Parcel 3/AM15	Destroyed	6/4/2020
Booster	Booster	10	2	No	4/30/2020	Parcel 3/AM15	Destroyed	6/4/2020
M83 Butterfly	Bomb	1	1	No	4/30/2020	Parcel 3/AM15	Destroyed	8/12/2020
PD Fuze	Fuze	25	2	No	4/30/2020	Parcel 3/AM15	Destroyed	6/4/2020
20mm	Projectile	2	2	No	5/4/2020	Parcel 3/AM15	Destroyed	8/6/2020
37mm	Projectile	1	3	No	5/4/2020	Parcel 3/AM15	Destroyed	8/6/2020
BD Fuze	Fuze	7	2	No	5/4/2020	Parcel 3/AM15	Destroyed	6/4/2020
Booster	Booster	1	2	No	5/4/2020	Parcel 3/AM15	Destroyed	6/4/2020
PD Fuze	Fuze	29	1	No	5/4/2020	Parcel 3/AM15	Destroyed	6/4/2020
AN-M110	Fuze	1	1	No	5/5/2020	Parcel 3/AM15	BIP	7/23/2020
BD Fuze	Fuze	18	2	No	5/5/2020	Parcel 3/AM15	Destroyed	6/4/2020
Booster	Booster	5	2	No	5/5/2020	Parcel 3/AM15	Destroyed	6/4/2020
PD Fuze	Fuze	89	1	No	5/5/2020	Parcel 3/AM15	Destroyed	6/4/2020
AN-M110	Fuze	1	1	No	5/7/2020	Parcel 3/AM14	BIP	7/23/2020
20mm	Projectile	4	2	No	5/8/2020	Parcel 3/AM14	Destroyed	8/6/2020
40mm	Projectile	22	2	No	5/8/2020	Parcel 3/AM14	Destroyed	8/6/2020
60mm	Projectile	1	1	No	5/8/2020	Parcel 3/AM14	Destroyed	8/12/2020
M83 Butterfly	Bomb	1	3	No	5/8/2020	Parcel 3/AM14	Destroyed	8/12/2020
M83 Butterfly	Bomb	1	1	Yes	5/8/2020	Parcel 3/AM14	BIP	7/23/2020
PD Fuze	Fuze	74	2	No	5/8/2020	Parcel 3/AM14	Destroyed	6/4/2020
AN-M110	Fuze	1	1	No	5/11/2020	Parcel 3/AM14	BIP	7/23/2020
AN-M110	Fuze	1	1	No	5/11/2020	Parcel 3/AM14	BIP	7/23/2020
M131	Fuze	1	1	No	5/11/2020	Parcel 3/AM14	BIP	7/23/2020
40mm	Projectile	2	6	No	5/13/2020	Parcel 3/AM14	Destroyed	8/6/2020
BD Fuze	Fuze	18	7	No	5/13/2020	Parcel 3/AM14	Destroyed	6/4/2020
Booster	Booster	17	4	No	5/13/2020	Parcel 3/AM14	Destroyed	6/4/2020
M83 Butterfly	Bomb	1	6	No	5/13/2020	Parcel 3/AM14	Destroyed	8/12/2020
PD Fuze	Fuze	109	5	No	5/13/2020	Parcel 3/AM14	Destroyed	6/4/2020
20mm	Projectile	3	2	No	5/15/2020	Parcel 3/AM14	Destroyed	8/6/2020
37mm	Projectile	1	2	No	5/15/2020	Parcel 3/AM14	Destroyed	8/6/2020
40mm	Projectile	4	2	No	5/15/2020	Parcel 3/AM14	Destroyed	8/6/2020
BD Fuze	Fuze	6	1	No	5/15/2020	Parcel 3/AM14	Destroyed	6/4/2020
Blu-3	Bomb	1	2	No	5/15/2020	Parcel 3/AM14	Destroyed	8/12/2020
Booster	Booster	2	1	No	5/15/2020	Parcel 3/AM14	Destroyed	6/4/2020
M83 Butterfly	Bomb	1	3	No	5/15/2020	Parcel 3/AM14	Destroyed	8/12/2020
PD Fuze	Fuze	42	2	No	5/15/2020	Parcel 3/AM14	Destroyed	6/4/2020
M63	Projectile	1	2	Yes	5/18/2020	Parcel 3/AN14	BIP	7/23/2020
M63	Projectile	1	1	Yes	5/19/2020	Parcel 3/AN14	BIP	7/23/2020
20lb Frag	Bomb	1	1	No	5/20/2020	Parcel 3/AN14	Destroyed	8/12/2020
20mm	Projectile	11	2	No	5/20/2020	Parcel 3/AN14	Destroyed	8/6/2020
3.5" Motor	Rocket	1	2	No	5/20/2020	Parcel 3/AN14	Destroyed	2/23/2021
37mm	Projectile	1	4	Yes	5/20/2020	Parcel 3/R25	Destroyed	8/6/2020
40mm	Projectile	12	2	No	5/20/2020	Parcel 3/AN14	Destroyed	8/6/2020

TABLE 3-4
MEC RECOVERED
FORT WINGATE DEPOT ACTIVITY
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Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
57mm	Projectile	1	1	No	5/20/2020	Parcel 3/AN14	Destroyed	8/12/2020
AN-M110	Fuze	1	1	No	5/20/2020	Parcel 3/AN14	BIP	7/23/2020
BD Fuze	Fuze	13	2	No	5/20/2020	Parcel 3/AN14	Destroyed	6/4/2020
BD Fuze	Fuze	3	3	No	5/20/2020	Parcel 3/R25	Destroyed	6/4/2020
Blu-4	Bomb	1	2	No	5/20/2020	Parcel 3/R25	Destroyed	8/12/2020
Booster	Booster	4	2	No	5/20/2020	Parcel 3/AN14	Destroyed	6/4/2020
M52	Fuze	1	1	No	5/20/2020	Parcel 3/AN14	BIP	7/23/2020
M83 Butterfly	Bomb	1	3	No	5/20/2020	Parcel 3/AN14	Destroyed	8/12/2020
PD Fuze	Fuze	42	2	No	5/20/2020	Parcel 3/AN14	Destroyed	6/4/2020
PD Fuze	Fuze	10	4	No	5/20/2020	Parcel 3/R25	Destroyed	6/4/2020
20mm	Projectile	2	2	No	5/22/2020	Parcel 3/AN14	Destroyed	8/6/2020
40mm	Projectile	2	4	No	5/22/2020	Parcel 3/Q25	Destroyed	8/6/2020
60mm	Projectile	1	6	No	5/22/2020	Parcel 3/Q25	Destroyed	8/12/2020
BD Fuze	Fuze	3	1	No	5/22/2020	Parcel 3/AN14	Destroyed	6/4/2020
BD Fuze	Fuze	5	3	No	5/22/2020	Parcel 3/Q25	Destroyed	6/4/2020
Blu-3	Bomb	2	2	No	5/22/2020	Parcel 3/Q25	Destroyed	8/12/2020
Blu-4	Bomb	4	3	No	5/22/2020	Parcel 3/Q25	Destroyed	8/12/2020
PD Fuze	Fuze	49	2	No	5/22/2020	Parcel 3/AN14	Destroyed	6/4/2020
PD Fuze	Fuze	10	2	No	5/22/2020	Parcel 3/Q25	Destroyed	6/4/2020
M52	Fuze	1	1	No	5/27/2020	Parcel 3/AN14	BIP	7/23/2020
20mm	Projectile	1	1	No	5/28/2020	Parcel 3/AN14	Destroyed	8/6/2020
37mm	Projectile	1	3	No	5/28/2020	Parcel 3/P25	Destroyed	8/6/2020
60mm	Projectile	1	2	No	5/28/2020	Parcel 3/AN14	Destroyed	8/12/2020
BD Fuze	Fuze	7	2	No	5/28/2020	Parcel 3/AN14	Destroyed	6/4/2020
BD Fuze	Fuze	3	2	No	5/28/2020	Parcel 3/P25	Destroyed	6/4/2020
Blu-3	Bomb	1	2	No	5/28/2020	Parcel 3/P25	Destroyed	8/12/2020
Blu-3	Bomb	1	2	Yes	5/28/2020	Parcel 3/P25	BIP	7/23/2020
Blu-4	Bomb	1	5	No	5/28/2020	Parcel 3/P25	Destroyed	8/12/2020
Booster	Booster	3	2	No	5/28/2020	Parcel 3/AN14	Destroyed	6/4/2020
Booster	Booster	1	2	No	5/28/2020	Parcel 3/P25	Destroyed	6/4/2020
PD Fuze	Fuze	77	1	No	5/28/2020	Parcel 3/AN14	Destroyed	6/4/2020
PD Fuze	Fuze	18	1	No	5/28/2020	Parcel 3/P25	Destroyed	6/4/2020
20mm	Projectile	6	2	No	6/2/2020	Parcel 3/AN15	Destroyed	8/6/2020
20mm	Projectile	1	2	No	6/2/2020	Parcel 3/O25	Destroyed	8/6/2020
40mm	Projectile	14	3	No	6/2/2020	Parcel 3/AN15	Destroyed	8/6/2020
40mm	Projectile	5	5	No	6/2/2020	Parcel 3/O25	Destroyed	8/6/2020
40mm	Projectile	1	1	Yes	6/2/2020	Parcel 3/AN15	Destroyed	8/6/2020
60mm	Projectile	1	3	Yes	6/2/2020	Parcel 3/AN15	Destroyed	2/23/2021
75mm	Projectile	1	7	No	6/2/2020	Parcel 3/O25	Destroyed	8/12/2020
BD Fuze	Fuze	23	2	No	6/2/2020	Parcel 3/AN15	Destroyed	6/4/2020
BD Fuze	Fuze	5	4	No	6/2/2020	Parcel 3/O25	Destroyed	6/4/2020
Blu-3	Bomb	1	5	Yes	6/2/2020	Parcel 3/O25	BIP	7/23/2020
Blu-3	Bomb	1	4	Yes	6/2/2020	Parcel 3/O25	BIP	7/23/2020
Blu-4	Bomb	5	3	No	6/2/2020	Parcel 3/O25	Destroyed	8/12/2020
Booster	Booster	3	2	No	6/2/2020	Parcel 3/AN15	Destroyed	6/4/2020

TABLE 3-4
MEC RECOVERED
FORT WINGATE DEPOT ACTIVITY
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Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
Booster	Booster	1	2	No	6/2/2020	Parcel 3/O25	Destroyed	6/4/2020
M83 Butterfly	Bomb	2	3	No	6/2/2020	Parcel 3/AN15	Destroyed	8/12/2020
M83 Butterfly	Bomb	1	0	Yes	6/2/2020	Parcel 3/AN15	BIP	7/23/2020
PD Fuze	Fuze	38	2	No	6/2/2020	Parcel 3/AN15	Destroyed	6/4/2020
PD Fuze	Fuze	25	4	No	6/2/2020	Parcel 3/O25	Destroyed	6/4/2020
M131	Fuze	1	1	No	6/3/2020	Parcel 3/AN15	BIP	7/23/2020
20mm	Projectile	4	1	No	6/5/2020	Parcel 3/AN15	Destroyed	8/6/2020
37mm	Projectile	1	4	No	6/5/2020	Parcel 3/N25	Destroyed	8/6/2020
40mm	Projectile	5	4	No	6/5/2020	Parcel 3/AN15	Destroyed	8/6/2020
40mm	Projectile	1	3	Yes	6/5/2020	Parcel 3/AN15	Destroyed	8/6/2020
60mm	Projectile	1	6	No	6/5/2020	Parcel 3/N25	Destroyed	8/12/2020
75mm	Projectile	1	6	Yes	6/5/2020	Parcel 3/N25	Destroyed	2/23/2021
BD Fuze	Fuze	6	2	No	6/5/2020	Parcel 3/AN15	Destroyed	8/4/2020
BD Fuze	Fuze	2	3	No	6/5/2020	Parcel 3/N25	Destroyed	8/4/2020
Blu-3	Bomb	1	2	No	6/5/2020	Parcel 3/N25	Destroyed	8/12/2020
Blu-4	Bomb	2	4	No	6/5/2020	Parcel 3/N25	Destroyed	8/12/2020
Booster	Booster	3	2	No	6/5/2020	Parcel 3/AN15	Destroyed	8/4/2020
PD Fuze	Fuze	121	2	No	6/5/2020	Parcel 3/AN15	Destroyed	8/4/2020
PD Fuze	Fuze	8	2	No	6/5/2020	Parcel 3/N25	Destroyed	8/4/2020
AN-M110	Fuze	1	0	No	6/8/2020	Parcel 3/AO15	BIP	7/23/2020
Blu-3	Bomb	1	0	Yes	6/8/2020	Parcel 3/N24	BIP	7/23/2020
37mm	Projectile	3	3	No	6/9/2020	Parcel 3/N24	Destroyed	8/6/2020
40mm	Projectile	3	4	No	6/9/2020	Parcel 3/N24	Destroyed	8/6/2020
40mm	Projectile	3	3	No	6/9/2020	Parcel 3/AO15	Destroyed	8/6/2020
75mm	Projectile	1	6	No	6/9/2020	Parcel 3/N24	Destroyed	8/12/2020
BD Fuze	Fuze	6	2	No	6/9/2020	Parcel 3/N24	Destroyed	8/4/2020
BD Fuze	Fuze	4	2	No	6/9/2020	Parcel 3/AO15	Destroyed	8/4/2020
Blu-3	Bomb	4	4	No	6/9/2020	Parcel 3/N24	Destroyed	8/12/2020
Blu-3	Bomb	1	1	Yes	6/9/2020	Parcel 3/N24	BIP	7/23/2020
PD Fuze	Fuze	5	2	No	6/9/2020	Parcel 3/N24	Destroyed	8/4/2020
PD Fuze	Fuze	11	2	No	6/9/2020	Parcel 3/AO15	Destroyed	8/4/2020
20mm	Projectile	5	1	No	6/12/2020	Parcel 3/AO15	Destroyed	8/6/2020
37mm	Projectile	2	3	No	6/12/2020	Parcel 3/AO15	Destroyed	8/6/2020
40mm	Projectile	9	2	No	6/12/2020	Parcel 3/AO15	Destroyed	8/6/2020
40mm	Projectile	2	4	No	6/12/2020	Parcel 3/O24	Destroyed	8/6/2020
60mm	Projectile	1	3	No	6/12/2020	Parcel 3/AO15	Destroyed	8/12/2020
60mm	Projectile	1	1	Yes	6/12/2020	Parcel 3/AO15	Destroyed	2/23/2021
AN-M110	Fuze	1	1	No	6/12/2020	Parcel 3/AO15	BIP	7/23/2020
BD Fuze	Fuze	10	2	No	6/12/2020	Parcel 3/AO15	Destroyed	8/4/2020
Blu-4	Bomb	1	1	No	6/12/2020	Parcel 3/O24	Destroyed	8/12/2020
Booster	Booster	2	2	No	6/12/2020	Parcel 3/O24	Destroyed	8/4/2020
PD Fuze	Fuze	48	1	No	6/12/2020	Parcel 3/AO15	Destroyed	8/4/2020
PD Fuze	Fuze	17	2	No	6/12/2020	Parcel 3/O24	Destroyed	8/4/2020
AN-M111	Fuze	1	1	No	6/15/2020	Parcel 3/AO15	BIP	7/23/2020
BD Fuze	Fuze	1	3	No	6/16/2020	Parcel 3/P24	Destroyed	8/4/2020

TABLE 3-4
MEC RECOVERED
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
BD Fuze	Fuze	5	2	No	6/16/2020	Parcel 3/AO15	Destroyed	8/4/2020
Blu-4	Bomb	1	2	No	6/16/2020	Parcel 3/P24	Destroyed	8/12/2020
Booster	Booster	2	1	No	6/16/2020	Parcel 3/P24	Destroyed	8/4/2020
M131	Fuze	1	3	No	6/16/2020	Parcel 3/P24	BIP	7/23/2020
PD Fuze	Fuze	1	2	No	6/16/2020	Parcel 3/P24	Destroyed	8/4/2020
PD Fuze	Fuze	65	2	No	6/16/2020	Parcel 3/AO15	Destroyed	8/4/2020
AN-M110	Fuze	1	1	No	6/17/2020	Parcel 3/AO14	BIP	7/23/2020
Blu-4	Bomb	1	1	Yes	6/17/2020	Parcel 3/Q24	BIP	7/23/2020
M404	Fuze	1	4	No	6/17/2020	Parcel 3/Q24	BIP	7/23/2020
AN-M110	Fuze	1	2	No	6/18/2020	Parcel 3/AO14	BIP	7/23/2020
Blu-4	Bomb	1	1	Yes	6/18/2020	Parcel 3/AO14	BIP	7/23/2020
Blu-4	Bomb	1	5	Yes	6/18/2020	Parcel 3/Q24	BIP	7/23/2020
M83 Butterfly	Bomb	1	2	Yes	6/18/2020	Parcel 3/AO14	BIP	7/23/2020
20mm	Projectile	3	3	No	6/19/2020	Parcel 3/AO14	Destroyed	8/6/2020
37mm	Projectile	1	2	No	6/19/2020	Parcel 3/Q24	Destroyed	8/6/2020
40mm	Projectile	15	3	No	6/19/2020	Parcel 3/AO14	Destroyed	8/6/2020
40mm	Projectile	1	2	No	6/19/2020	Parcel 3/Q24	Destroyed	8/6/2020
40mm	Projectile	1	2	Yes	6/19/2020	Parcel 3/AO14	Destroyed	8/6/2020
75mm	Projectile	1	6	No	6/19/2020	Parcel 3/Q24	Destroyed	8/12/2020
AN-M110	Fuze	1	4	No	6/19/2020	Parcel 3/Q24	BIP	7/23/2020
AN-M110	Fuze	1	2	No	6/19/2020	Parcel 3/Q24	BIP	7/23/2020
AN-M111	Fuze	1	2	No	6/19/2020	Parcel 3/Q24	BIP	7/23/2020
BD Fuze	Fuze	29	3	No	6/19/2020	Parcel 3/AO14	Destroyed	8/4/2020
BD Fuze	Fuze	7	4	No	6/19/2020	Parcel 3/Q24	Destroyed	8/4/2020
Blu-3	Bomb	2	2	No	6/19/2020	Parcel 3/Q24	Destroyed	8/12/2020
Blu-4	Bomb	4	4	No	6/19/2020	Parcel 3/Q24	Destroyed	8/12/2020
Booster	Booster	4	3	No	6/19/2020	Parcel 3/Q24	Destroyed	8/4/2020
PD Fuze	Fuze	76	1	No	6/19/2020	Parcel 3/AO14	Destroyed	8/4/2020
PD Fuze	Fuze	23	4	No	6/19/2020	Parcel 3/Q24	Destroyed	8/4/2020
Blu-3	Bomb	1	4	Yes	6/22/2020	Parcel 3/R24	BIP	7/23/2020
20mm	Projectile	1	2	No	6/23/2020	Parcel 3/R24	Destroyed	8/6/2020
40mm	Projectile	5	4	No	6/23/2020	Parcel 3/R24	Destroyed	8/6/2020
60mm	Projectile	1	4	Yes	6/23/2020	Parcel 3/AO14	Destroyed	2/23/2021
BD Fuze	Fuze	1	3	No	6/23/2020	Parcel 3/AO14	Destroyed	8/4/2020
BD Fuze	Fuze	2	3	No	6/23/2020	Parcel 3/R24	Destroyed	8/4/2020
Booster	Booster	2	1	No	6/23/2020	Parcel 3/R24	Destroyed	8/4/2020
M83 Butterfly	Bomb	1	0.5	No	6/23/2020	Parcel 3/R24	Destroyed	8/12/2020
PD Fuze	Fuze	70	1	No	6/23/2020	Parcel 3/AO14	Destroyed	8/4/2020
PD Fuze	Fuze	7	2	No	6/23/2020	Parcel 3/R24	Destroyed	8/4/2020
M131	Fuze	1	3	No	6/24/2020	Parcel 3/R24	BIP	7/23/2020
AN-M110	Fuze	1	2	No	6/25/2020	Parcel 3/AP14	BIP	7/23/2020
AN-M110	Fuze	1	1	No	6/25/2020	Parcel 3/AP14	BIP	7/23/2020
AN-M110	Fuze	1	2	No	6/25/2020	Parcel 3/AP14	BIP	7/23/2020
Blu-4	Bomb	1	2	Yes	6/25/2020	Parcel 3/S23	BIP	7/24/2020
M83 Butterfly	Bomb	1	3	Yes	6/25/2020	Parcel 3/S23	BIP	7/24/2020

TABLE 3-4
MEC RECOVERED
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
20mm	Projectile	1	3	No	6/26/2020	Parcel 3/S23	Destroyed	8/6/2020
20mm	Projectile	3	2	No	6/26/2020	Parcel 3/AP14	Destroyed	8/6/2020
37mm	Projectile	1	5	Yes	6/26/2020	Parcel 3/S23	Destroyed	8/6/2020
37mm	Projectile	2	2	Yes	6/26/2020	Parcel 3/AP14	Destroyed	8/6/2020
40mm	Projectile	3	4	No	6/26/2020	Parcel 3/S23	Destroyed	8/6/2020
40mm	Projectile	7	3	No	6/26/2020	Parcel 3/AP14	Destroyed	8/6/2020
40mm	Projectile	1	3	Yes	6/26/2020	Parcel 3/S23	Destroyed	8/6/2020
60mm	Projectile	2	6	No	6/26/2020	Parcel 3/S23	Destroyed	8/12/2020
BD Fuze	Fuze	5	2	No	6/26/2020	Parcel 3/S23	Destroyed	8/4/2020
BD Fuze	Fuze	11	1	No	6/26/2020	Parcel 3/AP14	Destroyed	8/4/2020
Blu-3	Bomb	4	4	No	6/26/2020	Parcel 3/S23	Destroyed	8/12/2020
Booster	Booster	3	2	No	6/26/2020	Parcel 3/S23	Destroyed	8/4/2020
Booster	Booster	3	1	No	6/26/2020	Parcel 3/AP14	Destroyed	8/4/2020
PD Fuze	Fuze	20	4	No	6/26/2020	Parcel 3/S23	Destroyed	8/4/2020
PD Fuze	Fuze	34	2	No	6/26/2020	Parcel 3/AP14	Destroyed	8/4/2020
20mm	Projectile	1	3	No	7/10/2020	Parcel 3/S23	Destroyed	8/6/2020
37mm	Projectile	2	3	No	7/10/2020	Parcel 3/AP14	Destroyed	8/6/2020
40mm	Projectile	6	2	No	7/10/2020	Parcel 3/AP14	Destroyed	8/6/2020
BD Fuze	Fuze	9	2	No	7/10/2020	Parcel 3/AP14	Destroyed	8/4/2020
BD Fuze	Fuze	2	4	No	7/10/2020	Parcel 3/S23	Destroyed	8/4/2020
Blu-3	Bomb	3	3	No	7/10/2020	Parcel 3/S23	Destroyed	8/12/2020
Blu-4	Bomb	1	2	No	7/10/2020	Parcel 3/S23	Destroyed	8/12/2020
PD Fuze	Fuze	63	2	No	7/10/2020	Parcel 3/AP14	Destroyed	8/4/2020
PD Fuze	Fuze	17	3	No	7/10/2020	Parcel 3/S23	Destroyed	8/4/2020
20mm	Projectile	1	3	No	7/14/2020	Parcel 3/AP14	Destroyed	8/6/2020
20mm	Projectile	2	2	No	7/14/2020	Parcel 3/T23	Destroyed	8/6/2020
40mm	Projectile	1	2	No	7/14/2020	Parcel 3/T23	Destroyed	8/6/2020
60mm	Projectile	1	3	No	7/14/2020	Parcel 3/T23	Destroyed	8/12/2020
75mm	Projectile	1	5	No	7/14/2020	Parcel 3/T23	Destroyed	8/12/2020
BD Fuze	Fuze	4	2	No	7/14/2020	Parcel 3/AP14	Destroyed	8/4/2020
BD Fuze	Fuze	2	2	No	7/14/2020	Parcel 3/T23	Destroyed	8/4/2020
Blu-3	Bomb	3	2	No	7/14/2020	Parcel 3/T23	Destroyed	8/12/2020
Blu-4	Bomb	1	2	Yes	7/14/2020	Parcel 3/T23	BIP	7/24/2020
M52	Fuze	1	1	No	7/14/2020	Parcel 3/AP14	BIP	7/23/2020
PD Fuze	Fuze	65	1	No	7/14/2020	Parcel 3/AP14	Destroyed	8/4/2020
PD Fuze	Fuze	3	1	No	7/14/2020	Parcel 3/T23	Destroyed	8/4/2020
20mm	Projectile	1	1	No	7/17/2020	Parcel 3/T23	Destroyed	8/6/2020
40mm	Projectile	3	2	No	7/17/2020	Parcel 3/T23	Destroyed	8/6/2020
60mm	Projectile	1	3	No	7/17/2020	Parcel 3/T23	Destroyed	8/12/2020
75mm	Projectile	1	3	No	7/17/2020	Parcel 3/T23	Destroyed	8/12/2020
BD Fuze	Fuze	3	3	No	7/17/2020	Parcel 3/T23	Destroyed	8/4/2020
Blu-3	Bomb	8	2	No	7/17/2020	Parcel 3/T23	Destroyed	8/12/2020
Blu-4	Bomb	2	2	No	7/17/2020	Parcel 3/T23	Destroyed	8/12/2020
M83 Butterfly	Bomb	1	1	Yes	7/17/2020	Parcel 3/U23	BIP	7/24/2020
PD Fuze	Fuze	40	3	No	7/17/2020	Parcel 3/T23	Destroyed	8/4/2020

TABLE 3-4
MEC RECOVERED
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
Blu-3	Bomb	1	2	Yes	7/22/2020	Parcel 3/U23	BIP	7/24/2020
20mm	Projectile	5	2	No	7/29/2020	Parcel 3/AP15	Destroyed	8/6/2020
20mm	Projectile	2	2	No	7/29/2020	Parcel 3/U23	Destroyed	8/6/2020
37mm	Projectile	3	2	No	7/29/2020	Parcel 3/U23	Destroyed	8/6/2020
40mm	Projectile	7	3	No	7/29/2020	Parcel 3/AP15	Destroyed	8/6/2020
40mm	Projectile	10	2	No	7/29/2020	Parcel 3/U23	Destroyed	8/6/2020
60mm	Projectile	2	2	No	7/29/2020	Parcel 3/AP15	Destroyed	8/12/2020
BD Fuze	Fuze	7	2	No	7/29/2020	Parcel 3/AP15	Destroyed	8/4/2020
BD Fuze	Fuze	4	1	No	7/29/2020	Parcel 3/U23	Destroyed	8/4/2020
Blu-3	Bomb	2	2	No	7/29/2020	Parcel 3/U23	Destroyed	8/12/2020
Blu-3	Bomb	1	1	Yes	7/29/2020	Parcel 3/AP15	BIP	9/5/2020
Blu-4	Bomb	1	1	No	7/29/2020	Parcel 3/U23	Destroyed	8/12/2020
Booster	Booster	4	1	No	7/29/2020	Parcel 3/U23	Destroyed	8/4/2020
M83 Butterfly	Bomb	1	1	No	7/29/2020	Parcel 3/AP15	Destroyed	8/12/2020
PD Fuze	Fuze	15	2	No	7/29/2020	Parcel 3/AP15	Destroyed	8/4/2020
PD Fuze	Fuze	42	1	No	7/29/2020	Parcel 3/U23	Destroyed	8/4/2020
20mm	Projectile	5	3	No	7/31/2020	Parcel 3/AP15	Destroyed	8/6/2020
37mm	Projectile	2	3	No	7/31/2020	Parcel 3/AP15	Destroyed	8/6/2020
40mm	Projectile	11	4	No	7/31/2020	Parcel 3/AP15	Destroyed	8/6/2020
AN-M110	Fuze	1	3	No	7/31/2020	Parcel 3/AP15	BIP	9/5/2020
AN-M110	Fuze	1	1	No	7/31/2020	Parcel 3/AP15	BIP	9/5/2020
BD Fuze	Fuze	4	3	No	7/31/2020	Parcel 3/AP15	Destroyed	8/4/2020
BD Fuze	Fuze	1	1	No	7/31/2020	Parcel 3/V23	Destroyed	8/4/2020
Booster	Booster	1	2	No	7/31/2020	Parcel 3/AP15	Destroyed	8/4/2020
Booster	Booster	1	1	No	7/31/2020	Parcel 3/V23	Destroyed	8/4/2020
M131	Fuze	1	0	No	7/31/2020	Parcel 3/AP15	BIP	9/5/2020
M83 Butterfly	Bomb	1	1	No	7/31/2020	Parcel 3/AP15	Destroyed	8/12/2020
PD Fuze	Fuze	29	1	No	7/31/2020	Parcel 3/AP15	Destroyed	8/4/2020
PD Fuze	Fuze	38	1	No	7/31/2020	Parcel 3/V23	Destroyed	8/4/2020
M404	Fuze	1	1	No	8/4/2020	Parcel 3/V23	BIP	9/5/2020
20mm	Projectile	1	4	No	8/5/2020	Parcel 3/V23	Destroyed	8/6/2020
40mm	Projectile	5	4	No	8/5/2020	Parcel 3/V23	Destroyed	8/6/2020
40mm	Projectile	2	3	No	8/5/2020	Parcel3/AQ14	Destroyed	8/6/2020
60mm	Projectile	1	3	No	8/5/2020	Parcel 3/V23	Destroyed	8/12/2020
60mm	Projectile	1	4	Yes	8/5/2020	Parcel 3/V23	Destroyed	2/23/2021
BD Fuze	Fuze	3	4	No	8/5/2020	Parcel 3/V23	Destroyed	8/12/2020
BD Fuze	Fuze	7	2	No	8/5/2020	Parcel3/AQ14	Destroyed	8/12/2020
Blu-3	Bomb	2	4	No	8/5/2020	Parcel 3/V23	Destroyed	8/12/2020
Blu-4	Bomb	2	4	No	8/5/2020	Parcel 3/V23	Destroyed	8/12/2020
Booster	Booster	2	4	No	8/5/2020	Parcel 3/V23	Destroyed	8/12/2020
PD Fuze	Fuze	44	4	No	8/5/2020	Parcel 3/V23	Destroyed	8/12/2020
PD Fuze	Fuze	81	2	No	8/5/2020	Parcel3/AQ14	Destroyed	8/12/2020
AN-M110	Fuze	1	1	Yes	8/6/2020	Parcel 3/W23	Destroyed	9/5/2020
M83 Butterfly	Bomb	1	3	Yes	8/6/2020	Parcel3/AQ14	BIP	9/5/2020
M120	Fuze	1	1	No	8/7/2020	Parcel 3/W23	BIP	9/5/2020

TABLE 3-4
MEC RECOVERED
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
M83 Butterfly	Bomb	1	1	Yes	8/7/2020	Parcel 3/AQ14	BIP	9/5/2020
20mm	Projectile	2	4	No	8/10/2020	Parcel 3/AQ14	Destroyed	8/12/2020
20mm	Projectile	2	1	No	8/10/2020	Parcel 3/W23	Destroyed	8/12/2020
37mm	Projectile	5	3	No	8/10/2020	Parcel 3/AQ14	Destroyed	8/12/2020
37mm	Projectile	1	1	No	8/10/2020	Parcel 3/W23	Destroyed	8/12/2020
40mm	Projectile	18	3	No	8/10/2020	Parcel 3/AQ14	Destroyed	8/12/2020
40mm	Projectile	9	1	No	8/10/2020	Parcel 3/W23	Destroyed	8/12/2020
AN-M111	Fuze	1	1	No	8/10/2020	Parcel 3/W23	BIP	9/5/2020
BD Fuze	Fuze	14	2	No	8/10/2020	Parcel 3/AQ14	Destroyed	8/12/2020
BD Fuze	Fuze	6	1	No	8/10/2020	Parcel 3/W23	Destroyed	8/12/2020
Blu-3	Bomb	3	1	No	8/10/2020	Parcel 3/W23	Destroyed	8/12/2020
Booster	Booster	3	1	No	8/10/2020	Parcel 3/AQ14	Destroyed	8/12/2020
Booster	Booster	1	1	No	8/10/2020	Parcel 3/W23	Destroyed	8/12/2020
M83 Butterfly	Bomb	1	3	No	8/10/2020	Parcel 3/AQ14	Destroyed	8/12/2020
M83 Butterfly	Bomb	3	1	No	8/10/2020	Parcel 3/W23	Destroyed	8/12/2020
M83 Butterfly	Bomb	1	1	Yes	8/10/2020	Parcel 3/W22	BIP	9/5/2020
M83 Butterfly	Bomb	1	1	Yes	8/10/2020	Parcel 3/W22	BIP	9/5/2020
PD Fuze	Fuze	56	1	No	8/10/2020	Parcel 3/AQ14	Destroyed	8/12/2020
PD Fuze	Fuze	64	1	No	8/10/2020	Parcel 3/W23	Destroyed	8/12/2020
20mm	Projectile	3	1	No	8/13/2020	Parcel 3/AQ15	Destroyed	11/17/2020
20mm	Projectile	1	1	No	8/13/2020	Parcel 3/W22	Destroyed	11/17/2020
3.5" Motor	Rocket	1	3	No	8/13/2020	Parcel 3/AQ15	Destroyed	2/23/2021
37mm	Projectile	2	1	No	8/13/2020	Parcel 3/W22	Destroyed	11/12/2020
40mm	Projectile	11	2	No	8/13/2020	Parcel 3/AQ15	Destroyed	11/12/2020
40mm	Projectile	6	1	No	8/13/2020	Parcel 3/W22	Destroyed	11/12/2020
AN-M110	Fuze	1	1	Yes	8/13/2020	Parcel 3/AQ15	Destroyed	9/5/2020
AN-M111	Fuze	1	1	No	8/13/2020	Parcel 3/W22	BIP	9/5/2020
BD Fuze	Fuze	11	3	No	8/13/2020	Parcel 3/AQ15	Destroyed	12/8/2020
BD Fuze	Fuze	6	1	No	8/13/2020	Parcel 3/W22	Destroyed	12/8/2020
Blu-3	Bomb	4	1	No	8/13/2020	Parcel 3/W22	Destroyed	11/12/2020
Blu-4	Bomb	2	1	No	8/13/2020	Parcel 3/W22	Destroyed	11/12/2020
Booster	Booster	1	2	No	8/13/2020	Parcel 3/AQ15	Destroyed	12/8/2020
M83 Butterfly	Bomb	2	2	No	8/13/2020	Parcel 3/AQ15	Destroyed	11/19/2020
M83 Butterfly	Bomb	3	1	No	8/13/2020	Parcel 3/W22	Destroyed	11/19/2020
PD Fuze	Fuze	105	1	No	8/13/2020	Parcel 3/AQ15	Destroyed	12/8/2020
PD Fuze	Fuze	31	1	No	8/13/2020	Parcel 3/W22	Destroyed	12/8/2020
BD Fuze	Fuze	4	1	No	8/14/2020	Parcel 3/AQ15	Destroyed	12/8/2020
Blu-3	Bomb	5	1	No	8/14/2020	Parcel 3/W22	Destroyed	11/12/2020
Blu-3	Bomb	1	2	No	8/14/2020	Parcel 3/AQ15	Destroyed	11/12/2020
Booster	Booster	1	1	No	8/14/2020	Parcel 3/W22	Destroyed	12/8/2020
M131	Fuze	1	1	No	8/14/2020	Parcel 3/AQ15	BIP	9/5/2020
PD Fuze	Fuze	67	1	No	8/14/2020	Parcel 3/W22	Destroyed	12/8/2020
PD Fuze	Fuze	61	1	No	8/14/2020	Parcel 3/AQ15	Destroyed	12/8/2020
AN-M111	Fuze	1	1	No	8/17/2020	Parcel 3/V22	BIP	9/5/2020
M52	Fuze	1	0	No	8/18/2020	Parcel 3/AQ16	BIP	9/5/2020

TABLE 3-4
MEC RECOVERED
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
M83 Butterfly	Bomb	1	3	Yes	8/18/2020	Parcel 3/AQ16	BIP	9/5/2020
40mm	Projectile	5	1	No	8/19/2020	Parcel 3/V22	Destroyed	11/12/2020
60mm	Projectile	1	1	No	8/19/2020	Parcel 3/V22	Destroyed	2/12/2021
60mm	Projectile	1	1	Yes	8/19/2020	Parcel 3/V22	Destroyed	2/23/2021
BD Fuze	Fuze	4	1	No	8/19/2020	Parcel 3/V22	Destroyed	12/8/2020
Blu-3	Bomb	1	1	No	8/19/2020	Parcel 3/V22	Destroyed	11/12/2020
Blu-4	Bomb	1	1	No	8/19/2020	Parcel 3/V22	Destroyed	11/12/2020
Booster	Booster	2	1	No	8/19/2020	Parcel 3/V22	Destroyed	12/8/2020
M83 Butterfly	Bomb	1	1	No	8/19/2020	Parcel 3/V22	Destroyed	11/19/2020
PD Fuze	Fuze	32	1	No	8/19/2020	Parcel 3/V22	Destroyed	12/8/2020
AN-M110	Fuze	1	1	No	8/20/2020	Parcel 3/V22	BIP	9/5/2020
Blu-3	Bomb	1	1	Yes	8/20/2020	Parcel 3/V22	BIP	9/5/2020
20mm	Projectile	2	1	No	8/21/2020	Parcel 3/V22	Destroyed	11/17/2020
20mm	Projectile	1	3	No	8/21/2020	Parcel 3/AQ16	Destroyed	11/17/2020
3.5" Motor	Rocket	1	0	No	8/21/2020	Parcel 3/AQ16	Destroyed	2/23/2021
37mm	Projectile	1	0	No	8/21/2020	Parcel 3/AQ16	Destroyed	11/12/2020
40mm	Projectile	3	1	No	8/21/2020	Parcel 3/V22	Destroyed	11/12/2020
40mm	Projectile	5	3	No	8/21/2020	Parcel 3/AQ16	Destroyed	11/12/2020
AN-M110	Fuze	1	0	No	8/21/2020	Parcel 3/AQ16	BIP	9/5/2020
BD Fuze	Fuze	11	2	No	8/21/2020	Parcel 3/AQ16	Destroyed	12/8/2020
Blu-3	Bomb	3	1	No	8/21/2020	Parcel 3/V22	Destroyed	11/12/2020
M83 Butterfly	Bomb	1	1	No	8/21/2020	Parcel 3/AQ16	Destroyed	11/19/2020
PD Fuze	Fuze	64	1	No	8/21/2020	Parcel 3/V22	Destroyed	12/8/2020
PD Fuze	Fuze	66	2	No	8/21/2020	Parcel 3/AQ16	Destroyed	12/8/2020
M83 Butterfly	Bomb	1	0	Yes	8/25/2020	Parcel 3/AQ17	BIP	9/26/2020
37mm	Projectile	1	3	No	8/26/2020	Parcel 3/AQ17	Destroyed	11/12/2020
37mm	Projectile	1	1	Yes	8/26/2020	Parcel 3/U22	Destroyed	11/12/2020
40mm	Projectile	6	1	No	8/26/2020	Parcel 3/AQ17	Destroyed	11/12/2020
40mm	Projectile	1	2	Yes	8/26/2020	Parcel 3/AQ17	Destroyed	11/12/2020
BD Fuze	Fuze	5	3	No	8/26/2020	Parcel 3/AQ17	Destroyed	12/8/2020
BD Fuze	Fuze	5	1	No	8/26/2020	Parcel 3/U22	Destroyed	12/8/2020
Blu-3	Bomb	5	1	No	8/26/2020	Parcel 3/U22	Destroyed	11/12/2020
Booster	Booster	3	1	No	8/26/2020	Parcel 3/U22	Destroyed	12/8/2020
M83 Butterfly	Bomb	1	1	Yes	8/26/2020	Parcel 3/T22	BIP	9/26/2020
M83 Butterfly	Bomb	1	1	Yes	8/26/2020	Parcel 3/T22	BIP	11/23/2020
M83 Butterfly	Bomb	1	1	Yes	8/26/2020	Parcel 3/T22	BIP	11/23/2020
PD Fuze	Fuze	53	1	No	8/26/2020	Parcel 3/AQ17	Destroyed	12/8/2020
PD Fuze	Fuze	38	1	No	8/26/2020	Parcel 3/U22	Destroyed	12/8/2020
M83 Butterfly	Bomb	1	0	Yes	8/31/2020	Parcel 3/AQ18	BIP	9/26/2020
20mm	Projectile	1	1	No	9/1/2020	Parcel 3/AQ18	Destroyed	11/17/2020
20mm	Projectile	2	1	No	9/1/2020	Parcel 3/T22	Destroyed	11/17/2020
37mm	Projectile	1	1	No	9/1/2020	Parcel 3/AQ18	Destroyed	11/12/2020
40mm	Projectile	9	2	No	9/1/2020	Parcel 3/AQ18	Destroyed	11/12/2020
40mm	Projectile	4	1	No	9/1/2020	Parcel 3/T22	Destroyed	11/12/2020
40mm	Projectile	2	3	Yes	9/1/2020	Parcel 3/AQ18	Destroyed	11/12/2020

TABLE 3-4
MEC RECOVERED
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
AN-M111	Fuze	1	1	No	9/1/2020	Parcel 3/T22	BIP	11/23/2020
BD Fuze	Fuze	10	2	No	9/1/2020	Parcel 3/AQ18	Destroyed	12/8/2020
BD Fuze	Fuze	5	1	No	9/1/2020	Parcel 3/T22	Destroyed	12/8/2020
Blu-3	Bomb	7	1	No	9/1/2020	Parcel 3/T22	Destroyed	11/12/2020
Blu-4	Bomb	2	1	No	9/1/2020	Parcel 3/T22	Destroyed	11/12/2020
Booster	Booster	4	1	No	9/1/2020	Parcel 3/AQ18	Destroyed	12/8/2020
Booster	Booster	1	1	No	9/1/2020	Parcel 3/T22	Destroyed	12/8/2020
M131	Fuze	1	1	No	9/1/2020	Parcel 3/T22	BIP	11/23/2020
M83 Butterfly	Bomb	2	3	No	9/1/2020	Parcel 3/AQ18	Destroyed	11/19/2020
PD Fuze	Fuze	106	2	No	9/1/2020	Parcel 3/AQ18	Destroyed	12/8/2020
PD Fuze	Fuze	60	1	No	9/1/2020	Parcel 3/T22	Destroyed	12/8/2020
Blu-4	Bomb	1	1	Yes	9/3/2020	Parcel 3/S22	BIP	9/26/2020
40mm	Projectile	5	2	No	9/8/2020	Parcel 3/AQ19	Destroyed	11/12/2020
40mm	Projectile	2	1	No	9/8/2020	Parcel 3/S22	Destroyed	11/12/2020
40mm	Projectile	1	3	Yes	9/8/2020	Parcel 3/AQ19	Destroyed	11/12/2020
60mm	Projectile	1	1	No	9/8/2020	Parcel 3/S22	Destroyed	2/12/2021
BD Fuze	Fuze	5	2	No	9/8/2020	Parcel 3/AQ19	Destroyed	12/8/2020
BD Fuze	Fuze	6	1	No	9/8/2020	Parcel 3/S22	Destroyed	12/8/2020
Blu-3	Bomb	1	1	No	9/8/2020	Parcel 3/S22	Destroyed	11/12/2020
Blu-3	Bomb	1	1	Yes	9/8/2020	Parcel 3/S22	BIP	9/26/2020
Booster	Booster	1	1	No	9/8/2020	Parcel 3/S22	Destroyed	12/8/2020
M131	Fuze	1	1	No	9/8/2020	Parcel 3/S22	BIP	9/26/2020
PD Fuze	Fuze	55	2	No	9/8/2020	Parcel 3/AQ19	Destroyed	12/8/2020
PD Fuze	Fuze	12	1	No	9/8/2020	Parcel 3/S22	Destroyed	12/8/2020
AN-M111	Fuze	1	2	No	9/9/2020	Parcel 3/X22	BIP	11/23/2020
20mm	Projectile	1	1	No	9/11/2020	Parcel 3/AQ20	Destroyed	11/17/2020
40mm	Projectile	4	3	No	9/11/2020	Parcel 3/AQ20	Destroyed	11/12/2020
60mm	Projectile	1	3	Yes	9/11/2020	Parcel 3/AQ20	Destroyed	2/23/2021
75mm	Projectile	1	3	No	9/11/2020	Parcel 3/AQ20	Destroyed	2/12/2021
BD Fuze	Fuze	4	2	No	9/11/2020	Parcel 3/AQ20	Destroyed	12/8/2020
Blu-4	Bomb	1	3	Yes	9/11/2020	Parcel 3/AP20	BIP	9/26/2020
Booster	Booster	2	2	No	9/11/2020	Parcel 3/AQ20	Destroyed	12/8/2020
PD Fuze	Fuze	87	2	No	9/11/2020	Parcel 3/AQ20	Destroyed	12/8/2020
AN-M111	Fuze	1	1	No	9/15/2020	Parcel 3/X22	BIP	11/23/2020
20mm	Projectile	2	3	No	9/16/2020	Parcel 3/AP20	Destroyed	11/17/2020
20mm	Projectile	3	1	No	9/16/2020	Parcel 3/X22	Destroyed	11/17/2020
3.5" Motor	Rocket	1	3	No	9/16/2020	Parcel 3/AP20	Destroyed	2/23/2021
37mm	Projectile	2	1	No	9/16/2020	Parcel 3/X22	Destroyed	11/12/2020
40mm	Projectile	2	3	No	9/16/2020	Parcel 3/AP20	Destroyed	11/12/2020
40mm	Projectile	5	1	No	9/16/2020	Parcel 3/X22	Destroyed	11/12/2020
60mm	Projectile	1	1	No	9/16/2020	Parcel 3/X22	Destroyed	2/12/2021
60mm	Projectile	1	3	Yes	9/16/2020	Parcel 3/AP20	Destroyed	2/23/2021
BD Fuze	Fuze	1	1	No	9/16/2020	Parcel 3/AP20	Destroyed	12/8/2020
BD Fuze	Fuze	11	1	No	9/16/2020	Parcel 3/X22	Destroyed	12/8/2020
Blu-3	Bomb	5	1	No	9/16/2020	Parcel 3/X22	Destroyed	11/12/2020

TABLE 3-4
MEC RECOVERED
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
Blu-4	Bomb	1	1	No	9/16/2020	Parcel 3/X22	Destroyed	11/12/2020
Booster	Booster	1	1	No	9/16/2020	Parcel 3/AP20	Destroyed	12/8/2020
M83 Butterfly	Bomb	1	1	No	9/16/2020	Parcel 3/X22	Destroyed	11/19/2020
PD Fuze	Fuze	72	4	No	9/16/2020	Parcel 3/AP20	Destroyed	12/8/2020
PD Fuze	Fuze	126	1	No	9/16/2020	Parcel 3/X22	Destroyed	12/8/2020
37mm	Projectile	1	2	No	9/21/2020	Parcel 3/AP19	Destroyed	11/12/2020
40mm	Projectile	3	3	No	9/21/2020	Parcel 3/AP19	Destroyed	11/12/2020
AN-M110	Fuze	1	1	No	9/21/2020	Parcel 3/AP18	BIP	9/26/2020
BD Fuze	Fuze	3	3	No	9/21/2020	Parcel 3/AP19	Destroyed	12/8/2020
Booster	Booster	2	4	No	9/21/2020	Parcel 3/X22	Destroyed	12/8/2020
PD Fuze	Fuze	102	2	No	9/21/2020	Parcel 3/AP19	Destroyed	12/8/2020
PD Fuze	Fuze	46	4	No	9/21/2020	Parcel 3/X22	Destroyed	12/8/2020
Blu-3	Bomb	1	1	Yes	9/22/2020	Parcel 3/AP18	BIP	9/26/2020
37mm	Projectile	4	1	No	9/24/2020	Parcel 3/AP18	Destroyed	11/12/2020
37mm	Projectile	1	3	Yes	9/24/2020	Parcel 3/AP18	Destroyed	11/12/2020
40mm	Projectile	3	2	No	9/24/2020	Parcel 3/AP18	Destroyed	11/12/2020
40mm	Projectile	1	2	Yes	9/24/2020	Parcel 3/AP18	Destroyed	11/12/2020
AN-M111	Fuze	1	1	No	9/24/2020	Parcel 3/Y22	BIP	11/23/2020
BD Fuze	Fuze	8	3	No	9/24/2020	Parcel 3/AP18	Destroyed	12/8/2020
Blu-4	Bomb	1	1	Yes	9/24/2020	Parcel 3/Y22	BIP	11/23/2020
M83 Butterfly	Bomb	1	0	No	9/24/2020	Parcel 3/AP18	Destroyed	11/19/2020
PD Fuze	Fuze	72	2	No	9/24/2020	Parcel 3/AP18	Destroyed	12/8/2020
37mm	Projectile	1	1	No	9/28/2020	Parcel 3/Y22	Destroyed	11/12/2020
37mm	Projectile	1	1	Yes	9/28/2020	Parcel 3/Y22	Destroyed	11/12/2020
40mm	Projectile	7	1	No	9/28/2020	Parcel 3/Y22	Destroyed	11/12/2020
60mm	Projectile	2	1	Yes	9/28/2020	Parcel 3/Y22	Destroyed	2/23/2021
AN-M110	Fuze	1	1	No	9/28/2020	Parcel 3/AP17	BIP	11/23/2020
BD Fuze	Fuze	2	1	No	9/28/2020	Parcel 3/Y22	Destroyed	12/8/2020
Blu-3	Bomb	4	1	No	9/28/2020	Parcel 3/Y22	Destroyed	11/12/2020
Blu-4	Bomb	2	1	No	9/28/2020	Parcel 3/Y22	Destroyed	11/12/2020
Booster	Booster	2	1	No	9/28/2020	Parcel 3/Y22	Destroyed	12/8/2020
M83 Butterfly	Bomb	1	1	No	9/28/2020	Parcel 3/Y22	Destroyed	11/19/2020
M83 Butterfly	Bomb	1	1	Yes	9/28/2020	Parcel 3/Y22	BIP	11/23/2020
M83 Butterfly	Bomb	1	1	Yes	9/28/2020	Parcel 3/AP17	BIP	11/23/2020
PD Fuze	Fuze	50	1	No	9/28/2020	Parcel 3/Y22	Destroyed	12/8/2020
AN-M111	Fuze	1	1	No	9/29/2020	Parcel 3/AP17	BIP	11/23/2020
20lb Frag	Bomb	2	5	No	9/30/2020	Parcel 3/Y22	Destroyed	12/1/2020
Booster	Booster	3	4	No	9/30/2020	Parcel 3/Y22	Destroyed	12/8/2020
PD Fuze	Fuze	121	4	No	9/30/2020	Parcel 3/Y22	Destroyed	12/8/2020
37mm	Projectile	4	5	No	10/1/2020	Parcel 3/AP17	Destroyed	11/12/2020
40mm	Projectile	9	4	No	10/1/2020	Parcel 3/AP17	Destroyed	11/12/2020
60mm	Projectile	1	3	No	10/1/2020	Parcel 3/AP17	Destroyed	2/12/2021
AN-M110	Fuze	1	1	No	10/1/2020	Parcel 3/AP17	BIP	11/23/2020
BD Fuze	Fuze	15	3	No	10/1/2020	Parcel 3/AP17	Destroyed	12/8/2020
Booster	Booster	3	1	No	10/1/2020	Parcel 3/AP17	Destroyed	12/8/2020

TABLE 3-4
MEC RECOVERED
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
PD Fuze	Fuze	88	2	No	10/1/2020	Parcel 3/AP17	Destroyed	12/8/2020
M83 Butterfly	Bomb	1	1	Yes	10/2/2020	Parcel 3/AP16	BIP	11/23/2020
20mm	Projectile	1	4	No	10/6/2020	Parcel 3/AP16	Destroyed	11/17/2020
37mm	Projectile	1	3	No	10/6/2020	Parcel 3/AP16	Destroyed	11/12/2020
40mm	Projectile	6	3	No	10/6/2020	Parcel 3/AP16	Destroyed	11/12/2020
60mm	Projectile	1	4	No	10/6/2020	Parcel 3/AP16	Destroyed	2/12/2021
BD Fuze	Fuze	16	3	No	10/6/2020	Parcel 3/AP16	Destroyed	12/8/2020
PD Fuze	Fuze	122	2	No	10/6/2020	Parcel 3/AP16	Destroyed	12/8/2020
AN-M110	Fuze	1	1	No	10/7/2020	Parcel 3/AQ21	BIP	11/23/2020
Blu-3	Bomb	1	1	Yes	10/7/2020	Parcel 3/AQ21	BIP	11/23/2020
Blu-3	Bomb	1	1	Yes	10/7/2020	Parcel 3/AQ21	BIP	11/23/2020
Blu-4	Bomb	1	2	Yes	10/7/2020	Parcel 3/AQ21	BIP	11/23/2020
M83 Butterfly	Bomb	1	1	Yes	10/7/2020	Parcel 3/AQ21	BIP	11/23/2020
20mm	Projectile	1	1	No	10/8/2020	Parcel 3/AQ21	Destroyed	11/17/2020
20mm	Projectile	1	3	Yes	10/8/2020	Parcel 3/AQ21	Destroyed	11/17/2020
37mm	Projectile	1	4	No	10/8/2020	Parcel 3/AQ21	Destroyed	11/12/2020
40mm	Projectile	2	3	No	10/8/2020	Parcel 3/AQ21	Destroyed	11/12/2020
60mm	Projectile	2	4	No	10/8/2020	Parcel 3/AQ21	Destroyed	2/12/2021
60mm	Projectile	1	1	Yes	10/8/2020	Parcel 3/AQ21	Destroyed	2/23/2021
BD Fuze	Fuze	2	3	No	10/8/2020	Parcel 3/AQ21	Destroyed	12/8/2020
M83 Butterfly	Bomb	1	2	No	10/8/2020	Parcel 3/AQ21	Destroyed	11/19/2020
PD Fuze	Fuze	30	2	No	10/8/2020	Parcel 3/AQ21	Destroyed	12/8/2020
37mm	Projectile	1	2	No	10/12/2020	Parcel/AQ22	Destroyed	11/12/2020
37mm	Projectile	3	2	Yes	10/12/2020	Parcel/AQ22	Destroyed	11/12/2020
40mm	Projectile	2	2	No	10/12/2020	Parcel/AQ22	Destroyed	11/12/2020
40mm	Projectile	2	1	Yes	10/12/2020	Parcel/AQ22	Destroyed	11/12/2020
57mm	Projectile	1	1	Yes	10/12/2020	Parcel/AQ22	Destroyed	11/17/2020
BD Fuze	Fuze	3	2	No	10/12/2020	Parcel/AQ22	Destroyed	12/8/2020
M83 Butterfly	Bomb	1	3	No	10/12/2020	Parcel/AQ22	Destroyed	11/19/2020
M83 Butterfly	Bomb	1	1	Yes	10/12/2020	Parcel 3/AQ23	BIP	11/23/2020
M83 Butterfly	Bomb	1	0	Yes	10/12/2020	Parcel 3/AQ23	BIP	11/23/2020
PD Fuze	Fuze	36	2	No	10/12/2020	Parcel/AQ22	Destroyed	12/8/2020
37mm	Projectile	2	1	No	10/13/2020	Parcel 3/AQ23	Destroyed	11/12/2020
40mm	Projectile	2	1	No	10/13/2020	Parcel 3/AQ23	Destroyed	11/12/2020
40mm	Projectile	1	4	Yes	10/13/2020	Parcel 3/AQ23	Destroyed	11/12/2020
60mm	Projectile	1	1	No	10/13/2020	Parcel 3/AQ23	Destroyed	2/12/2021
BD Fuze	Fuze	2	1	No	10/13/2020	Parcel 3/AQ23	Destroyed	12/8/2020
Booster	Booster	1	1	No	10/13/2020	Parcel 3/AQ23	Destroyed	12/8/2020
M83 Butterfly	Bomb	1	1	No	10/13/2020	Parcel 3/AQ23	Destroyed	11/19/2020
PD Fuze	Fuze	22	1	No	10/13/2020	Parcel 3/AQ23	Destroyed	12/8/2020
20mm	Projectile	1	1	No	10/14/2020	Parcel 3/AQ24	Destroyed	11/17/2020
40mm	Projectile	2	1	No	10/14/2020	Parcel 3/AQ24	Destroyed	11/12/2020
BD Fuze	Fuze	2	1	No	10/14/2020	Parcel 3/AQ24	Destroyed	12/8/2020
PD Fuze	Fuze	24	1	No	10/14/2020	Parcel 3/AQ24	Destroyed	12/8/2020
Blu-4	Bomb	1	1	Yes	11/3/2020	Parcel 3/B22	BIP	12/15/2020

TABLE 3-4
MEC RECOVERED
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Item(s) Description	Munition Type	Quantity	Depth (Inches)*	Fuzed	Date Found	Grid	Status	Date Destroyed
Blu-4	Bomb	1	0	Yes	11/3/2020	Parcel 3/B22	BIP	12/15/2020
Blu-4	Bomb	1	1	Yes	11/3/2020	Parcel 3/B22	BIP	12/15/2020
BD Fuze	Fuze	1	1	No	11/4/2020	Parcel 3/C22	Destroyed	12/8/2020
Blu-3	Bomb	2	1	No	11/4/2020	Parcel 3/C22	Destroyed	11/12/2020
Blu-4	Bomb	2	2	No	11/4/2020	Parcel 3/C22	Destroyed	11/12/2020
Blu-4	Bomb	1	2	Yes	11/6/2020	Parcel 3/B8	BIP	12/15/2020
Blu-4	Bomb	1	1	Yes	11/13/2020	Parcel 3/B20	BIP	12/15/2020
M83 Butterfly	Bomb	1	1	Yes	11/16/2020	Parcel 3/C8	BIP	12/15/2020
M83 Butterfly	Bomb	1	1	Yes	11/16/2020	Parcel 3/C8	BIP	12/15/2020
20mm	Projectile	1	1	Yes	11/19/2020	Parcel 3/C8	Destroyed	2/10/2021
37mm	Projectile	1	1	No	11/19/2020	Parcel 3/C8	Destroyed	2/10/2021
40mm	Projectile	3	1	No	11/19/2020	Parcel 3/C8	Destroyed	2/10/2021
60mm	Projectile	1	1	No	11/19/2020	Parcel 3/C8	Destroyed	2/12/2021
Booster	Booster	1	1	No	11/19/2020	Parcel 3/C8	Destroyed	12/8/2020
Blu-4	Bomb	1	0	Yes	11/20/2020	Parcel 3/D8	BIP	12/15/2020
M83 Butterfly	Bomb	1	0	Yes	11/23/2020	Parcel 3/D8	BIP	12/15/2020
M83 Butterfly	Bomb	1	2	Yes	12/3/2020	Parcel 3/E9	BIP	12/15/2020
M83 Butterfly	Bomb	1	2	Yes	12/3/2020	Parcel 3/E9	BIP	12/15/2020
37mm	Projectile	1	1	No	12/7/2020	Parcel 3/E8	Destroyed	2/10/2021
37mm	Projectile	1	1	No	12/7/2020	Parcel 3/E9	Destroyed	2/10/2021
40mm	Projectile	1	1	No	12/7/2020	Parcel 3/E8	Destroyed	2/10/2021
60mm	Projectile	1	1	No	12/7/2020	Parcel 3/E8	Destroyed	2/12/2021
75mm	Projectile	1	1	No	12/7/2020	Parcel 3/E8	Destroyed	2/12/2021
75mm	Projectile	1	1	No	12/7/2020	Parcel 3/E9	Destroyed	2/12/2021
BD Fuze	Fuze	2	1	No	12/7/2020	Parcel 3/E8	Destroyed	12/8/2020
BD Fuze	Fuze	1	1	No	12/7/2020	Parcel 3/E9	Destroyed	12/8/2020
Blu-3	Bomb	2	1	No	12/7/2020	Parcel 3/E8	Destroyed	2/12/2021
Blu-3	Bomb	4	1	No	12/7/2020	Parcel 3/E9	Destroyed	2/12/2021
Blu-4	Bomb	4	1	No	12/7/2020	Parcel 3/E8	Destroyed	2/12/2021
Blu-4	Bomb	6	1	No	12/7/2020	Parcel 3/E9	Destroyed	2/12/2021
Booster	Booster	1	1	No	12/7/2020	Parcel 3/E9	Destroyed	12/8/2020
PD Fuze	Fuze	5	1	No	12/7/2020	Parcel 3/E8	Destroyed	12/8/2020
PD Fuze	Fuze	3	1	No	12/7/2020	Parcel 3/E9	Destroyed	12/8/2020
		16,578						

* When multiple equivalent items were reported together (i.e., Quantity >1), the maximum depth of recovery is shown.

TABLE 3-5
DETONATIONS IN PLACE LOG
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Parcel	Date	Item Description	NEW (lbs)[1]	Northing	Easting
3	8/18/2017	M83 Butterfly Bomb	2.2872	1619205.404	2488551.204
3	9/2/2017	M83 Butterfly Bomb	2.2872	1619205.404	2488551.204
3	9/16/2017	Blu-4 Bomb	1.993	1619205.404	2488551.204
3	9/21/2017	M83 Butterfly Bomb	2.2872	1619205.404	2488551.204
3	10/6/2017	M83 Butterfly Bomb	2.2872	1619205.404	2488551.204
3	10/6/2017	M83 Butterfly Bomb	2.2872	1615779.413	2491768.998
3	10/6/2017	BD fuze	0.01	1616712.75	2491129.924
3	10/13/2017	M83 Butterfly Bomb	2.2872	1619205.404	2488551.204
3	10/14/2017	M83 Butterfly Bomb	2.2872	1616098.899	2491176.284
3	10/14/2017	M83 Butterfly Bomb	2.2872	1615880.071	2491179.82
3	10/18/2017	Blu-4 Bomb	1.993	1619205.404	2488551.204
3	10/18/2017	M83 Butterfly Bomb	2.2872	1619205.404	2488551.204
3	10/27/2017	M83 Butterfly Bomb	2.2872	1615497.184	2490915.688
3	11/2/2017	M83 Butterfly Bomb	2.2872	1616132.333	2491086.235
3	11/2/2017	M83 Butterfly Bomb	2.2872	1616201.83	2491059.918
3	11/2/2017	M83 Butterfly Bomb	2.2872	1616204.067	2490996.745
3	11/2/2017	M83 Butterfly Bomb	2.2872	1615412.971	2491009.557
3	11/18/2017	M83 Butterfly Bomb	2.2872	1615089.958	2491084.821
3	11/17/2017	Blu-4 Bomb	1.993	1619205.404	2488551.204
3	11/17/2017	M83 Butterfly Bomb	2.2872	1619205.404	2488551.204
3	11/18/2017	M83 Butterfly Bomb	2.2872	1615891.066	2491035.404
3	11/18/2017	M83 Butterfly Bomb	2.2872	1615873.014	2491013.17
3	11/17/2017	Blu-4 Bomb	1.993	1619205.404	2488551.204
3	11/17/2017	M83 Butterfly Bomb	2.2872	1619205.404	2488551.204
3	11/18/2017	M83 Butterfly Bomb	2.2872	1614952.04	2490901.602
3	11/18/2017	M83 Butterfly Bomb	2.2872	1615002.838	2491193.818
3	11/17/2017	M83 Butterfly Bomb	2.2872	1619205.404	2488551.204
3	11/18/2017	M83 Butterfly Bomb	2.2872	1614736.156	2490928.134
3	11/18/2017	M83 Butterfly Bomb	2.2872	1614788.575	2490904.385
3	11/18/2017	Impact fuze	0.01	1614773.446	2490866.767
3	11/18/2017	M83 Butterfly Bomb	2.2872	1614440.459	2491175.345
3	11/18/2017	M83 Butterfly Bomb	2.2872	1614454.137	2491160.891
3	11/18/2017	M83 Butterfly Bomb	2.2872	1614416.085	2491186.937
3	11/18/2017	M83 Butterfly Bomb	2.2872	1614272.163	2491042.295
3	11/18/2017	Blu-3 Bomb	0.521	1614568.243	2490604.165
3	12/2/2017	M83 Butterfly Bomb	2.2872	1614574.407	2490667.761
3	12/2/2017	M83 Butterfly Bomb	2.2872	1614592.093	2490656.518
3	12/8/2017	Blu-4 Bomb	1.993	1619205.404	2488551.204
3	12/2/2017	Blu-4 Bomb	1.993	1614451.984	2490655.319
3	12/2/2017	M83 Butterfly Bomb	2.2872	1614660.969	2491027.573
3	12/2/2017	M83 Butterfly Bomb	2.2872	1614279.482	2490717.049
3	12/9/2017	M83 Butterfly Bomb	2.2872	1615030.141	2491274.608

TABLE 3-5
DETONATIONS IN PLACE LOG
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Parcel	Date	Item Description	NEW (lbs)[1]	Northing	Easting
3	12/9/2017	M83 Butterfly Bomb	2.2872	1614450.33	2490746.762
3	12/9/2017	M83 Butterfly Bomb	2.2872	1614873.002	2491331.868
3	12/16/2017	M83 Butterfly Bomb	2.2872	1614084.738	2490721.887
3	12/16/2017	M83 Butterfly Bomb	2.2872	1613956.902	2490700.131
3	12/16/2017	Blu-4 Bomb	1.993	1619205.404	2488551.204
3	12/16/2017	M83 Butterfly Bomb	2.2872	1614824.078	2491520.382
3	12/16/2017	M83 Butterfly Bomb	2.2872	1614765.312	2491513.145
3	12/16/2017	M83 Butterfly Bomb	2.2872	35.441472	-108.619778
3	12/16/2017	M83 Butterfly Bomb	2.2872	35.441528	-108.619806
3	12/16/2017	M83 Butterfly Bomb	2.2872	35.442556	-108.620861
3	12/16/2017	M83 Butterfly Bomb	2.2872	35.443	-108.620556
3	12/16/2017	M83 Butterfly Bomb	2.2872	35.433667	-108.628056
3	12/20/2017	Blu-3 Bomb	0.521	1614709.703	2491358.727
3	1/9/2018	M83 Butterfly Bomb	0.47	1615028.116	2488715.359
3	1/15/2018	M83 Butterfly Bomb	0.47	1614504.364	2491203.729
3	1/15/2018	M83 Butterfly Bomb	0.47	1615421.72	2491626.677
3	1/17/2018	Blu-4 Bomb	0.258	1615028.116	2488715.359
3	1/17/2018	M83 Butterfly Bomb	0.47	1615028.116	2488715.359
3	1/19/2018	Blu-4 Bomb	0.258	1615028.116	2488715.359
3	1/23/2018	Blu-3 Bomb	0.521	1614489.238	2491478.177
3	1/24/2018	M83 Butterfly Bomb	0.47	1615028.116	2488715.359
3	1/24/2018	M83 Butterfly Bomb	0.47	1614337	2491402.446
3	1/31/2018	Blu-4 Bomb	0.258	1615028.116	2488715.359
3	1/31/2018	M404 Fuze	0.132	1615028.116	2488715.359
3	2/2/2018	M83 Butterfly Bomb	0.47	1615028.116	2488715.359
3	2/6/2018	M404 Fuze	0.132	1615028.116	2488715.359
3	2/7/2018	Blu-4 Bomb	0.258	1614097.25	2491134.349
3	2/7/2018	M83 Butterfly Bomb	0.47	1615028.116	2488715.359
3	2/7/2018	M83 Butterfly Bomb	0.47	1614026.367	2491128.336
3	2/12/2018	Blu-3 Bomb	0.521	1613888.176	2491123.812
3	2/13/2018	Blu-4 Bomb	0.258	1615028.116	2488715.359
3	2/13/2018	M83 Butterfly Bomb	0.47	1615028.116	2488715.359
3	3/5/2018	M83 Butterfly Bomb	0.47	1614507.715	2491851.765
3	3/6/2018	Blu-3 Bomb	0.521	1615028.116	2488715.359
3	3/7/2018	M404 Fuze	0.132	1615028.116	2488715.359
3	3/7/2018	M83 Butterfly Bomb	0.47	1615028.116	2488715.359
3	3/8/2018	M83 Butterfly Bomb	0.47	1614840.13	2490612.746
3	3/9/2018	M83 Butterfly Bomb	0.47	1614859.361	2490641.764
3	3/9/2018	M83 Butterfly Bomb	0.47	1614890.663	2490642.599
3	3/13/2018	Blu-4 Bomb	0.258	1613110.2	2491220.051
3	3/13/2018	M83 Butterfly Bomb	0.47	1614793.433	2490602.105
3	9/21/2018	AN-M110 Fuze	0.041	1613517.715	2490826.755

TABLE 3-5
DETONATIONS IN PLACE LOG
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Parcel	Date	Item Description	NEW (lbs)[1]	Northing	Easting
3	3/14/2018	M83 Butterfly Bomb	0.47	1614809.309	2491619.407
3	3/15/2018	M219 Fuze	0.007	1612993.635	2491220.963
3	3/15/2018	M219 Fuze	0.007	1612966.052	2491202.005
3	3/22/2018	M83 Butterfly Bomb	0.47	1613277.929	2491841.172
3	3/22/2018	M83 Butterfly Bomb	0.47	1615028.116	2488715.359
3	3/23/2018	M83 Butterfly Bomb	0.47	1615028.116	2488715.359
3	3/23/2018	M83 Butterfly Bomb	0.47	1614863.766	2490734.644
3	3/27/2018	M83 Butterfly Bomb	0.47	1615028.116	2488715.359
3	3/28/2018	Blu-4 Bomb	0.258	1612835.983	2491398.851
3	3/29/2018	Booster	0.02	1615004.008	2490733.433
3	4/10/2018	M83 Butterfly Bomb	0.47	1615028.116	2488715.359
3	4/16/2018	Blu-4 Bomb	0.258	1615028.116	2488715.359
3	4/16/2018	M83 Butterfly Bomb	0.47	1615028.116	2488715.359
3	4/18/2018	M83 Butterfly Bomb	0.47	1615028.116	2488715.359
3	4/20/2018	M83 Butterfly Bomb	0.47	1615028.116	2488715.359
3	4/20/2018	M404 Fuze	0.132	1615028.116	2488715.359
3	4/25/2018	M83 Butterfly Bomb	0.47	1615028.116	2488715.359
3	4/25/2018	M83 Butterfly Bomb	0.47	1616450.982	2490778.322
3	4/26/2018	M83 Butterfly Bomb	0.47	1616392.263	2490702.718
3	5/3/2018	M83 Butterfly Bomb	0.47	1615028.116	2488715.359
3	5/8/2018	M83 Butterfly Bomb	0.47	1615028.116	2488715.359
3	5/15/2018	M83 Butterfly Bomb	0.47	1615028.116	2488715.359
3	5/16/2018	M83 Butterfly Bomb	0.47	1615028.116	2488715.359
3	5/17/2018	M83 Butterfly Bomb	0.47	1615028.116	2488715.359
3	5/17/2018	M404 Fuze	0.132	1615028.116	2488715.359
3	5/17/2018	M83 Butterfly Bomb	0.47	1616498.941	2490610.783
3	5/17/2018	M83 Butterfly Bomb	0.47	1616510.681	2490670.8
3	5/17/2018	M83 Butterfly Bomb	0.47	1614459.841	2490923.611
3	5/18/2018	AN-M110 Fuze	0.041	1615569.367	2490877.04
3	5/21/2018	M83 Butterfly Bomb	0.47	1616338.805	2490653.516
3	5/22/2018	M83 Butterfly Bomb	0.47	1615028.116	2488715.359
3	5/22/2018	M83 Butterfly Bomb	0.47	1615505.75	2490874.438
3	5/22/2018	AN-M110 Fuze	0.041	1615494.355	2490891.135
3	5/23/2018	M83 Butterfly Bomb	0.47	1615028.116	2488715.359
3	5/24/2018	Blu-3 Bomb	0.521	1614555.301	2490920.126
3	5/24/2018	M131	0.062	1615424.352	2490802.017
3	5/29/2018	Blu-3 Bomb	0.521	1614683.702	2490985.584
3	5/29/2018	M83 Butterfly Bomb	0.47	1616299.301	2490535.404
3	5/30/2018	M83 Butterfly Bomb	0.47	1615415.094	2490835.839
3	5/30/2018	M404 Fuze	0.132	1615028.116	2488715.359
3	6/5/2018	M404 Fuze	0.132	1615028.116	2488715.359
3	6/6/2018	M83 Butterfly Bomb	0.47	1615028.116	2488715.359

TABLE 3-5
DETONATIONS IN PLACE LOG
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Parcel	Date	Item Description	NEW (lbs)[1]	Northing	Easting
3	6/6/2018	M83 Butterfly Bomb	0.47	1616551.592	2490500.042
3	6/7/2018	M83 Butterfly Bomb	0.47	1615028.116	2488715.359
3	6/8/2018	M83 Butterfly Bomb	0.47	1615028.116	2488715.359
3	6/12/2018	Blu-3 Bomb	0.521	1613372.539	2490606
3	6/22/2018	Blu-3 Bomb	0.521	1613532.748	2490615.261
3	6/12/2018	M83 Butterfly Bomb	0.47	1615028.116	2488715.359
3	6/13/2018	M83 Butterfly Bomb	0.47	1616681.334	2490406.085
3	6/13/2018	M83 Butterfly Bomb	0.47	1616713.261	2490411.496
3	6/13/2018	Blu-4 Bomb	0.258	1613398.539	2490623.434
3	6/13/2018	Blu-3 Bomb	0.521	1614057.866	2490828.909
3	6/14/2018	Blu-4 Bomb	0.258	1613349.006	2490647.589
3	6/14/2018	M83 Butterfly Bomb	0.47	1616623.142	2490470.578
3	6/18/2018	M83 Butterfly Bomb	0.47	1616645.066	2490455.747
3	6/21/2018	M83 Butterfly Bomb	0.47	1616466.141	2490429.761
3	6/22/2018	Blu-3 Bomb	0.521	1613532.748	2490615.261
3	7/13/2018	Blu-3 Bomb	0.521	1613640.196	2490767.249
3	7/9/2018	Blu-4 Bomb	0.258	1613682.716	2490628.52
3	7/9/2018	M83 Butterfly Bomb	0.47	1616231.517	2490418.372
3	7/9/2018	M83 Butterfly Bomb	0.47	1616234.828	2490302.517
3	7/13/2018	Blu-4 Bomb	0.258	1615028.116	2488715.359
3	7/13/2018	M83 Butterfly Bomb	0.47	1615028.116	2488715.359
3	7/13/2018	M83 Butterfly Bomb	0.47	1616358.444	2490312.118
3	7/13/2018	Blu-3 Bomb	0.521	1613906.171	2490906.341
3	7/19/2018	Blu-3 Bomb	0.521	1613782.335	2490920.29
3	9/25/2018	Blu-3 Bomb	0.521	1615473.306	2490523.317
3	7/19/2018	M83 Butterfly Bomb	0.47	1616446.341	2490390.975
3	7/19/2018	M83 Butterfly Bomb	0.47	1613733.347	2490979.605
3	7/19/2018	M83 Butterfly Bomb	0.47	1615028.116	2488715.359
3	7/20/2018	M83 Butterfly Bomb	0.47	1616491.559	2490304.92
3	7/23/2018	M83 Butterfly Bomb	0.47	1615028.116	2488715.359
3	7/23/2018	AN-M110 Fuze	0.041	1616445.133	2490330.355
3	7/23/2018	AN-M110 Fuze	0.041	1616438.841	2490327.287
3	7/25/2018	M83 Butterfly Bomb	0.47	1615028.116	2488715.359
3	7/26/2018	M83 Butterfly Bomb	0.47	1616602.13	2490313.956
3	7/26/2018	M404 Fuze	0.132	1615028.116	2488715.359
3	7/26/2018	Blu-3 Bomb	0.521	1613413.039	2490774.888
3	7/27/2018	M83 Butterfly Bomb	0.47	1615028.116	2488715.359
3	7/27/2018	M83 Butterfly Bomb	0.47	1616634.524	2490352.654
3	7/27/2018	Blu-4 Bomb	0.258	1615028.116	2488715.359
3	7/30/2018	M83 Butterfly Bomb	0.47	1615028.116	2488715.359
3	8/2/2018	AN-M110 Fuze	0.041	1614074.799	2491299.524
3	8/3/2018	M83 Butterfly Bomb	0.47	1615028.116	2488715.359

TABLE 3-5
DETONATIONS IN PLACE LOG
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Parcel	Date	Item Description	NEW (lbs)[1]	Northing	Easting
3	8/6/2018	M83 Butterfly Bomb	0.47	1615028.116	2488715.359
3	8/6/2018	M404 Fuze	0.132	1615028.116	2488715.359
3	8/6/2018	Blu-3 Bomb	0.521	1613443.926	2491135.848
3	8/8/2018	M83 Butterfly Bomb	0.47	1614761.393	2490481.794
3	8/10/2018	M83 Butterfly Bomb	0.47	1613791.107	2491331.039
3	8/10/2018	Blu-4 Bomb	0.258	1613241.702	2491130.531
3	8/20/2018	M83 Butterfly Bomb	0.47	1616148.583	2490855.84
3	8/23/2018	M83 Butterfly Bomb	0.47	1615028.116	2488715.359
3	8/23/2018	Blu-4 Bomb	0.258	1615028.116	2488715.359
3	8/24/2018	M83 Butterfly Bomb	0.47	1615028.116	2488715.359
3	8/24/2018	M83 Butterfly Bomb	0.47	1615028.116	2488715.359
3	8/24/2018	AN-M110 Fuze	0.041	1615028.116	2488715.359
3	8/24/2018	M63	0.085	1615028.116	2488715.359
3	8/29/2018	Blu-4 Bomb	0.258	1613567.971	2490938.361
3	8/29/2018	Blu-3 Bomb	0.521	1613567.457	2490934.335
3	9/4/2018	AN-M110 Fuze	0.041	1615028.116	2488715.359
3	9/7/2018	M83 Butterfly Bomb	0.47	1615861.853	2490842.607
3	9/7/2018	Blu-3 Bomb	0.521	1613450.171	2490934.526
3	9/10/2018	M83 Butterfly Bomb	0.47	1615854.834	2490886.65
3	9/10/2018	M404 Fuze	0.132	1615028.116	2488715.359
3	9/12/2018	M83 Butterfly Bomb	0.47	1615028.116	2488715.359
3	9/12/2018	M83 Butterfly Bomb	0.47	1615028.116	2488715.359
3	9/12/2018	Blu-4 Bomb	0.258	1613237.19	2491370.319
3	9/25/2018	AN-M110 Fuze	0.041	1613536.733	2490808.887
3	9/13/2018	M404 Fuze	0.132	1615028.116	2488715.359
3	9/19/2018	M83 Butterfly Bomb	0.47	1615028.116	2488715.359
3	9/19/2018	Blu-4 Bomb	0.258	1613446.55	2490893.587
3	9/20/2018	M83 Butterfly Bomb	0.47	1615820.853	2490726.055
3	9/20/2018	M83 Butterfly Bomb	0.47	1613506.044	2490855.561
3	9/20/2018	M83 Butterfly Bomb	0.47	1613510.118	2490819.637
3	12/10/2018	M43	1.23	1615425.424	2490555.907
3	9/25/2018	Blu-3 Bomb	0.521	1612909.104	2490909.336
3	9/25/2018	AN-M110 Fuze	0.041	1613594.853	2490885.413
3	10/2/2018	M83 Butterfly Bomb	0.47	1615973.955	2490726.291
3	10/2/2018	Blu-4 Bomb	0.258	1615028.116	2488715.359
3	10/2/2018	M404 Fuze	0.132	1615028.116	2488715.359
3	10/5/2018	AN-M110 Fuze	0.041	1615028.116	2488715.359
3	10/9/2018	M131	0.062	1615953.354	2490679.087
3	10/10/2018	Blu-4 Bomb	0.258	1612957.115	2490810.743
3	10/9/2018	AN-M110 Fuze	0.041	1615710.07	2490602.973
3	10/11/2018	M83 Butterfly Bomb	0.47	1616132.75	2490788.624
3	10/11/2018	M83 Butterfly Bomb	0.47	1615028.116	2488715.359

TABLE 3-5
DETONATIONS IN PLACE LOG
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Parcel	Date	Item Description	NEW (lbs)[1]	Northing	Easting
3	10/11/2018	M83 Butterfly Bomb	0.47	1615028.116	2488715.359
3	10/15/2018	M63	0.085	1615028.116	2488715.359
3	10/15/2018	M83 Butterfly Bomb	0.47	1615028.116	2488715.359
3	10/15/2018	Blu-4 Bomb	0.258	1613208.842	2490898.316
3	10/16/2018	Blu-4 Bomb	0.258	1613200.8	2490862.828
3	10/16/2018	M83 Butterfly Bomb	0.47	1615028.116	2488715.359
3	10/25/2018	Blu-3 Bomb	0.521	1615506.517	2490635.726
3	10/30/2018	Blu-4 Bomb	0.258	1612957.804	2490629.86
3	10/30/2018	Blu-4 Bomb	0.258	1612993.535	2490672.602
3	11/1/2018	Blu-4 Bomb	0.258	1612952.054	2490649.101
3	11/1/2018	Blu-4 Bomb	0.258	1612945.415	2490639.738
3	11/5/2018	Blu-4 Bomb	0.258	1612943.974	2490709.069
3	11/5/2018	Blu-4 Bomb	0.258	1612972.385	2490769.215
3	11/7/2018	M83 Butterfly Bomb	0.47	1615028.116	2488715.359
3	11/7/2018	M404 Fuze	0.132	1615028.116	2488715.359
3	11/8/2018	M83 Butterfly Bomb	0.47	1615028.116	2488715.359
3	11/13/2018	M83 Butterfly Bomb	0.47	1615028.116	2488715.359
3	11/5/2018	Blu-4 Bomb	0.258	1612855.911	2490661.781
3	11/14/2018	M404 Fuze	0.132	1615028.116	2488715.359
3	11/14/2018	Blu-4 Bomb	0.258	1612893.035	2490684.631
3	11/15/2018	Blu-4 Bomb	0.258	1612684.327	2490458.513
3	11/27/2018	Blu-3 Bomb	0.521	1612675.269	2490895.5
3	11/27/2018	Blu-3 Bomb	0.521	1612771.55	2490876.366
3	10/11/2018	AN-M110 Fuze	0.041	1615602.548	2490671.145
3	11/28/2018	Blu-4 Bomb	0.258	1612686.717	2490840.594
3	11/28/2018	Blu-3 Bomb	0.521	1612770.19	2490830.576
3	10/25/2018	Blu-3 Bomb	0.521	1616634.524	2490352.654
3	7/19/2018	Blu-3 Bomb	0.521	1615103.112	2490702.963
3	11/28/2018	AN-M110 Fuze	0.041	1615263.519	2490558.525
3	11/29/2018	AN-M110 Fuze	0.041	1615240.876	2490534.181
3	12/13/2018	Blu-4 Bomb	0.258	1612760.847	2490607.651
3	12/14/2018	M83 Butterfly Bomb	0.47	1615863.89	2490446.021
3	5/2/2019	M131 Fuze	0.062	1615405.583	2490381.444
3	5/2/2019	M131 Fuze	0.062	1615419.314	2490361.711
3	5/2/2019	M131 Fuze	0.062	1615378.079	2490305.782
3	5/2/2019	AN-M120 Fuze	0.054	1615397.898	2490367.124
3	5/2/2019	AN-M120 Fuze	0.054	1614731.553	2490203.386
3	5/2/2019	AN-M110 Fuze	0.041	1615168.232	2488718.692
3	5/2/2019	M83 Butterfly Bomb	0.47	1615168.232	2488718.692
3	5/6/2019	M83 Butterfly Bomb	0.47	1615168.232	2488718.692
3	5/6/2019	M83 Butterfly Bomb	0.47	1615168.232	2488718.692
3	5/6/2019	M83 Butterfly Bomb	0.47	1615168.232	2488718.692

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DETONATIONS IN PLACE LOG
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Parcel	Date	Item Description	NEW (lbs)[1]	Northing	Easting
3	5/6/2019	AN-M110 Fuze	0.041	1615168.232	2488718.692
3	5/8/2019	M63 Projectile	0.085	1615168.232	2488718.692
3	5/8/2019	AN-M110 Fuze	0.041	1615168.232	2488718.692
3	5/9/2019	M131 Fuze	0.062	1615410.477	2490340.37
3	5/9/2019	M131 Fuze	0.062	1615381.011	2490341.729
3	5/9/2019	BLU-3 Bomb	0.521	1615421.466	2490334
3	5/9/2019	M131 Fuze	0.062	1615475.357	2490392.828
3	5/14/2019	BLU-4 Bomb	0.258	1612745.496	2490254.832
3	5/14/2019	M131 Fuze	0.062	1614869.074	2490236.872
3	5/15/2019	M131 Fuze	0.062	1614878.223	2490232.463
3	5/15/2019	M131 Fuze	0.062	1615458.396	2490380.92
3	5/15/2019	M131 Fuze	0.062	1615527.404	2490358.866
3	5/15/2019	M131 Fuze	0.062	1615440.331	2490306.256
3	5/16/2019	BLU-3 Bomb	0.521	1612756.712	2490240.471
3	5/16/2019	BLU-4 Bomb	0.258	1612704.788	2490254.808
3	5/16/2019	M131 Fuze	0.062	1614846.597	2490225.324
3	5/16/2019	M219 Fuze	0.007	1612696.254	2490252.258
3	5/21/2019	M83 Butterfly Bomb	0.47	1615624.953	2490319.064
3	5/21/2019	M83 Butterfly Bomb	0.47	1615561.14	2490302.473
3	5/22/2019	M131 Fuze	0.062	1614932.243	2490297.213
3	5/22/2019	M56 Fuze	0.027	1615025.396	2490269.934
3	5/22/2019	M83 Butterfly Bomb	0.47	1615168.232	2488718.692
3	5/24/2019	M52 Fuze	0.040	1614964.226	2490279.728
3	5/24/2019	AN-M110 Fuze	0.041	1615561.401	2490338.471
3	5/28/2019	M131 Fuze	0.062	1615023.16	2490276.57
3	5/30/2019	M131 Fuze	0.062	1615556.042	2490356.353
3	5/30/2019	AN-M110 Fuze	0.041	1615168.232	2488718.692
3	5/30/2019	M83 Butterfly Bomb	0.47	1615168.232	2488718.692
3	5/31/2019	Blu-3 Bomb	0.521	1615168.232	2488718.692
3	5/31/2019	M83 Butterfly Bomb	0.47	1615168.232	2488718.692
3	5/31/2019	M131 Fuze	0.062	1614971.508	2490222.886
3	5/31/2019	M131 Fuze	0.062	1614963.772	2490217.632
3	5/31/2019	Blu-3 Bomb	0.521	1613329.899	2490215.106
3	5/31/2019	M131 Fuze	0.062	1615690.532	2490306.291
3	6/3/2019	M52 Fuze	0.040	1614931.429	2490213.21
3	6/3/2019	M131 Fuze	0.062	1615018.057	2490219.872
3	6/3/2019	M131 Fuze	0.062	1614951.268	2490231.512
3	6/4/2019	M131 Fuze	0.062	1615012.223	2490211.117
3	6/4/2019	M131 Fuze	0.062	1615017.631	2490206.991
3	6/4/2019	M131 Fuze	0.062	1615026.398	2490210.01
3	6/4/2019	M404 Fuze	0.132	1615677.919	2490333.063
3	6/4/2019	AN-M110 Fuze	0.041	1615706.008	2490324.299

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DETONATIONS IN PLACE LOG
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Parcel	Date	Item Description	NEW (lbs)[1]	Northing	Easting
3	6/4/2019	M83 Butterfly Bomb	0.47	1615168.232	2488718.692
3	6/4/2019	M63 Projectile	0.085	1615168.232	2488718.692
3	6/5/2019	M83 Butterfly Bomb	0.47	1615168.232	2488718.692
3	6/5/2019	AN-M110 Fuze	0.041	1615168.232	2488718.692
3	6/5/2019	M131 Fuze	0.062	1615698.309	2490336.971
3	6/6/2019	Blu-3 Bomb	0.521	1614264.41	2490325.686
3	6/6/2019	M63 Projectile	0.085	1615168.232	2488718.692
3	6/7/2019	M83 Butterfly Bomb	0.47	1615168.232	2488718.692
3	6/7/2019	Blu-4 Bomb	0.258	1615168.232	2488718.692
3	6/8/2019	AN-M110 Fuze	0.041	1615168.232	2488718.692
3	6/10/2019	M83 Butterfly Bomb	0.47	1615168.232	2488718.692
3	6/13/2019	Blu-3 Bomb	0.521	1613643.686	2490361.634
3	6/14/2019	Blu-4 Bomb	0.258	1614310.01	2490364.375
3	6/17/2019	Blu-3 Bomb	0.521	1613638.657	2490335.444
3	6/18/2019	AN-M110 Fuze	0.041	1615168.232	2488718.692
3	6/18/2019	AN-M120 Fuze	0.054	1614368.185	2490398.676
3	6/19/2019	M83 Butterfly Bomb	0.47	1615168.232	2488718.692
3	6/19/2019	M83 Butterfly Bomb	0.47	1615168.232	2488718.692
3	6/19/2019	M63 Projectile	0.085	1614338.568	2490381.365
3	6/20/2019	Blu-4 Bomb	0.258	1614388.106	2490359.038
3	6/20/2019	Blu-4 Bomb	0.258	1613547.151	2490313.888
3	6/21/2019	Blu-4 Bomb	0.258	1614353.301	2490339.456
3	6/24/2019	Blu-3 Bomb	0.521	1613508.654	2490397.803
3	6/24/2019	Blu-4 Bomb	0.258	1613508.367	2490346.188
3	6/24/2019	M83 Butterfly Bomb	0.47	1613233.912	2490394.881
3	6/25/2019	Blu-3 Bomb	0.521	1613452.469	2490395.994
3	6/25/2019	M83 Butterfly Bomb	0.47	1615168.232	2488718.692
3	6/25/2019	M83 Butterfly Bomb	0.47	1615168.232	2488718.692
3	6/25/2019	AN-M110 Fuze	0.041	1615168.232	2488718.692
3	6/25/2019	M83 Butterfly Bomb	0.47	1615168.232	2488718.692
3	6/26/2019	M61 Fuze	2.122	1613440.16	2490390.766
3	6/27/2019	M83 Butterfly Bomb	0.47	1615168.232	2488718.692
3	6/27/2019	M83 Butterfly Bomb	0.47	1615168.232	2488718.692
3	6/27/2019	M83 Butterfly Bomb	0.47	1615168.232	2488718.692
3	6/28/2019	M83 Butterfly Bomb	0.47	1615168.232	2488718.692
3	6/28/2019	M83 Butterfly Bomb	0.47	1615168.232	2488718.692
3	7/8/2019	M503 Fuze	0.032	1613469.784	2490258.028
3	7/8/2019	M503 Fuze	0.032	1613501.584	2490226.104
3	7/8/2019	AN-M110 Fuze	0.041	1614504.977	2490355.638
3	7/8/2019	AN-M110 Fuze	0.041	1615168.232	2488718.692
3	7/9/2019	M83 Butterfly Bomb	0.47	1615168.232	2488718.692
3	7/11/2019	M83 Butterfly Bomb	0.47	1615168.232	2488718.692

TABLE 3-5
DETONATIONS IN PLACE LOG
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Parcel	Date	Item Description	NEW (lbs)[1]	Northing	Easting
3	7/11/2019	M63 Projectile	0.085	1615168.232	2488718.692
3	7/11/2019	Blu-4 Bomb	0.258	1615168.232	2488718.692
3	7/11/2019	M56 Fuze	0.027	1614521.454	2490304.303
3	7/11/2019	AN-M110 Fuze	0.041	1613541.317	2490257.303
3	7/12/2019	M83 Butterfly Bomb	0.47	1615168.232	2488718.692
3	7/12/2019	M503 Fuze	0.032	1613572.866	2490203.43
3	7/15/2019	M503 Fuze	0.032	1613603.69	2490202.78
3	7/15/2019	M503 Fuze	0.032	1614596.358	2490384.414
3	7/15/2019	M503 Fuze	0.032	1614601.404	2490390.661
3	7/15/2019	M131 Fuze	0.062	1614606.39	2490396.906
3	7/15/2019	M404 Fuze	0.132	1615168.232	2488718.692
3	7/15/2019	M83 Butterfly Bomb	0.47	1615168.232	2488718.692
3	7/16/2019	Blu-3 Bomb	0.521	1614546.45	2490366.244
3	7/17/2019	Blu-4 Bomb	0.258	1613715.81	2490286.489
3	7/19/2019	M503 Fuze	0.032	1614569.214	2490356.891
3	7/19/2019	M503 Fuze	0.032	1614573.66	2490354.642
3	7/19/2019	M503 Fuze	0.032	1614611.889	2490361.3
3	7/22/2019	M503 Fuze	0.032	1613673.003	2490291.016
3	7/22/2019	M503 Fuze	0.032	1613685.357	2490209.434
3	7/22/2019	M503 Fuze	0.032	1613692.784	2490206.216
3	7/22/2019	M503 Fuze	0.032	1613682.405	2490237.515
3	7/22/2019	M503 Fuze	0.032	1613653.902	2490207.666
3	7/22/2019	M503 Fuze	0.032	1613634.482	2490267.622
3	7/22/2019	M503 Fuze	0.032	1614606.512	2490304.754
3	7/22/2019	M83 Butterfly Bomb	0.47	1614697.235	2490393.801
3	7/23/2019	M503 Fuze	0.032	1614714.197	2490381.572
3	7/23/2019	M503 Fuze	0.032	1614694.483	2490396.56
3	7/23/2019	M503 Fuze	0.032	1614697.594	2490394.4
3	7/23/2019	Blu-3 Bomb	0.521	1614673.332	2490378.469
3	7/23/2019	M503 Fuze	0.032	1613724.598	2490195.494
3	7/23/2019	Blu-3 Bomb	0.521	1613708.605	2490184.94
3	7/23/2019	Blu-3 Bomb	0.521	1613711.797	2490180.149
3	7/24/2019	AN-M110 Fuze	0.041	1614646.502	2490364.95
3	7/24/2019	AN-M110 Fuze	0.041	1614646.695	2490355.865
3	7/24/2019	AN-M110 Fuze	0.041	1614705.53	2490349.826
3	7/24/2019	Blu-4 Bomb	0.258	1613573.503	2490191.915
3	7/24/2019	M503 Fuze	0.032	1614688.505	2490392.938
3	7/29/2019	M83 Butterfly Bomb	0.47	1615168.232	2488718.692
3	7/30/2019	M83 Butterfly Bomb	0.47	1615168.232	2488718.692
3	7/30/2019	M83 Butterfly Bomb	0.47	1615168.232	2488718.692
3	7/30/2019	M83 Butterfly Bomb	0.47	1615168.232	2488718.692
3	7/30/2019	M83 Butterfly Bomb	0.47	1615168.232	2488718.692

TABLE 3-5
DETONATIONS IN PLACE LOG
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Parcel	Date	Item Description	NEW (lbs)[1]	Northing	Easting
3	7/30/2019	M63 Projectile	0.085	1615168.232	2488718.692
3	7/31/2019	AN-M110 Fuze	0.041	1615168.232	2488718.692
3	7/31/2019	M404 Fuze	0.132	1615168.232	2488718.692
3	8/1/2019	AN-M110 Fuze	0.041	1615168.232	2488718.692
3	8/2/2019	Blu-3 Bomb	0.521	1613674.583	2490006.962
3	8/5/2019	Blu-4 Bomb	0.258	1613678.956	2490075.369
3	8/6/2019	M83 Butterfly Bomb	0.47	1613642.24	2490069.17
3	8/14/2019	M83 Butterfly Bomb	0.47	1615168.232	2488718.692
3	8/16/2019	M83 Butterfly Bomb	0.47	1614594.68	2490258.931
3	8/19/2019	M83 Butterfly Bomb	0.47	1615168.232	2488718.692
3	8/19/2019	M83 Butterfly Bomb	0.47	1615168.232	2488718.692
3	8/20/2019	M83 Butterfly Bomb	0.47	1615168.232	2488718.692
3	8/20/2019	AN-M110 Fuze	0.041	1615168.232	2488718.692
3	8/21/2019	M83 Butterfly Bomb	0.47	1615168.232	2488718.692
3	8/21/2019	AN-M110 Fuze	0.041	1615168.232	2488718.692
3	8/21/2019	AN-M110 Fuze	0.041	1615168.232	2488718.692
3	8/22/2019	Blu-3 Bomb	0.521	1613620.034	2490076.988
3	8/23/2019	Blu-3 Bomb	0.521	1613735.905	2490091.507
3	8/26/2019	M83 Butterfly Bomb	0.47	1615168.232	2488718.692
3	8/28/2019	M83 Butterfly Bomb	0.47	1615168.232	2488718.692
3	8/29/2019	M83 Butterfly Bomb	0.47	1615168.232	2488718.692
3	8/29/2019	M83 Butterfly Bomb	0.47	1615168.232	2488718.692
3	8/30/2019	M83 Butterfly Bomb	0.47	1615168.232	2488718.692
3	9/4/2019	M83 Butterfly Bomb	0.47	1614135.808	2490049.492
3	9/4/2019	AN-M110 Fuze	0.041	1615168.232	2488718.692
3	9/6/2019	Blu-3 Bomb	0.521	1614059.461	2490040.948
3	9/6/2019	M131 Fuze	0.062	1614402.576	2490224.343
3	9/6/2019	M404 Fuze	0.132	1614336.86	2490218.262
3	9/10/2019	M83 Butterfly Bomb	0.47	1615168.232	2488718.692
3	9/10/2019	M83 Butterfly Bomb	0.47	1614308.281	2490272.505
3	9/11/2019	AN-M110 Fuze	0.041	1615168.232	2488718.692
3	9/11/2019	M83 Butterfly Bomb	0.47	1615168.232	2488718.692
3	9/11/2019	M83 Butterfly Bomb	0.47	1615168.232	2488718.692
3	9/11/2019	M83 Butterfly Bomb	0.47	1615168.232	2488718.692
3	9/12/2019	M83 Butterfly Bomb	0.47	1615168.232	2488718.692
3	9/12/2019	M83 Butterfly Bomb	0.47	1613967.02	2490089.07
3	9/13/2019	AN-M120 Fuze	0.054	1613957.873	2490026.037
3	9/13/2019	M83 Butterfly Bomb	0.47	1613994.052	2490100.009
3	9/13/2019	M83 Butterfly Bomb	0.47	1615168.232	2488718.692
3	9/13/2019	M83 Butterfly Bomb	0.47	1615168.232	2488718.692
3	9/13/2019	M83 Butterfly Bomb	0.47	1615168.232	2488718.692
3	9/13/2019	M83 Butterfly Bomb	0.47	1615168.232	2488718.692

TABLE 3-5
DETONATIONS IN PLACE LOG
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Parcel	Date	Item Description	NEW (lbs)[1]	Northing	Easting
3	9/13/2019	M83 Butterfly Bomb	0.47	1615168.232	2488718.692
3	9/17/2019	AN-M110 Fuze	0.041	1616735.003	2489055.759
3	9/18/2019	Blu-3 Bomb	0.521	1613851.788	2490053.698
3	9/18/2019	Blu-3 Bomb	0.521	1613883.648	2490044.814
3	9/19/2019	AN-M110 Fuze	0.041	1616791.093	2489097.364
3	9/20/2019	AN-M110 Fuze	0.041	1615168.232	2488718.692
3	9/25/2019	Blu-4 Bomb	0.258	1614310.462	2490541.637
3	9/26/2019	M404 Fuze	0.132	1613796.504	2490155.298
3	10/2/2019	M83 Butterfly Bomb	0.47	1614154.05	2490189.904
3	10/2/2019	M83 Butterfly Bomb	0.47	1614579.095	2490503.64
3	10/2/2019	M83 Butterfly Bomb	0.47	1614564.976	2490563.061
3	10/4/2019	M83 Butterfly Bomb	0.47	1614687.74	2490597.248
3	10/10/2019	M83 Butterfly Bomb	0.47	1616151.396	2490468.948
3	10/10/2019	M83 Butterfly Bomb	0.47	1614539.448	2490415.493
3	10/14/2019	AN-M110 Fuze	0.041	1614483.501	2490416.888
3	10/14/2019	Blu-3 Bomb	0.521	1613441.596	2490048.118
3	10/15/2019	Blu-3 Bomb	0.521	1614488.429	2490438.128
3	10/16/2019	M83 Butterfly Bomb	0.47	1616075.142	2490314.879
3	10/17/2019	M63 Projectile	0.085	1616042.995	2490344.613
3	10/17/2019	M63 Projectile	0.085	1616068.609	2490350.774
3	10/22/2019	M83 Butterfly Bomb	0.47	1614821.228	2490564.241
3	10/22/2019	Blu-3 Bomb	0.521	1615910.477	2490354.687
3	10/22/2019	M83 Butterfly Bomb	0.47	1615875.777	2490308.437
3	10/23/2019	AN-M110 Fuze	0.041	1615834.6	2490321.765
3	10/29/2019	M83 Butterfly Bomb	0.47	1615753.156	2490386.609
3	10/30/2019	Blu-4 Bomb	0.258	1612765.932	2490186.917
3	10/30/2019	M83 Butterfly Bomb	0.47	1615123.629	2490575.468
3	10/30/2019	AN-M110 Fuze	0.041	1615057.843	2490547.591
3	10/31/2019	AN-M110 Fuze	0.041	1615111.37	2490514.499
3	10/31/2019	Blu-3 Bomb	0.521	1615767.558	2490230.127
3	10/31/2019	M131 Fuze	0.062	1615096.165	2490519.394
3	10/31/2019	AN-M110 Fuze	0.041	1615811.592	2490285.19
3	10/31/2019	M83 Butterfly Bomb	0.47	1615168.232	2488718.692
3	11/1/2019	Blu-4 Bomb	0.258	1615168.232	2488718.692
3	11/5/2019	M83 Butterfly Bomb	0.47	1615921.302	2490244.004
3	11/5/2019	AN-M110 Fuze	0.041	1615886.553	2490265.327
3	11/5/2019	M131 Fuze	0.062	1615895.43	2490255.219
3	11/6/2019	Blu-4 Bomb	0.258	1615147.951	2490414.99
3	11/7/2019	Blu-4 Bomb	0.258	1615168.232	2488718.692
3	11/8/2019	AN-M110 Fuze	0.041	1615995.991	2490220.217
3	11/8/2019	M404 Fuze	0.132	1615168.232	2488718.692
3	11/11/2019	M83 Butterfly Bomb	0.47	1616091.8	2490272.015

TABLE 3-5
DETONATIONS IN PLACE LOG
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Parcel	Date	Item Description	NEW (lbs)[1]	Northing	Easting
3	11/11/2019	M83 Butterfly Bomb	0.47	1616091.814	2490201.315
3	11/11/2019	AN-M110 Fuze	0.041	1614976.517	2490497.694
3	11/12/2019	AN-M110 Fuze	0.041	1615022.994	2490473.981
3	11/12/2019	AN-M110 Fuze	0.041	1616057.976	2490237.688
3	11/12/2019	AN-M110 Fuze	0.041	1616119.394	2490211.959
3	11/12/2019	AN-M110 Fuze	0.041	1615168.232	2488718.692
3	11/13/2019	M83 Butterfly Bomb	0.47	1614861.829	2490462.628
3	11/14/2019	M111 Fuze	0.003	1616187.954	2490280.322
3	11/14/2019	Blu-4 Bomb	0.258	1615168.232	2488718.692
3	11/15/2019	Blu-4 Bomb	0.258	1615030.99	2490345.051
3	11/19/2019	M111 Fuze	0.003	1615167.73	2490307.355
3	11/19/2019	M83 Butterfly Bomb	0.47	1616089.62	2490118.184
3	11/25/2019	M83 Butterfly Bomb	0.47	1612840.769	2490021.712
3	11/25/2019	AN-M110 Fuze	0.041	1615192.451	2490326.716
3	12/3/2019	Blu-4 Bomb	0.258	1612877.696	2490016.542
3	12/3/2019	AN-M110 Fuze	0.041	1615948.252	2490196.306
3	12/6/2019	M83 Butterfly Bomb	0.47	1615168.232	2488718.692
3	12/6/2019	AN-M110 Fuze	0.041	1615982.133	2490131.434
3	12/6/2019	M83 Butterfly Bomb	0.47	1615987.278	2490155.952
3	12/9/2019	M131 Fuze	0.062	1615932.871	2490108.354
3	12/9/2019	M83 Butterfly Bomb	0.47	1616605.935	2490045.316
3	12/9/2019	M83 Butterfly Bomb	0.47	1616535.009	2490030.704
3	12/10/2019	Blu-3 Bomb	0.521	1615037.085	2490287.802
3	12/10/2019	M53 Fuze	0.040	1615042.93	2490254.533
3	12/10/2019	M53 Fuze	0.040	1615106.623	2490247.837
3	12/10/2019	M63 Projectile	0.085	1615083.89	2490253.317
3	12/11/2019	AN-M110 Fuze	0.041	1615046.072	2490202.374
3	12/11/2019	M83 Butterfly Bomb	0.47	1615081.681	2490218.097
3	12/11/2019	M83 Butterfly Bomb	0.47	1616570.572	2489990.87
3	12/11/2019	M83 Butterfly Bomb	0.47	1616649.3	2489939.76
3	12/12/2019	M131 Fuze	0.062	1615205.018	2490118.531
3	12/13/2019	AN-M110 Fuze	0.041	1615156.457	2490190.934
3	12/16/2019	Blu-3 Bomb	0.521	1615205.072	2490190.88
3	12/16/2019	AN-M110 Fuze	0.041	1615174.696	2490140.087
3	2/6/20	M83 Butterfly Bomb	0.47	1616668.403	2488970.083
3	2/17/20	AN-M110 Fuze	0.01	1616662.041	2488908.021
3	2/17/20	M83 Butterfly Bomb	0.47	1616745.537	2488951.681
3	2/19/20	M120 Fuze	0.054	1616705.128	2488952.204
3	2/21/20	AN-M110 Fuze	0.01	1616788.915	2488936.486
3	2/27/20	AN-M110 Fuze	0.01	1616621.844	2489011.566
3	3/4/20	M58 Fuze	0.00708	1616604.067	2489057.598
3	3/5/20	M130 Fuze	0.062	1616573.724	2489020.517

TABLE 3-5
DETONATIONS IN PLACE LOG
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Parcel	Date	Item Description	NEW (lbs)[1]	Northing	Easting
3	3/6/20	M83 Butterfly Bomb	0.47	1615155.75	2488742.962
3	3/7/20	M404 Fuze	0.01	1615155.75	2488742.962
3	3/9/20	Blu-4 Bomb	0.176	1615155.75	2488742.962
3	3/18/20	AN-M110 Fuze	0.01	1616532.504	2488985.986
3	3/24/20	M52 Fuze	0.01	1615155.75	2488742.962
3	3/25/20	AN-M110 Fuze	0.01	1616541.121	2488863.418
3	3/27/20	M131 Fuze	0.062	1616545.856	2488893.593
3	3/30/20	M83 Butterfly Bomb	0.47	1615155.75	2488742.962
3	3/31/20	AN-M110 Fuze	0.01	1616623.505	2488856.23
3	4/1/20	AN-M110 Fuze	0.01	1616583.56	2488813.71
3	4/1/20	AN-M111 Fuze	0.01	1616630.573	2488875.202
3	4/1/20	AN-M111 Fuze	0.01	1616617.005	2488849.624
3	4/7/20	M83 Butterfly Bomb	0.47	1616676.873	2488714.817
3	4/9/20	AN-M110 Fuze	0.01	1616660.933	2488757.628
3	4/15/20	AN-M110 Fuze	0.01	1616776.092	2488649.617
3	4/16/20	AN-M110 Fuze	0.01	1616705.436	2488608.74
3	4/17/20	Blu-4 Bomb	0.176	1615155.75	2488742.962
3	4/20/20	AN-M110 Fuze	0.01	1616637.292	2488739.914
3	4/20/20	AN-M110 Fuze	0.01	1616625.237	2488722.491
3	4/24/20	AN-M110 Fuze	0.01	1616583.969	2488731.843
3	4/24/20	AN-M110 Fuze	0.01	1616564.445	2488783.769
3	4/28/20	AN-M110 Fuze	0.01	1616321.933	2489351.162
3	5/5/20	Blu-7 Bomb	0.5	1615155.75	2488742.962
3	5/5/20	M83 Butterfly Bomb	0.47	1615155.75	2488742.962
3	5/5/20	AN-M110 Fuze	0.01	1616231.088	2489392.443
3	5/7/20	AN-M110 Fuze	0.01	1616309.538	2489292.428
3	5/8/20	M83 Butterfly Bomb	0.47	1616240.877	2489275.151
3	5/11/20	AN-M110 Fuze	0.01	1616301.64	2489217.396
3	5/11/20	AN-M110 Fuze	0.01	1616303.926	2489204.555
3	5/11/20	M131 Fuze	0.01	1616267.446	2489283.256
3	5/16/20	M83 Butterfly Bomb	0.47	1615155.75	2488742.962
3	5/18/20	M63 Projectile	0.085	1616380.271	2489209.133
3	5/19/20	M63 Projectile	0.085	1616386.935	2489256.154
3	5/20/20	M83 Butterfly Bomb	0.47	1615155.75	2488742.962
3	5/20/20	AN-M110 Fuze	0.01	1616427.105	2489232.195
3	5/20/20	M52 Fuze	0.01	1616393.209	2489214.797
3	5/27/20	M52 Fuze	0.01	1616410.666	2489293.082
3	5/28/20	Blu-3 Bomb	0.357	1613948.151	2490311.613
3	5/29/20	M83 Butterfly Bomb	0.47	1615155.75	2488742.962
3	6/2/2020	M63 Projectile	0.085	1615155.75	2488742.962
3	6/2/2020	Blu-3 Bomb	0.357	1613875.392	2490375.338
3	6/2/2020	Blu-3 Bomb	0.357	1613863.733	2490376.587

TABLE 3-5
DETONATIONS IN PLACE LOG
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Parcel	Date	Item Description	NEW (lbs)[1]	Northing	Easting
3	6/2/2020	M83 Butterfly Bomb	0.47	1616426.292	2489364.873
3	6/3/2020	M131 Fuze	0.01	1616343.317	2489377.993
3	6/3/2020	Blu-4 Bomb	0.176	1615155.75	2488742.962
3	6/8/2020	Blu-3 Bomb	0.357	1613780.136	2490276.52
3	6/8/2020	AN-M110 Fuze	0.01	1616453.206	2489329.813
3	6/9/2020	Blu-4 Bomb	0.176	1615155.75	2488742.962
3	6/9/2020	Blu-3 Bomb	0.357	1613788.152	2490252.452
3	6/12/2020	AN-M110 Fuze	0.01	1616500.502	2489355.807
3	6/15/2020	AN-M111 Fuze	0.01	1616464.149	2489326.871
3	6/15/2020	M83 Butterfly Bomb	0.47	1615155.75	2488742.962
3	6/16/2020	M131 Fuze	0.01	1614025.319	2490288.787
3	6/17/2020	AN-M110 Fuze	0.01	1616478.059	2489286.568
3	6/17/2020	M404 Fuze	0.01	1614126.29	2490224.938
3	6/17/2020	Blu-4 Bomb	0.176	1614096.471	2490244.216
3	6/18/2020	M83 Butterfly Bomb	0.47	1616502.344	2489230.906
3	6/18/2020	Blu-4 Bomb	0.176	1616490.801	2489278.775
3	6/18/2020	AN-M110 Fuze	0.01	1615155.75	2488742.962
3	6/18/2020	AN-M110 Fuze	0.01	1616479.229	2489238.517
3	6/18/2020	Blu-4 Bomb	0.176	1614041.76	2490296.464
3	6/19/2020	AN-M110 Fuze	0.01	1614052.998	2490233.197
3	6/19/2020	AN-M110 Fuze	0.01	1614098.654	2490236.636
3	6/19/2020	AN-M111 Fuze	0.01	1614080.575	2490213.703
3	6/19/2020	Blu-4 Bomb	0.176	1615155.75	2488742.962
3	6/22/2020	Blu-3 Bomb	0.357	1614140.223	2490227.581
3	6/24/2020	M131 Fuze	0.01	1614193.103	2490214.99
3	6/25/2020	AN-M110 Fuze	0.01	1616579.827	2489260.219
3	6/25/2020	AN-M110 Fuze	0.01	1616620.973	2489250.914
3	6/25/2020	M83 Butterfly Bomb	0.47	1614277.836	2490133.287
3	6/25/2020	Blu-4 Bomb	0.176	1614261.052	2490138.269
3	6/25/2020	AN-M110 Fuze	0.01	1616610.755	2489231.271
3	6/26/2020	M83 Butterfly Bomb	0.47	1615155.75	2488742.962
3	6/26/2020	M83 Butterfly Bomb	0.47	1615155.75	2488742.962
3	6/26/2020	AN-M110 Fuze	0.01	1615155.75	2488742.962
3	7/9/2020	M83 Butterfly Bomb	0.47	1615155.75	2488742.962
3	7/13/2020	M83 Butterfly Bomb	0.47	1615155.75	2488742.962
3	7/14/2020	M52 Fuze	0.01	1616554.437	2489218.213
3	7/14/2020	Blu-4 Bomb	0.176	1614331.723	2490146.772
3	7/17/2020	M83 Butterfly Bomb	0.47	1614520.735	2490181.137
3	7/22/2020	Blu-3 Bomb	0.357	1614513.569	2490135.997
3	7/29/2020	Blu-3 Bomb	0.357	1616618.659	2489313.105
3	7/31/2020	AN-M110 Fuze	0.01	1616604.443	2489353.703
3	7/31/2020	AN-M110 Fuze	0.01	1616591.837	2489375.051

TABLE 3-5
DETONATIONS IN PLACE LOG
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Parcel	Date	Item Description	NEW (lbs)[1]	Northing	Easting
3	7/31/2020	M131 Fuze	0.01	1616630.079	2489357.085
3	8/4/2020	M404 Fuze	0.01	1614594.746	2490143.293
3	8/6/2020	M83 Butterfly Bomb	0.47	1616699.125	2489203.574
3	8/6/2020	AN-M110 Fuze	0.01	1614711.292	2490112.19
3	8/7/2020	M83 Butterfly Bomb	0.47	1616782.994	2489230.853
3	8/7/2020	M120 Fuze	0.054	1614640.795	2490122.506
3	8/10/2020	AN-M111 Fuze	0.01	1614654.732	2490124.412
3	8/10/2020	M83 Butterfly Bomb	0.47	1614638.153	2490070.549
3	8/10/2020	M83 Butterfly Bomb	0.47	1614707.561	2490077.702
3	8/11/2020	M83 Butterfly Bomb	0.47	1615155.75	2488742.962
3	8/12/2020	M83 Butterfly Bomb	0.47	1615155.75	2488742.962
3	8/12/2020	M83 Butterfly Bomb	0.47	1615155.75	2488742.962
3	8/13/2020	AN-M110 Fuze	0.01	1616756.86	2489336.147
3	8/13/2020	AN-M111 Fuze	0.01	1614725.978	2490020.376
3	8/14/2020	M83 Butterfly Bomb	0.47	1615155.75	2488742.962
3	8/14/2020	M131 Fuze	0.01	1616731.451	2489357.641
3	8/15/2020	M83 Butterfly Bomb	0.47	1615155.75	2488742.962
3	8/15/2020	M83 Butterfly Bomb	0.47	1615155.75	2488742.962
3	8/17/2020	M83 Butterfly Bomb	0.47	1615155.75	2488742.962
3	8/17/2020	M83 Butterfly Bomb	0.47	1615155.75	2488742.962
3	8/17/2020	AN-M111 Fuze	0.01	1614608.151	2490059.388
3	8/17/2020	M83 Butterfly Bomb	0.47	1615155.75	2488742.962
3	8/18/2020	M83 Butterfly Bomb	0.47	1615155.75	2488742.962
3	8/18/2020	AN-M110 Fuze	0.01	1615155.75	2488742.962
3	8/18/2020	M52 Fuze	0.01	1616700.276	2489410.021
3	8/18/2020	M83 Butterfly Bomb	0.47	1616750.132	2489457.483
3	8/20/2020	Blu-3 Bomb	0.357	1615155.75	2488742.962
3	8/20/2020	AN-M110 Fuze	0.01	1614613.614	2490005.311
3	8/20/2020	Blu-3 Bomb	0.357	1614544.068	2490038.523
3	8/21/2020	AN-M110 Fuze	0.01	1616712.637	2489473.122
3	8/24/2020	AN-M110 Fuze	0.01	1615155.75	2488742.962
3	8/24/2020	Blu-4 Bomb	0.176	1615155.75	2488742.962
3	8/25/2020	M83 Butterfly Bomb	0.47	1616745.927	2489574.57
3	8/26/2020	M83 Butterfly Bomb	0.47	1614375.384	2490080.336
3	8/26/2020	M83 Butterfly Bomb	0.47	1614420.289	2490017.633
3	8/26/2020	M83 Butterfly Bomb	0.47	1615155.75	2488742.962
3	8/26/2020	M83 Butterfly Bomb	0.47	1614409.759	2490060.35
3	8/28/2020	M83 Butterfly Bomb	0.47	1615155.75	2488742.962
3	8/28/2020	M83 Butterfly Bomb	0.47	1615155.75	2488742.962
3	8/29/2020	M83 Butterfly Bomb	0.47	1615155.75	2488742.962
3	8/31/2020	M83 Butterfly Bomb	0.47	1616701.686	2489698.736
3	8/31/2020	M83 Butterfly Bomb	0.47	1615155.75	2488742.962

TABLE 3-5
DETONATIONS IN PLACE LOG
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Parcel	Date	Item Description	NEW (lbs)[1]	Northing	Easting
3	9/1/2020	M83 Butterfly Bomb	0.47	1615155.75	2488742.962
3	9/1/2020	M63 Projectile	0.085	1615155.75	2488742.962
3	9/1/2020	AN-M111 Fuze	0.01	1614359.741	2490040.887
3	9/1/2020	M131 Fuze	0.01	1614361.3	2490047.839
3	9/3/2020	Blu-4 Bomb	0.176	1614309.976	2490065.965
3	9/4/2020	M83 Butterfly Bomb	0.47	1615155.75	2488742.962
3	9/4/2020	AN-M110 Fuze	0.01	1615155.75	2488742.962
3	9/4/2020	M83 Butterfly Bomb	0.47	1615155.75	2488742.962
3	9/8/2020	AN-M110 Fuze	0.01	1615155.75	2488742.962
3	9/8/2020	Blu-3 Bomb	0.357	1614294.961	2490077.415
3	9/8/2020	M131 Fuze	0.01	1614298.469	2490086.479
3	9/9/2020	AN-M111 Fuze	0.01	1614786.839	2490094.963
3	9/10/2020	M83 Butterfly Bomb	0.47	1615155.75	2488742.962
3	9/10/2020	AN-M110 Fuze	0.01	1615155.75	2488742.962
3	9/11/2020	Blu-3 Bomb	0.357	1615155.75	2488742.962
3	9/11/2020	Blu-3 Bomb	0.357	1615155.75	2488742.962
3	9/11/2020	Blu-3 Bomb	0.357	1615155.75	2488742.962
3	9/11/2020	Blu-3 Bomb	0.357	1615155.75	2488742.962
3	9/11/2020	Blu-4 Bomb	0.176	1616652.638	2489893.564
3	9/15/2020	M83 Butterfly Bomb	0.47	1615155.75	2488742.962
3	9/15/2020	M83 Butterfly Bomb	0.47	1615155.75	2488742.962
3	9/15/2020	AN-M111 Fuze	0.01	1614742.896	2490005.491
3	9/15/2020	Blu-3 Bomb	0.357	1615155.75	2488742.962
3	9/17/2020	M83 Butterfly Bomb	0.47	1615155.75	2488742.962
3	9/18/2020	AN-M110 Fuze	0.01	1615155.75	2488742.962
3	9/18/2020	M83 Butterfly Bomb	0.47	1615155.75	2488742.962
3	9/19/2020	AN-M110 Fuze	0.01	1615155.75	2488742.962
3	9/21/2020	M83 Butterfly Bomb	0.47	1615155.75	2488742.962
3	9/21/2020	AN-M110 Fuze	0.01	1615155.75	2488742.962
3	9/21/2020	AN-M110 Fuze	0.01	1615155.75	2488742.962
3	9/21/2020	AN-M110 Fuze	0.01	1616645.884	2489605.303
3	9/22/2020	M83 Butterfly Bomb	0.47	1615155.75	2488742.962
3	9/22/2020	Blu-3 Bomb	0.357	1616544.504	2489644.068
3	9/22/2020	AN-M110 Fuze	0.01	1615155.75	2488742.962
3	9/22/2020	AN-M110 Fuze	0.01	1615155.75	2488742.962
3	9/23/2020	M63 Projectile	0.085	1615155.75	2488742.962
3	9/24/2020	AN-M110 Fuze	0.01	1615155.75	2488742.962
3	9/24/2020	AN-M111 Fuze	0.01	1614908.731	2490032.424
3	9/24/2020	Blu-4 Bomb	0.176	1614872.085	2490052.67
3	9/28/2020	M52 Fuze	0.01	1615155.75	2488742.962
3	9/28/2020	M83 Butterfly Bomb	0.47	1614849.518	2490093.821
3	9/28/2020	M83 Butterfly Bomb	0.47	1616570.905	2489512.759

TABLE 3-5
DETONATIONS IN PLACE LOG
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Parcel	Date	Item Description	NEW (lbs)[1]	Northing	Easting
3	9/28/2020	M83 Butterfly Bomb	0.47	1615155.75	2488742.962
3	9/28/2020	AN-M110 Fuze	0.01	1616563.749	2489573.621
3	9/29/2020	M83 Butterfly Bomb	0.47	1615155.75	2488742.962
3	9/29/2020	AN-M111 Fuze	0.01	1616605.671	2489512.389
3	9/30/2020	AN-M110 Fuze	0.01	1615155.75	2488742.962
3	9/30/2020	AN-M110 Fuze	0.01	1615155.75	2488742.962
3	9/30/2020	M83 Butterfly Bomb	0.47	1615155.75	2488742.962
3	10/1/2020	AN-M110 Fuze	0.01	1615155.75	2488742.962
3	10/1/2020	AN-M110 Fuze	0.01	1616542.774	2489579.213
3	10/1/2020	AN-M110 Fuze	0.01	1615155.75	2488742.962
3	10/1/2020	AN-M110 Fuze	0.01	1615155.75	2488742.962
3	10/2/2020	AN-M110 Fuze	0.01	1615155.75	2488742.962
3	10/2/2020	M83 Butterfly Bomb	0.47	1616559.695	2489457.61
3	10/5/2020	M83 Butterfly Bomb	0.47	1615155.75	2488742.962
3	10/5/2020	M83 Butterfly Bomb	0.47	1615155.75	2488742.962
3	10/5/2020	M83 Butterfly Bomb	0.47	1615155.75	2488742.962
3	10/5/2020	M83 Butterfly Bomb	0.47	1615155.75	2488742.962
3	10/5/2020	M83 Butterfly Bomb	0.47	1615155.75	2488742.962
3	10/6/2020	M83 Butterfly Bomb	0.47	1615155.75	2488742.962
3	10/6/2020	M83 Butterfly Bomb	0.47	1615155.75	2488742.962
3	10/6/2020	M83 Butterfly Bomb	0.47	1615155.75	2488742.962
3	10/6/2020	M83 Butterfly Bomb	0.47	1615155.75	2488742.962
3	10/6/2020	AN-M110 Fuze	0.01	1615155.75	2488742.962
3	10/7/2020	AN-M110 Fuze	0.01	1615155.75	2488742.962
3	10/7/2020	M83 Butterfly Bomb	0.47	1616724.883	2489994.476
3	10/7/2020	AN-M110 Fuze	0.01	1616748.994	2489907.038
3	10/7/2020	Blu-3 Bomb	0.357	1616730.377	2489951.871
3	10/7/2020	Blu-4 Bomb	0.176	1616691.836	2489931.012
3	10/7/2020	AN-M110 Fuze	0.01	1615155.75	2488742.962
3	10/7/2020	AN-M110 Fuze	0.01	1615155.75	2488742.962
3	10/8/2020	AN-M110 Fuze	0.01	1615155.75	2488742.962
3	10/8/2020	AN-M110 Fuze	0.01	1615155.75	2488742.962
3	10/9/2020	M83 Butterfly Bomb	0.47	1615155.75	2488742.962
3	10/10/2020	AN-M110 Fuze	0.01	1615155.75	2488742.962
3	10/10/2020	AN-M110 Fuze	0.01	1615155.75	2488742.962
3	10/10/2020	M83 Butterfly Bomb	0.47	1615155.75	2488742.962
3	10/10/2020	M83 Butterfly Bomb	0.47	1615155.75	2488742.962
3	10/12/2020	M83 Butterfly Bomb	0.47	1615155.75	2488742.962
3	10/12/2020	M83 Butterfly Bomb	0.47	1616691.564	2490103.338
3	10/12/2020	M83 Butterfly Bomb	0.47	1616713.787	2490177.54
3	10/13/2020	M83 Butterfly Bomb	0.47	1615155.75	2488742.962
3	10/13/2020	AN-M110 Fuze	0.01	1615155.75	2488742.962

TABLE 3-5
DETONATIONS IN PLACE LOG
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Parcel	Date	Item Description	NEW (lbs)[1]	Northing	Easting
3	10/13/2020	AN-M110 Fuze	0.01	1615155.75	2488742.962
3	10/13/2020	AN-M110 Fuze	0.01	1615155.75	2488742.962
3	10/13/2020	M83 Butterfly Bomb	0.47	1615155.75	2488742.962
3	10/13/2020	AN-M110 Fuze	0.01	1615155.75	2488742.962
3	10/16/2020	M83 Butterfly Bomb	0.47	1615155.75	2488742.962
3	10/16/2020	Blu-3 Bomb	0.357	1615155.75	2488742.962
3	10/16/2020	Blu-3 Bomb	0.357	1615155.75	2488742.962
3	10/16/2020	AN-M110 Fuze	0.01	1615155.75	2488742.962
3	10/16/2020	AN-M110 Fuze	0.01	1615155.75	2488742.962
3	11/3/2020	Blu-4 Bomb	0.176	1612650.036	2490028.494
3	11/3/2020	Blu-4 Bomb	0.176	1612626.029	2490033.916
3	11/3/2020	Blu-4 Bomb	0.176	1612605.891	2490041.105
3	11/6/2020	Blu-4 Bomb	0.176	1612637.919	2488651.017
3	11/13/2020	Blu-4 Bomb	0.176	1612578.84	2489813.036
3	11/16/2020	M83 Butterfly Bomb	0.47	1615155.75	2488742.962
3	11/16/2020	M83 Butterfly Bomb	0.47	1612727.13	2488677.846
3	11/16/2020	M83 Butterfly Bomb	0.47	1612711.78	2488662.629
3	11/20/2020	M52 Fuze	0.01	1615155.75	2488742.962
3	11/20/2020	Blu-4 Bomb	0.176	1612825.22	2488671.477
3	11/23/2020	M83 Butterfly Bomb	0.47	1612820.607	2488679.335
3	11/24/2020	AN-M110 Fuze	0.01	1615155.75	2488742.962
3	11/30/2020	M83 Butterfly Bomb	0.47	1615155.75	2488742.962
3	12/2/2020	M83 Butterfly Bomb	0.47	1615155.75	2488742.962
3	12/3/2020	M83 Butterfly Bomb	0.47	1612914.907	2488783.219
3	12/3/2020	M83 Butterfly Bomb	0.47	1612857.531	2488773.675
3	12/4/2020	AN-M110 Fuze	0.01	1615155.75	2488742.962
3	12/5/2020	M83 Butterfly Bomb	0.47	1615155.75	2488742.962
3	12/9/2020	AN-M110 Fuze	0.01	1615155.75	2488742.962

Notes:

[1] NEW includes BIP item and donor explosives

* Highlighted yellow are from USACE requested BIPS

NEW - Net Explosive Weight

lbs - pounds

BIP - blown-in-place

TABLE 3-6
INNER FENCE AREA SAMPLE SUMMARY
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Field ID	Date Sampled	Date Lab Received	Matrix	Discrete (D)/Incremental (IS)	VOCs (8260B)	SVOCs (8270D)	NDMA (8270D-SIM)	Explosives (8330B)	PCBs (8082A)	Dioxins/Furans (8290)	Metals (6010B/6020A/7471B)	Perchlorate (6850)	Cyanide (9014)	Nitrate (9056A)
P3IF-SS-IS-SO-AP008	6/5/2023	6/8/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AP508	6/5/2023	6/8/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AP608	6/5/2023	6/8/2023	Soil	IS				x			x			
P3IF-BA-GRID-AP008	6/5/2023	6/8/2023	Soil	D	x	x	x		x	x		x	x	x
P3IF-SS-IS-SO-AP009	6/6/2023	6/8/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AP509	6/6/2023	6/8/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AP609	6/6/2023	6/8/2023	Soil	IS				x			x			
P3IF-BA-GRID-AP009	6/6/2023	6/8/2023	Soil	D	x	x	x		x	x		x	x	x
P3IF-BA-GRID-AP509	6/6/2023	6/9/2023	Soil	D	x	x	x		x	x		x	x	x
P3IF-SS-IS-SO-AD028	6/6/2023	6/8/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AD628	6/6/2023	6/8/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AD528	6/6/2023	6/8/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AF029	6/6/2023	6/8/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AF529	6/6/2023	6/8/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AF629	6/6/2023	6/8/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AP010	6/6/2023	6/8/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AP510	6/6/2023	6/8/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AP610	6/6/2023	6/8/2023	Soil	IS				x			x			
P3IF-BA-GRID-AP010	6/6/2023	6/9/2023	Soil	D	x	x	x		x	x		x	x	x
P3IF-SS-IS-SO-AE027	6/6/2023	6/8/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AE527	6/6/2023	6/8/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AE627	6/6/2023	6/8/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AP011	6/6/2023	6/8/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AP511	6/6/2023	6/8/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AP611	6/6/2023	6/8/2023	Soil	IS				x			x			
P3IF-BA-GRID-AP011	6/6/2023	6/9/2023	Soil	D	x	x	x		x	x		x	x	x
P3IF-SS-IS-SO-AP012	6/7/2023	6/9/2023	Soil	IS				x			x			

TABLE 3-6
INNER FENCE AREA SAMPLE SUMMARY
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Field ID	Date Sampled	Date Lab Received	Matrix	Discrete (D)/Incremental (IS)	VOCs (8260B)	SVOCs (8270D)	NDMA (8270D-SIM)	Explosives (8330B)	PCBs (8082A)	Dioxins/Furans (8290)	Metals (6010B/6020A/7471B)	Perchlorate (6850)	Cyanide (9014)	Nitrate (9056A)
P3IF-SS-IS-SO-AP512	6/7/2023	6/9/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AP612	6/7/2023	6/9/2023	Soil	IS				x			x			
P3IF-BA-GRID-AP012	6/7/2023	6/9/2023	Soil	D	x	x	x		x	x		x	x	x
P3IF-SS-IS-SO-AP028	6/7/2023	6/9/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AP528	6/7/2023	6/9/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AP628	6/7/2023	6/9/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AO026	6/7/2023	6/9/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AO526	6/7/2023	6/9/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AO626	6/7/2023	6/9/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AN027	6/7/2023	6/9/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AN527	6/7/2023	6/9/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AN627	6/7/2023	6/9/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AP014	6/7/2023	6/9/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AP514	6/7/2023	6/9/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AP614	6/7/2023	6/9/2023	Soil	IS				x			x			
P3IF-BA-GRID-AP014	6/7/2023	6/9/2023	Soil	D	x	x	x		x	x		x	x	x
P3IF-SS-IS-SO-AP015	6/7/2023	6/9/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AP515	6/7/2023	6/9/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AP615	6/7/2023	6/9/2023	Soil	IS				x			x			
P3IF-BA-GRID-AP015	6/7/2023	6/9/2023	Soil	D	x	x	x		x	x		x	x	x
P3IF-SS-IS-SO-AM029	6/8/2023	6/9/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AM529	6/8/2023	6/9/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AM629	6/8/2023	6/9/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AN028	6/8/2023	6/9/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AN528	6/8/2023	6/9/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AN628	6/8/2023	6/9/2023	Soil	IS				x			x			

TABLE 3-6
INNER FENCE AREA SAMPLE SUMMARY
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Field ID	Date Sampled	Date Lab Received	Matrix	Discrete (D)/Incremental (IS)	VOCs (8260B)	SVOCs (8270D)	NDMA (8270D-SIM)	Explosives (8330B)	PCBs (8082A)	Dioxins/Furans (8290)	Metals (6010B/6020A/7471B)	Perchlorate (6850)	Cyanide (9014)	Nitrate (9056A)
P3IF-SS-IS-SO-AQ015	6/8/2023	6/9/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AQ515	6/8/2023	6/9/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AQ615	6/8/2023	6/9/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AP016	6/8/2023	6/9/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AP516	6/8/2023	6/9/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AP616	6/8/2023	6/9/2023	Soil	IS				x			x			
P3IF-BA-GRID-AP016	6/8/2023	6/9/2023	Soil	D	x	x	x		x	x		x	x	x
P3IF-SS-IS-SO-AP017	6/8/2023	6/9/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AP517	6/8/2023	6/9/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AP617	6/8/2023	6/9/2023	Soil	IS				x			x			
P3IF-BA-GRID-AP017	6/8/2023	6/9/2023	Soil	D	x	x	x		x	x		x	x	x
P3IF-SS-IS-SO-AF034	6/9/2023	6/10/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AF534	6/9/2023	6/10/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AF634	6/9/2023	6/10/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AC034	6/9/2023	6/10/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AC534	6/9/2023	6/10/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AC634	6/9/2023	6/10/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AF032	6/9/2023	6/10/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AF532	6/9/2023	6/10/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AF632	6/9/2023	6/13/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AA032	6/8/2023	6/10/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AA532	6/8/2023	6/10/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AA632	6/8/2023	6/10/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AB027	6/8/2023	6/10/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AB527	6/8/2023	6/10/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AB627	6/8/2023	6/10/2023	Soil	IS				x			x			

TABLE 3-6
INNER FENCE AREA SAMPLE SUMMARY
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Field ID	Date Sampled	Date Lab Received	Matrix	Discrete (D)/Incremental (IS)	VOCs (8260B)	SVOCs (8270D)	NDMA (8270D-SIM)	Explosives (8330B)	PCBs (8082A)	Dioxins/Furans (8290)	Metals (6010B/6020A/7471B)	Perchlorate (6850)	Cyanide (9014)	Nitrate (9056A)
P3IF-SS-IS-SO-Z029	6/8/2023	6/10/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-Z529	6/8/2023	6/10/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-Z629	6/8/2023	6/10/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AP018	6/8/2023	6/13/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AP518	6/8/2023	6/13/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AP618	6/8/2023	6/13/2023	Soil	IS				x			x			
P3IF-BA-GRID-AP018	6/8/2023	6/13/2023	Soil	D	x	x	x		x	x		x	x	x
P3IF-SS-IS-SO-AP019	6/8/2023	6/13/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AP519	6/8/2023	6/13/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AP619	6/8/2023	6/13/2023	Soil	IS				x			x			
P3IF-BA-GRID-AP019	6/8/2023	6/13/2023	Soil	D	x	x	x		x	x		x	x	x
P3IF-BA-GRID-AP519	6/8/2023	6/13/2023	Soil	D	x	x	x		x	x		x	x	x
P3IF-SS-IS-SO-AP021	6/8/2023	6/13/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AP521	6/8/2023	6/13/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AP621	6/8/2023	6/13/2023	Soil	IS				x			x			
P3IF-BA-GRID-AP021	6/9/2023	6/13/2023	Soil	D	x	x	x		x	x		x	x	x
P3IF-SS-IS-SO-AP022	6/8/2023	6/13/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AP522	6/8/2023	6/13/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AP622	6/8/2023	6/13/2023	Soil	IS				x			x			
P3IF-BA-GRID-AP022	6/9/2023	6/13/2023	Soil	D	x	x	x		x	x		x	x	x
P3IF-SS-IS-SO-AQ024	6/9/2023	6/13/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AQ524	6/9/2023	6/13/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AQ624	6/9/2023	6/13/2023	Soil	IS				x			x			
P3IF-BA-GRID-AQ024	6/9/2023	6/13/2023	Soil	D	x	x	x		x	x		x	x	x
P3IF-SS-IS-SO-AQ022	6/9/2023	6/13/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AQ522	6/9/2023	6/13/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AQ622	6/9/2023	6/13/2023	Soil	IS				x			x			

TABLE 3-6
INNER FENCE AREA SAMPLE SUMMARY
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Field ID	Date Sampled	Date Lab Received	Matrix	Discrete (D)/Incremental (IS)	VOCs (8260B)	SVOCs (8270D)	NDMA (8270D-SIM)	Explosives (8330B)	PCBs (8082A)	Dioxins/Furans (8290)	Metals (6010B/6020A/7471B)	Perchlorate (6850)	Cyanide (9014)	Nitrate (9056A)
P3IF-SS-IS-SO-AD034	6/9/2023	6/13/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AD034	6/9/2023	6/13/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AD534	6/9/2023	6/13/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AD634	6/9/2023	6/13/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AD634	6/9/2023	6/13/2023	Soil					x			x			
P3IF-SS-IS-SO-AP020	6/9/2023	6/13/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AP520	6/9/2023	6/13/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AP620	6/9/2023	6/13/2023	Soil	IS				x			x			
P3IF-BA-GRID-AP020	6/9/2023	6/13/2023	Soil	D	x	x	x		x	x		x	x	x
P3IF-SS-IS-SO-AQ023	6/9/2023	6/13/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AQ523	6/9/2023	6/13/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AQ623	6/9/2023	6/13/2023	Soil	IS				x			x			
P3IF-BA-GRID-AQ023	6/9/2023	6/13/2023	Soil	D	x	x	x		x	x		x	x	x
P3IF-SS-IS-SO-T032	6/9/2023	6/13/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-T532	6/9/2023	6/13/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-T632	6/9/2023	6/13/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-U032	6/9/2023	6/13/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-U532	6/9/2023	6/13/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-U632	6/9/2023	6/13/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-R032	6/12/2023	6/14/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-R532	6/12/2023	6/14/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-R632	6/12/2023	6/14/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-U033	6/12/2023	6/14/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-U533	6/12/2023	6/14/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-U633	6/12/2023	6/14/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-V033	6/12/2023	6/14/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-V533	6/12/2023	6/14/2023	Soil	IS				x			x			

TABLE 3-6
INNER FENCE AREA SAMPLE SUMMARY
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Field ID	Date Sampled	Date Lab Received	Matrix	Discrete (D)/Incremental (IS)	VOCs (8260B)	SVOCs (8270D)	NDMA (8270D-SIM)	Explosives (8330B)	PCBs (8082A)	Dioxins/Furans (8290)	Metals (6010B/6020A/7471B)	Perchlorate (6850)	Cyanide (9014)	Nitrate (9056A)
P3IF-SS-IS-SO-V633	6/12/2023	6/14/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-C035	6/12/2023	6/14/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-C535	6/12/2023	6/14/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-C635	6/12/2023	6/14/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-F032	6/12/2023	6/14/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-F532	6/12/2023	6/14/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-F632	6/12/2023	6/14/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-G030	6/12/2023	6/14/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-G530	6/12/2023	6/14/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-G630	6/12/2023	6/14/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-B020	6/12/2023	6/14/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-B520	6/12/2023	6/14/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-B620	6/12/2023	6/14/2023	Soil	IS				x			x			
P3IF-BA-GRID-B020	6/12/2023	6/14/2023	Soil	D	x	x	x		x	x		x	x	x
P3IF-SS-IS-SO-D008	6/12/2023	6/14/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-D508	6/12/2023	6/14/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-D608	6/12/2023	6/14/2023	Soil	IS				x			x			
P3IF-BA-GRID-D008	6/12/2023	6/14/2023	Soil	D	x	x	x		x	x		x	x	x
P3IF-SS-IS-SO-B021	6/12/2023	6/14/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-B521	6/12/2023	6/14/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-B621	6/12/2023	6/14/2023	Soil	IS				x			x			
P3IF-BA-GRID-B021	6/12/2023	6/14/2023	Soil	D	x	x	x		x	x		x	x	x
P3IF-SS-IS-SO-B022	6/12/2023	6/14/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-B522	6/12/2023	6/14/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-B622	6/12/2023	6/14/2023	Soil	IS				x			x			
P3IF-BA-GRID-B022	6/12/2023	6/14/2023	Soil	D	x	x	x		x	x		x	x	x

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INNER FENCE AREA SAMPLE SUMMARY
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McKINLEY COUNTY, NEW MEXICO

Field ID	Date Sampled	Date Lab Received	Matrix	Discrete (D)/Incremental (IS)	VOCs (8260B)	SVOCs (8270D)	NDMA (8270D-SIM)	Explosives (8330B)	PCBs (8082A)	Dioxins/Furans (8290)	Metals (6010B/6020A/7471B)	Perchlorate (6850)	Cyanide (9014)	Nitrate (9056A)
P3IF-SS-IS-SO-B008	6/12/2023	6/14/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-B508	6/12/2023	6/14/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-B608	6/12/2023	6/14/2023	Soil	IS				x			x			
P3IF-BA-GRID-B008	6/12/2023	6/14/2023	Soil	D	x	x	x		x	x		x	x	x
P3IF-SS-IS-SO-C008	6/12/2023	6/14/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-C508	6/12/2023	6/14/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-C608	6/12/2023	6/14/2023	Soil	IS				x			x			
P3IF-BA-GRID-C008	6/12/2023	6/14/2023	Soil	D	x	x	x		x	x		x	x	x
P3IF-SS-IS-SO-P033	6/13/2023	6/15/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-P533	6/13/2023	6/15/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-P633	6/13/2023	6/15/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-I029	6/13/2023	6/15/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-I529	6/13/2023	6/15/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-I629	6/13/2023	6/15/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-I030	6/13/2023	6/15/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-I530	6/13/2023	6/15/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-I630	6/13/2023	6/15/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-R024	6/13/2023	6/15/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-R524	6/13/2023	6/15/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-R624	6/13/2023	6/15/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-C027	6/13/2023	6/15/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-C527	6/13/2023	6/15/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-C627	6/13/2023	6/15/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-P032	6/13/2023	6/15/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-P532	6/13/2023	6/15/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-P632	6/13/2023	6/15/2023	Soil	IS				x			x			

TABLE 3-6
INNER FENCE AREA SAMPLE SUMMARY
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Field ID	Date Sampled	Date Lab Received	Matrix	Discrete (D)/Incremental (IS)	VOCs (8260B)	SVOCs (8270D)	NDMA (8270D-SIM)	Explosives (8330B)	PCBs (8082A)	Dioxins/Furans (8290)	Metals (6010B/6020A/7471B)	Perchlorate (6850)	Cyanide (9014)	Nitrate (9056A)
P3IF-SS-IS-SO-O032	6/13/2023	6/15/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-O532	6/13/2023	6/15/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-O632	6/13/2023	6/15/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-E024	6/13/2023	6/15/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-E524	6/13/2023	6/15/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-E624	6/13/2023	6/15/2023	Soil	IS				x			x			
P3IF-BA-GRID-E024	6/13/2023	6/15/2023	Soil	D	x	x	x		x	x		x	x	x
P3IF-SS-IS-SO-E025	6/13/2023	6/15/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-E525	6/13/2023	6/15/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-E625	6/13/2023	6/15/2023	Soil	IS				x			x			
P3IF-BA-GRID-E025	6/13/2023	6/15/2023	Soil	D	x	x	x		x	x		x	x	x
P3IF-SS-IS-SO-D022	6/13/2023	6/15/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-D522	6/13/2023	6/15/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-D622	6/13/2023	6/15/2023	Soil	IS				x			x			
P3IF-BA-GRID-D022	6/13/2023	6/15/2023	Soil	D	x	x	x		x	x		x	x	x
P3IF-SS-IS-SO-E022	6/13/2023	6/15/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-E522	6/13/2023	6/15/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-E622	6/13/2023	6/15/2023	Soil	IS				x			x			
P3IF-BA-GRID-E022	6/13/2023	6/15/2023	Soil	D	x	x	x		x	x		x	x	x
P3IF-SS-IS-SO-C022	6/13/2023	6/15/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-C522	6/13/2023	6/15/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-C622	6/13/2023	6/15/2023	Soil	IS				x			x			
P3IF-BA-GRID-C022	6/13/2023	6/15/2023	Soil	D	x	x	x		x	x		x	x	x
P3IF-BA-GRID-C522	6/13/2023	6/15/2023	Soil	D	x	x	x		x	x		x	x	x
P3IF-SS-IS-SO-I033	6/13/2023	6/15/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-I533	6/13/2023	6/15/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-I633	6/13/2023	6/15/2023	Soil	IS				x			x			

TABLE 3-6
INNER FENCE AREA SAMPLE SUMMARY
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Field ID	Date Sampled	Date Lab Received	Matrix	Discrete (D)/Incremental (IS)	VOCs (8260B)	SVOCs (8270D)	NDMA (8270D-SIM)	Explosives (8330B)	PCBs (8082A)	Dioxins/Furans (8290)	Metals (6010B/6020A/7471B)	Perchlorate (6850)	Cyanide (9014)	Nitrate (9056A)
P3IF-SS-IS-SO-E026	6/14/2023	6/16/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-E526	6/14/2023	6/16/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-E626	6/14/2023	6/16/2023	Soil	IS				x			x			
P3IF-BA-GRID-E026	6/14/2023	6/16/2023	Soil	D	x	x	x		x	x		x	x	x
P3IF-SS-IS-SO-F026	6/14/2023	6/16/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-F526	6/14/2023	6/16/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-F626	6/14/2023	6/16/2023	Soil	IS				x			x			
P3IF-BA-GRID-F026	6/14/2023	6/16/2023	Soil	D	x	x	x		x	x		x	x	x
P3IF-SS-IS-SO-K034	6/14/2023	6/16/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-K534	6/14/2023	6/16/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-K634	6/14/2023	6/16/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-L034	6/14/2023	6/16/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-L534	6/14/2023	6/16/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-L634	6/14/2023	6/16/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-M032	6/14/2023	6/16/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-M532	6/14/2023	6/16/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-M632	6/14/2023	6/16/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-M028	6/14/2023	6/16/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-M528	6/14/2023	6/16/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-M628	6/14/2023	6/16/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-N027	6/14/2023	6/16/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-N527	6/14/2023	6/16/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-N627	6/14/2023	6/16/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-N028	6/14/2023	6/16/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-N528	6/14/2023	6/16/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-N628	6/14/2023	6/16/2023	Soil	IS				x			x			

TABLE 3-6
INNER FENCE AREA SAMPLE SUMMARY
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Field ID	Date Sampled	Date Lab Received	Matrix	Discrete (D)/Incremental (IS)	VOCs (8260B)	SVOCs (8270D)	NDMA (8270D-SIM)	Explosives (8330B)	PCBs (8082A)	Dioxins/Furans (8290)	Metals (6010B/6020A/7471B)	Perchlorate (6850)	Cyanide (9014)	Nitrate (9056A)
P3IF-SS-IS-SO-G025	6/14/2023	6/16/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-G525	6/14/2023	6/16/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-G625	6/14/2023	6/16/2023	Soil	IS				x			x			
P3IF-BA-GRID-G025	6/14/2023	6/16/2023	Soil	D	x	x	x		x	x		x	x	x
P3IF-SS-IS-SO-G026	6/14/2023	6/16/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-G526	6/14/2023	6/16/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-G626	6/14/2023	6/16/2023	Soil	IS				x			x			
P3IF-BA-GRID-G026	6/14/2023	6/16/2023	Soil	D	x	x	x		x	x		x	x	x
P3IF-SS-IS-SO-E027	6/14/2023	6/16/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-E527	6/14/2023	6/16/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-E627	6/14/2023	6/16/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-O027	6/14/2023	6/16/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-O527	6/14/2023	6/16/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-O627	6/14/2023	6/16/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-E023	6/13/2023	6/20/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-E523	6/13/2023	6/20/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-E623	6/13/2023	6/20/2023	Soil	IS				x			x			
P3IF-BA-GRID-E023	6/13/2023	6/20/2023	Soil	D	x	x	x		x	x		x	x	x
P3IF-SS-IS-SO-H025	6/14/2023	6/20/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-H525	6/14/2023	6/20/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-H625	6/14/2023	6/20/2023	Soil	IS				x			x			
P3IF-BA-GRID-H025	6/14/2023	6/20/2023	Soil	D	x	x	x		x	x		x	x	x
P3IF-SS-IS-SO-J024	6/15/2023	6/19/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-J524	6/15/2023	6/19/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-J624	6/15/2023	6/19/2023	Soil	IS				x			x			
P3IF-BA-GRID-J024	6/15/2023	6/19/2023	Soil	D	x	x	x		x	x		x	x	x
P3IF-SS-IS-SO-J025	6/15/2023	6/19/2023	Soil	IS				x			x			

TABLE 3-6
INNER FENCE AREA SAMPLE SUMMARY
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Field ID	Date Sampled	Date Lab Received	Matrix	Discrete (D)/Incremental (IS)	VOCs (8260B)	SVOCs (8270D)	NDMA (8270D-SIM)	Explosives (8330B)	PCBs (8082A)	Dioxins/Furans (8290)	Metals (6010B/6020A/7471B)	Perchlorate (6850)	Cyanide (9014)	Nitrate (9056A)
P3IF-SS-IS-SO-J525	6/15/2023	6/19/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-J625	6/15/2023	6/19/2023	Soil	IS				x			x			
P3IF-BA-GRID-J025	6/15/2023	6/19/2023	Soil	D	x	x	x		x	x		x	x	x
P3IF-SS-IS-SO-S036	6/15/2023	6/19/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-S536	6/15/2023	6/19/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-S636	6/15/2023	6/19/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-I025	6/15/2023	6/19/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-I525	6/15/2023	6/19/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-I625	6/15/2023	6/19/2023	Soil	IS				x			x			
P3IF-BA-GRID-I025	6/15/2023	6/19/2023	Soil	D	x	x	x		x	x		x	x	x
P3IF-BA-GRID-I525	6/15/2023	6/19/2023	Soil	D	x	x	x		x	x		x	x	x
P3IF-SS-IS-SO-L029	6/15/2023	6/19/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-L529	6/15/2023	6/19/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-L629	6/15/2023	6/19/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-L022	6/15/2023	6/17/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-L522	6/15/2023	6/17/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-L622	6/15/2023	6/17/2023	Soil	IS				x			x			
P3IF-BA-GRID-L022	6/15/2023	6/17/2023	Soil	D	x	x	x		x	x		x	x	x
P3IF-SS-IS-SO-J022	6/15/2023	6/17/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-J522	6/15/2023	6/17/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-J622	6/15/2023	6/17/2023	Soil	IS				x			x			
P3IF-BA-GRID-J022	6/15/2023	6/17/2023	Soil	D	x	x	x		x	x		x	x	x
P3IF-SS-IS-SO-K022	6/15/2023	6/17/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-K522	6/15/2023	6/17/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-K622	6/15/2023	6/17/2023	Soil	IS				x			x			
P3IF-BA-GRID-K022	6/15/2023	6/17/2023	Soil	D	x	x	x		x	x		x	x	x
P3IF-SS-IS-SO-N022	6/15/2023	6/17/2023	Soil	IS				x			x			

TABLE 3-6
INNER FENCE AREA SAMPLE SUMMARY
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Field ID	Date Sampled	Date Lab Received	Matrix	Discrete (D)/Incremental (IS)	VOCs (8260B)	SVOCs (8270D)	NDMA (8270D-SIM)	Explosives (8330B)	PCBs (8082A)	Dioxins/Furans (8290)	Metals (6010B/6020A/7471B)	Perchlorate (6850)	Cyanide (9014)	Nitrate (9056A)
P3IF-SS-IS-SO-N522	6/15/2023	6/17/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-N622	6/15/2023	6/17/2023	Soil	IS				x			x			
P3IF-BA-GRID-N022	6/15/2023	6/17/2023	Soil	D	x	x	x		x	x		x	x	x
P3IF-SS-IS-SO-J023	6/15/2023	6/17/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-J523	6/15/2023	6/17/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-J623	6/15/2023	6/17/2023	Soil	IS				x			x			
P3IF-BA-GRID-J023	6/15/2023	6/17/2023	Soil	D	x	x	x		x	x		x	x	x
P3IF-SS-IS-SO-M022	6/15/2023	6/17/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-M522	6/15/2023	6/17/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-M622	6/15/2023	6/17/2023	Soil	IS				x			x			
P3IF-BA-GRID-M022	6/15/2023	6/17/2023	Soil	D	x	x	x		x	x		x	x	x
P3IF-SS-IS-SO-U035	6/15/2023	6/17/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-U535	6/15/2023	6/17/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-U635	6/15/2023	6/17/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-T034	6/15/2023	6/17/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-T534	6/15/2023	6/17/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-T634	6/15/2023	6/17/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-U037	6/15/2023	6/17/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-U537	6/15/2023	6/17/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-U637	6/15/2023	6/17/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-K030	6/15/2023	6/17/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-K530	6/15/2023	6/17/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-K630	6/15/2023	6/17/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-V036	6/15/2023	6/17/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-V536	6/15/2023	6/17/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-V636	6/15/2023	6/17/2023	Soil	IS				x			x			

TABLE 3-6
INNER FENCE AREA SAMPLE SUMMARY
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Field ID	Date Sampled	Date Lab Received	Matrix	Discrete (D)/Incremental (IS)	VOCs (8260B)	SVOCs (8270D)	NDMA (8270D-SIM)	Explosives (8330B)	PCBs (8082A)	Dioxins/Furans (8290)	Metals (6010B/6020A/7471B)	Perchlorate (6850)	Cyanide (9014)	Nitrate (9056A)
P3IF-SS-IS-SO-T023	6/15/2023	6/17/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-T523	6/15/2023	6/17/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-T623	6/15/2023	6/17/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-W031	6/16/2023	6/20/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-W531	6/16/2023	6/20/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-W631	6/16/2023	6/20/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-P022	6/16/2023	6/20/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-P522	6/16/2023	6/20/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-P622	6/16/2023	6/20/2023	Soil	IS				x			x			
P3IF-BA-GRID-P022	6/16/2023	6/20/2023	Soil	D	x	x	x		x	x		x	x	x
P3IF-BA-GRID-P522	6/16/2023	6/20/2023	Soil	D	x	x	x		x	x		x	x	x
P3IF-SS-IS-SO-W034	6/16/2023	6/20/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-W534	6/16/2023	6/20/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-W634	6/16/2023	6/20/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-R022	6/16/2023	6/20/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-R522	6/16/2023	6/20/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-R622	6/16/2023	6/20/2023	Soil	IS				x			x			
P3IF-BA-GRID-R022	6/16/2023	6/20/2023	Soil	D	x	x	x		x	x		x	x	x
P3IF-SS-IS-SO-O022	6/16/2023	6/20/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-O522	6/16/2023	6/20/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-O622	6/16/2023	6/20/2023	Soil	IS				x			x			
P3IF-BA-GRID-O022	6/16/2023	6/20/2023	Soil	D	x	x	x		x	x		x	x	x
P3IF-SS-IS-SO-S022	6/16/2023	6/20/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-S522	6/16/2023	6/20/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-S622	6/16/2023	6/20/2023	Soil	IS				x			x			
P3IF-BA-GRID-S022	6/16/2023	6/20/2023	Soil	D	x	x	x		x	x		x	x	x
P3IF-SS-IS-SO-T022	6/16/2023	6/20/2023	Soil	IS				x			x			

TABLE 3-6
INNER FENCE AREA SAMPLE SUMMARY
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Field ID	Date Sampled	Date Lab Received	Matrix	Discrete (D)/Incremental (IS)	VOCs (8260B)	SVOCs (8270D)	NDMA (8270D-SIM)	Explosives (8330B)	PCBs (8082A)	Dioxins/Furans (8290)	Metals (6010B/6020A/7471B)	Perchlorate (6850)	Cyanide (9014)	Nitrate (9056A)
P3IF-SS-IS-SO-T522	6/16/2023	6/20/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-T622	6/16/2023	6/20/2023	Soil	IS				x			x			
P3IF-BA-GRID-T022	6/16/2023	6/20/2023	Soil	D	x	x	x		x	x		x	x	x
P3IF-SS-IS-SO-U022	6/16/2023	6/20/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-U522	6/16/2023	6/20/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-U622	6/16/2023	6/20/2023	Soil	IS				x			x			
P3IF-BA-GRID-U022	6/16/2023	6/20/2023	Soil	D	x	x	x		x	x		x	x	x
P3IF-SS-IS-SO-Q022	6/16/2023	6/20/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-Q522	6/16/2023	6/20/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-Q622	6/16/2023	6/20/2023	Soil	IS				x			x			
P3IF-BA-GRID-Q022	6/16/2023	6/20/2023	Soil	D	x	x	x		x	x		x	x	x
P3IF-SS-IS-SO-X033	6/16/2023	6/20/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-X533	6/16/2023	6/20/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-X633	6/16/2023	6/20/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-V030	6/16/2023	6/20/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-V530	6/16/2023	6/20/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-V630	6/16/2023	6/20/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AE038	6/16/2023	6/20/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AE538	6/16/2023	6/20/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AE638	6/16/2023	6/20/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-V022	6/19/2023	6/21/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-V522	6/19/2023	6/21/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-V622	6/19/2023	6/21/2023	Soil	IS				x			x			
P3IF-BA-GRID-V022	6/19/2023	6/21/2023	Soil	D	x	x	x		x	x		x	x	x
P3IF-SS-IS-SO-W022	6/19/2023	6/21/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-W522	6/19/2023	6/21/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-W622	6/19/2023	6/21/2023	Soil	IS				x			x			

TABLE 3-6
INNER FENCE AREA SAMPLE SUMMARY
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Field ID	Date Sampled	Date Lab Received	Matrix	Discrete (D)/Incremental (IS)	VOCs (8260B)	SVOCs (8270D)	NDMA (8270D-SIM)	Explosives (8330B)	PCBs (8082A)	Dioxins/Furans (8290)	Metals (6010B/6020A/7471B)	Perchlorate (6850)	Cyanide (9014)	Nitrate (9056A)
P3IF-BA-GRID-W022	6/19/2023	6/21/2023	Soil	D	x	x	x		x	x		x	x	x
P3IF-SS-IS-SO-M039	6/19/2023	6/21/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-M539	6/19/2023	6/21/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-M639	6/19/2023	6/21/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-H035	6/19/2023	6/21/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-H535	6/19/2023	6/21/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-H635	6/19/2023	6/21/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-I038	6/19/2023	6/21/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-I538	6/19/2023	6/21/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-I638	6/19/2023	6/21/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AB038	6/16/2023	6/21/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AB538	6/16/2023	6/21/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AB638	6/16/2023	6/21/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-X036	6/16/2023	6/21/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-X536	6/16/2023	6/21/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-X636	6/16/2023	6/21/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-C037	6/19/2023	6/21/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-C537	6/19/2023	6/21/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-C637	6/19/2023	6/21/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AH039	6/19/2023	6/21/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AH539	6/19/2023	6/21/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AH639	6/19/2023	6/21/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-W024	6/19/2023	6/21/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-W524	6/19/2023	6/21/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-W624	6/19/2023	6/21/2023	Soil	IS				x			x			
P3IF-BA-GRID-W024	6/19/2023	6/21/2023	Soil	D	x	x	x		x	x		x	x	x

TABLE 3-6
INNER FENCE AREA SAMPLE SUMMARY
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Field ID	Date Sampled	Date Lab Received	Matrix	Discrete (D)/Incremental (IS)	VOCs (8260B)	SVOCs (8270D)	NDMA (8270D-SIM)	Explosives (8330B)	PCBs (8082A)	Dioxins/Furans (8290)	Metals (6010B/6020A/7471B)	Perchlorate (6850)	Cyanide (9014)	Nitrate (9056A)
P3IF-BA-GRID-W524	6/19/2023	6/21/2023	Soil	D	x	x	x		x	x		x	x	x
P3IF-SS-IS-SO-Z024	6/19/2023	6/21/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-Z524	6/19/2023	6/21/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-Z624	6/19/2023	6/21/2023	Soil	IS				x			x			
P3IF-BA-GRID-Z024	6/19/2023	6/21/2023	Soil	D	x	x	x		x	x		x	x	x
P3IF-SS-IS-SO-Y024	6/19/2023	6/21/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-Y524	6/19/2023	6/21/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-Y624	6/19/2023	6/21/2023	Soil	IS				x			x			
P3IF-BA-GRID-Y024	6/19/2023	6/21/2023	Soil	D	x	x	x		x	x		x	x	x
P3IF-SS-IS-SO-X024	6/19/2023	6/21/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-X524	6/19/2023	6/21/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-X624	6/19/2023	6/21/2023	Soil	IS				x			x			
P3IF-BA-GRID-X024	6/19/2023	6/21/2023	Soil	D	x	x	x		x	x		x	x	x
P3IF-SS-IS-SO-W023	6/19/2023	6/21/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-W523	6/19/2023	6/21/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-W623	6/19/2023	6/21/2023	Soil	IS				x			x			
P3IF-BA-GRID-W023	6/19/2023	6/21/2023	Soil	D	x	x	x		x	x		x	x	x
P3IF-SS-IS-SO-AD025	6/20/2023	6/22/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AD525	6/20/2023	6/22/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AD625	6/20/2023	6/22/2023	Soil	IS				x			x			
P3IF-BA-GRID-AD025	6/20/2023	6/22/2023	Soil	D	x	x	x		x	x		x	x	x
P3IF-SS-IS-SO-AE025	6/20/2023	6/22/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AE525	6/20/2023	6/22/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AE625	6/20/2023	6/22/2023	Soil	IS				x			x			
P3IF-BA-GRID-AE025	6/20/2023	6/22/2023	Soil	D	x	x	x		x	x		x	x	x
P3IF-SS-IS-SO-AB024	6/20/2023	6/22/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AB524	6/20/2023	6/22/2023	Soil	IS				x			x			

TABLE 3-6
INNER FENCE AREA SAMPLE SUMMARY
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Field ID	Date Sampled	Date Lab Received	Matrix	Discrete (D)/Incremental (IS)	VOCs (8260B)	SVOCs (8270D)	NDMA (8270D-SIM)	Explosives (8330B)	PCBs (8082A)	Dioxins/Furans (8290)	Metals (6010B/6020A/7471B)	Perchlorate (6850)	Cyanide (9014)	Nitrate (9056A)
P3IF-SS-IS-SO-AB624	6/20/2023	6/22/2023	Soil	IS				x			x			
P3IF-BA-GRID-AB024	6/20/2023	6/22/2023	Soil	D	x	x	x		x	x		x	x	x
P3IF-SS-IS-SO-AC025	6/20/2023	6/22/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AC525	6/20/2023	6/22/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AC625	6/20/2023	6/22/2023	Soil	IS				x			x			
P3IF-BA-GRID-AC025	6/20/2023	6/22/2023	Soil	D	x	x	x		x	x		x	x	x
P3IF-SS-IS-SO-H039	6/19/2023	6/22/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-H539	6/19/2023	6/22/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-H639	6/19/2023	6/22/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AL039	6/19/2023	6/22/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AL539	6/19/2023	6/22/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AL639	6/19/2023	6/22/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-W039	6/20/2023	6/22/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-W539	6/20/2023	6/22/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-W639	6/20/2023	6/22/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-N037	6/20/2023	6/22/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-N537	6/20/2023	6/22/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-N637	6/20/2023	6/22/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-O037	6/20/2023	6/22/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-O537	6/20/2023	6/22/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-O637	6/20/2023	6/22/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-X025	6/20/2023	6/22/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-X525	6/20/2023	6/22/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-X625	6/20/2023	6/22/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-Q038	6/20/2023	6/22/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-Q538	6/20/2023	6/22/2023	Soil	IS				x			x			

TABLE 3-6
INNER FENCE AREA SAMPLE SUMMARY
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Field ID	Date Sampled	Date Lab Received	Matrix	Discrete (D)/Incremental (IS)	VOCs (8260B)	SVOCs (8270D)	NDMA (8270D-SIM)	Explosives (8330B)	PCBs (8082A)	Dioxins/Furans (8290)	Metals (6010B/6020A/7471B)	Perchlorate (6850)	Cyanide (9014)	Nitrate (9056A)
P3IF-SS-IS-SO-Q638	6/20/2023	6/22/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-Q029	6/21/2023	6/23/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-Q529	6/21/2023	6/23/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-Q629	6/21/2023	6/23/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-Q026	6/21/2023	6/23/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-Q526	6/21/2023	6/23/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-Q626	6/21/2023	6/23/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-S029	6/21/2023	6/23/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-S529	6/21/2023	6/23/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-S629	6/21/2023	6/23/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AB025	6/20/2023	6/23/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AB525	6/20/2023	6/23/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AB625	6/20/2023	6/23/2023	Soil	IS				x			x			
P3IF-BA-GRID-AB025	6/20/2023	6/23/2023	Soil	D	x	x	x		x	x		x	x	x
P3IF-SS-IS-SO-AA024	6/20/2023	6/23/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AA524	6/20/2023	6/23/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AA624	6/20/2023	6/23/2023	Soil	IS				x			x			
P3IF-BA-GRID-AA024	6/20/2023	6/23/2023	Soil	D	x	x	x		x	x		x	x	x
P3IF-SS-IS-SO-AH028	6/21/2023	6/23/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AH528	6/21/2023	6/23/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AH628	6/21/2023	6/23/2023	Soil	IS				x			x			
P3IF-BA-GRID-AE525	6/20/2023	6/23/2023	Soil	D	x	x	x		x	x		x	x	x
P3IF-SS-IS-SO-AF025	6/21/2023	6/23/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AF525	6/21/2023	6/23/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AF625	6/21/2023	6/23/2023	Soil	IS				x			x			
P3IF-BA-GRID-AF025	6/21/2023	6/23/2023	Soil	D	x	x	x		x	x		x	x	x

TABLE 3-6
INNER FENCE AREA SAMPLE SUMMARY
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Field ID	Date Sampled	Date Lab Received	Matrix	Discrete (D)/Incremental (IS)	VOCs (8260B)	SVOCs (8270D)	NDMA (8270D-SIM)	Explosives (8330B)	PCBs (8082A)	Dioxins/Furans (8290)	Metals (6010B/6020A/7471B)	Perchlorate (6850)	Cyanide (9014)	Nitrate (9056A)
P3IF-SS-IS-SO-AI024	6/21/2023	6/23/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AI524	6/21/2023	6/23/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AI624	6/21/2023	6/23/2023	Soil	IS				x			x			
P3IF-BA-GRID-AI024	6/21/2023	6/23/2023	Soil	D	x	x	x		x	x		x	x	x
P3IF-SS-IS-SO-AH024	6/21/2023	6/23/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AH524	6/21/2023	6/23/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AH624	6/21/2023	6/23/2023	Soil	IS				x			x			
P3IF-BA-GRID-AH024	6/21/2023	6/23/2023	Soil	D	x	x	x		x	x		x	x	x
P3IF-SS-IS-SO-L037	6/20/2023	6/23/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-L537	6/20/2023	6/23/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-L637	6/20/2023	6/23/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-T039	6/20/2023	6/23/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-T539	6/20/2023	6/23/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-T639	6/20/2023	6/23/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-Q039	6/20/2023	6/23/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-Q539	6/20/2023	6/23/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-Q639	6/20/2023	6/23/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-S026	6/21/2023	6/23/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-S526	6/21/2023	6/23/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-S626	6/21/2023	6/23/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-U028	6/21/2023	6/23/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-U528	6/21/2023	6/23/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-U628	6/21/2023	6/23/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-T028	6/21/2023	6/23/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-T528	6/21/2023	6/23/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-T628	6/21/2023	6/23/2023	Soil	IS				x			x			

TABLE 3-6
INNER FENCE AREA SAMPLE SUMMARY
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Field ID	Date Sampled	Date Lab Received	Matrix	Discrete (D)/Incremental (IS)	VOCs (8260B)	SVOCs (8270D)	NDMA (8270D-SIM)	Explosives (8330B)	PCBs (8082A)	Dioxins/Furans (8290)	Metals (6010B/6020A/7471B)	Perchlorate (6850)	Cyanide (9014)	Nitrate (9056A)
P3IF-SS-IS-SO-AJ023	6/21/2023	6/23/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AJ523	6/21/2023	6/23/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AJ623	6/21/2023	6/23/2023	Soil	IS				x			x			
P3IF-BA-GRID-AJ023	6/21/2023	6/23/2023	Soil	D	x	x	x		x	x		x	x	x
P3IF-SS-IS-SO-AL023	6/21/2023	6/23/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AL523	6/21/2023	6/23/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AL623	6/21/2023	6/23/2023	Soil	IS				x			x			
P3IF-BA-GRID-AL023	6/21/2023	6/23/2023	Soil	D	x	x	x		x	x		x	x	x
P3IF-SS-IS-SO-AI023	6/21/2023	6/23/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AI523	6/21/2023	6/23/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AI623	6/21/2023	6/23/2023	Soil	IS				x			x			
P3IF-BA-GRID-AI023	6/21/2023	6/23/2023	Soil	D	x	x	x		x	x		x	x	x
P3IF-SS-IS-SO-AK023	6/21/2023	6/23/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AK523	6/21/2023	6/23/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AK623	6/21/2023	6/23/2023	Soil	IS				x			x			
P3IF-BA-GRID-AK023	6/21/2023	6/23/2023	Soil	D	x	x	x		x	x		x	x	x
P3IF-SS-IS-SO-AK036	6/22/2023	6/24/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AK536	6/22/2023	6/24/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AK636	6/22/2023	6/24/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AJ031	6/22/2023	6/24/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AJ531	6/22/2023	6/24/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AJ631	6/22/2023	6/24/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AM033	6/22/2023	6/24/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AM533	6/22/2023	6/24/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AM633	6/22/2023	6/24/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AG025	6/21/2023	6/24/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AG525	6/21/2023	6/24/2023	Soil	IS				x			x			

TABLE 3-6
INNER FENCE AREA SAMPLE SUMMARY
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Field ID	Date Sampled	Date Lab Received	Matrix	Discrete (D)/Incremental (IS)	VOCs (8260B)	SVOCs (8270D)	NDMA (8270D-SIM)	Explosives (8330B)	PCBs (8082A)	Dioxins/Furans (8290)	Metals (6010B/6020A/7471B)	Perchlorate (6850)	Cyanide (9014)	Nitrate (9056A)
P3IF-SS-IS-SO-AG625	6/21/2023	6/24/2023	Soil	IS				x			x			
P3IF-BA-GRID-AG025	6/21/2023	6/24/2023	Soil	D	x	x	x		x	x		x	x	x
P3IF-SS-IS-SO-AM025	6/22/2023	6/24/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AM525	6/22/2023	6/24/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AM625	6/22/2023	6/24/2023	Soil	IS				x			x			
P3IF-BA-GRID-AM025	6/22/2023	6/24/2023	Soil	D	x	x	x		x	x		x	x	x
P3IF-SS-IS-SO-AJ026	6/23/2023	6/24/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AJ526	6/23/2023	6/24/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AJ626	6/23/2023	6/24/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AL025	6/22/2023	6/24/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AL525	6/22/2023	6/24/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AL625	6/22/2023	6/24/2023	Soil	IS				x			x			
P3IF-BA-GRID-AL025	6/22/2023	6/24/2023	Soil	D	x	x	x		x	x		x	x	x
P3IF-SS-IS-SO-AO025	6/22/2023	6/24/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AO525	6/22/2023	6/24/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AO625	6/22/2023	6/24/2023	Soil	IS				x			x			
P3IF-BA-GRID-AO025	6/22/2023	6/24/2023	Soil	D	x	x	x		x	x		x	x	x
P3IF-SS-IS-SO-AN025	6/22/2023	6/24/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AN525	6/22/2023	6/24/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AN625	6/22/2023	6/24/2023	Soil	IS				x			x			
P3IF-BA-GRID-AN025	6/22/2023	6/24/2023	Soil	D	x	x	x		x	x		x	x	x
P3IF-SS-IS-SO-AL024	6/22/2023	6/24/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AL524	6/22/2023	6/24/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AL624	6/22/2023	6/24/2023	Soil	IS				x			x			
P3IF-BA-GRID-AL024	6/22/2023	6/24/2023	Soil	D	x	x	x		x	x		x	x	x
P3IF-SS-IS-SO-AI026	6/23/2023	6/24/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AI526	6/23/2023	6/24/2023	Soil	IS				x			x			

TABLE 3-6
INNER FENCE AREA SAMPLE SUMMARY
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Field ID	Date Sampled	Date Lab Received	Matrix	Discrete (D)/Incremental (IS)	VOCs (8260B)	SVOCs (8270D)	NDMA (8270D-SIM)	Explosives (8330B)	PCBs (8082A)	Dioxins/Furans (8290)	Metals (6010B/6020A/7471B)	Perchlorate (6850)	Cyanide (9014)	Nitrate (9056A)
P3IF-SS-IS-SO-AI626	6/23/2023	6/24/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AJ027	6/23/2023	6/24/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AJ527	6/23/2023	6/24/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AJ627	6/23/2023	6/24/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AK028	6/23/2023	6/24/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AK528	6/23/2023	6/24/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AK628	6/23/2023	6/24/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AP025	6/22/2023	6/24/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AP525	6/22/2023	6/24/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AP625	6/22/2023	6/24/2023	Soil	IS				x			x			
P3IF-BA-GRID-AP025	6/22/2023	6/24/2023	Soil	D	x	x	x		x	x		x	x	x
P3IF-SS-IS-SO-AL027	6/22/2023	6/24/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AL527	6/22/2023	6/24/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AL627	6/22/2023	6/24/2023	Soil	IS				x			x			
P3IF-BA-GRID-AP525	6/22/2023	6/24/2023	Soil	D	x	x	x		x	x		x	x	x
P3IF-SS-IS-SO-AI029	6/22/2023	6/24/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AI529	6/22/2023	6/24/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AI629	6/22/2023	6/24/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AJ033	6/22/2023	6/24/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AJ533	6/22/2023	6/24/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AJ633	6/22/2023	6/24/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AI031	6/22/2023	6/24/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AI531	6/22/2023	6/24/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AI631	6/22/2023	6/24/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AL034	6/22/2023	6/24/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AL534	6/22/2023	6/24/2023	Soil	IS				x			x			

TABLE 3-6
INNER FENCE AREA SAMPLE SUMMARY
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Field ID	Date Sampled	Date Lab Received	Matrix	Discrete (D)/Incremental (IS)	VOCs (8260B)	SVOCs (8270D)	NDMA (8270D-SIM)	Explosives (8330B)	PCBs (8082A)	Dioxins/Furans (8290)	Metals (6010B/6020A/7471B)	Perchlorate (6850)	Cyanide (9014)	Nitrate (9056A)
P3IF-SS-IS-SO-AL634	6/22/2023	6/24/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-W028	6/23/2023	6/24/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-W528	6/23/2023	6/24/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-W628	6/23/2023	6/24/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-W026	6/23/2023	6/24/2023	Soil					x			x			
P3IF-SS-IS-SO-W526	6/23/2023	6/24/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-W626	6/23/2023	6/24/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AN038	6/23/2023	6/24/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AN538	6/23/2023	6/24/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-AN638	6/23/2023	6/24/2023	Soil	IS				x			x			
P3IF-SS-IS-SO-H035.2	3/22/2024	3/23/2024	Soil	IS				x						
P3IF-SS-IS-SO-H535.2	3/22/2024	3/23/2024	Soil	IS				x						
P3IF-SS-IS-SO-H635.2	3/22/2024	3/23/2024	Soil	IS				x						
P3IF-SS-IS-SO-E023.2	3/22/2024	3/23/2024	Soil	IS				x						
P3IF-SS-IS-SO-E523.2	3/22/2024	3/23/2024	Soil	IS				x						
P3IF-SS-IS-SO-E623.2	3/22/2024	3/23/2024	Soil	IS				x						
P3IF-SS-IS-SO-I038.2	3/22/2024	3/23/2024	Soil	IS				x						
P3IF-SS-IS-SO-I538.2	3/22/2024	3/23/2024	Soil	IS				x						
P3IF-SS-IS-SO-I638.2	3/22/2024	3/23/2024	Soil	IS				x						
P3IF-SS-IS-SO-M039.2	3/22/2024	3/23/2024	Soil	IS				x						
P3IF-SS-IS-SO-M539.2	3/22/2024	3/23/2024	Soil	IS				x						
P3IF-SS-IS-SO-M639.2	3/22/2024	3/23/2024	Soil	IS				x						
P3IF-SS-IS-SO-V022.2	3/22/2024	3/23/2024	Soil	IS				x						
P3IF-SS-IS-SO-V522.2	3/22/2024	3/23/2024	Soil	IS				x						
P3IF-SS-IS-SO-V622.2	3/22/2024	3/23/2024	Soil	IS				x						

TABLE 3-6
INNER FENCE AREA SAMPLE SUMMARY
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Field ID	Date Sampled	Date Lab Received	Matrix	Discrete (D)/Incremental (IS)	VOCs (8260B)	SVOCs (8270D)	NDMA (8270D-SIM)	Explosives (8330B)	PCBs (8082A)	Dioxins/Furans (8290)	Metals (6010B/6020A/7471B)	Perchlorate (6850)	Cyanide (9014)	Nitrate (9056A)
P3IF-SS-IS-SO-W022.2	3/22/2024	3/23/2024	Soil	IS				x						
P3IF-SS-IS-SO-W522.2	3/22/2024	3/23/2024	Soil	IS				x						
P3IF-SS-IS-SO-W622.2	3/22/2024	3/23/2024	Soil	IS				x						
P3IF-SS-IS-SO-O027.2	3/22/2024	3/23/2024	Soil	IS				x						
P3IF-SS-IS-SO-O527.2	3/22/2024	3/23/2024	Soil	IS				x						
P3IF-SS-IS-SO-O627.2	3/22/2024	3/23/2024	Soil	IS				x						
P3IF-SS-IS-SO-AL034.2	3/22/2024	3/23/2024	Soil	IS				x						
P3IF-SS-IS-SO-AL534.2	3/22/2024	3/23/2024	Soil	IS				x						
P3IF-SS-IS-SO-AL634.2	3/22/2024	3/23/2024	Soil	IS				x						
P3IF-SS-IS-SO-AF030	3/22/2024	3/23/2024	Soil	IS				x						
P3IF-SS-IS-SO-AF530	3/22/2024	3/23/2024	Soil	IS				x						
P3IF-SS-IS-SO-AF630	3/22/2024	3/23/2024	Soil	IS				x						

Notes:

MS/MSD = Matrix Spike/Matrix Spike Duplicate

NDMA = N-Nitrosodimethylamine

PCBs = Polychlorinated Biphenyls

SIM = Selective Ion Monitoring

SVOC = Semi-volatile compound

VOC = volatile organic compound

TABLE 3-7
DETECTIONS AND NONDETECT EXCEEDANCES ABOVE SSLs
FORT WINGATE DEPOT ACTIVITY
MCKINLEY COUNTY, NEW MEXICO

						Sample ID and Date				
Analyte	**Exceedance Count**	**Unit**	**Residential SSL Cancer Endpoint**	**Residential SSL Noncancer Endpoint**	**Minimum RDL**	**P31F-SS-IS-SO-AL039* 2023-Jun-19**	**P3IF-BA-GRID-AP012** 2023-Jun-07**	**P3IF-BA-GRID-AP014** 2023-Jun-07**	**P3IF-BA-GRID-AP016** 2023-Jun-08**	**P3IF-BA-GRID-AP020** 2023-Jun-09**
Arsenic	1	mg/kg	7.07	13	0.3	**8.6**	-	-	-	-
Dibenz(a,h)anthracene[a]	9	mg/kg	0.153	--	0.13	-	**< 0.16**	**< 0.16**	< 0.15	**< 0.28**
n-Nitrosodimethylamine[b]	9	mg/kg	0.0234	0.493	0.02	-	**< 0.025**	**< 0.025**	**< 0.024**	**< 0.043**

Notes:

* = Low Density Area Sample

** = Buffer Area Sample

[a] Dibenz(a,h)anthracene (analyzed Method 8270D) had an SSL above the DL and LOD but below the LOQ (**Section 4.1.8**). However, this compound is not known to have been used at FWDA.

[b] N-Nitrosodimethylamine (analyzed by Method 8270 SIM) had an SSL below the DL, LOD, and LOQ (**Section 4.1.8**). However, this analyte is not suspected to have been used at Fort Wingate.

- : No exceedance

--: No SSL available

Bold: Detected analyte concentration exceeded SSL.

LOD Exceeded SSL < : Denotes nondetect reported above the SSL.

DL = detection limit
ID = identification
LOD = limit of detection
LOQ = limit of quantitation
mg/kg = milligrams per kilogram
RDL = Reporting Detection Limit
SSL = Soil Screening Level

TABLE 3-7
DETECTIONS AND NONDETECT EXCEEDANCES ABOVE SSLs
FORT WINGATE DEPOT ACTIVITY
MCKINLEY COUNTY, NEW MEXICO

						Sample ID and Date				
Analyte	**Exceedance Count**	**Unit**	**Residential SSL Cancer Endpoint**	**Residential SSL Noncancer Endpoint**	**Minimum RDL**	**P3IF-BA-GRID-AP009** 2023-Jun-06**	**P3IF-BA-GRID-AP509** 2023-Jun-06**	**P3IF-BA-GRID-E022** 2023-Jun-13**	**P3IF-BA-GRID-U022** 2023-Jun-16**	**P31F-BA-GRID-W022** 2023-Jun-19**
Arsenic	1	mg/kg	7.07	13	0.3	-	-	-	-	-
Dibenz(a,h)anthracene[a]	9	mg/kg	0.153	--	0.13	**< 0.28**	**< 0.27**	**< 0.16**	**< 0.28**	**< 0.16**
n-Nitrosodimethylamine[b]	9	mg/kg	0.0234	0.493	0.02	**< 0.042**	**< 0.042**	**< 0.024**	< 0.022	**< 0.024**

Notes:

* = Low Density Area Sample

** = Buffer Area Sample

[a] Dibenz(a,h)anthracene (analyzed Method 8270D) had an SSL above the DL and LOD but below the LOQ (**Section 4.1.8**). However, this compound is not known to have been used at FWDA.

[b] N-Nitrosodimethylamine (analyzed by Method 8270 SIM) had an SSL below the DL, LOD, and LOQ (**Section 4.1.8**). However, this analyte is not suspected to have been used at Fort Wingate.

- : No exceedance

--: No SSL available

Bold: Detected analyte concentration exceeded SSL.

LOD Exceeded SSL < : Denotes nondetect reported above the SSL.

DL = detection limit
ID = identification
LOD = limit of detection
LOQ = limit of quantitation
mg/kg = milligrams per kilogram
RDL = Reporting Detection Limit
SSL = Soil Screening Level

TABLE 3-7
DETECTIONS AND NONDETECT EXCEEDANCES ABOVE SSLs
FORT WINGATE DEPOT ACTIVITY
MCKINLEY COUNTY, NEW MEXICO

						Sample ID and Date
Analyte	**Exceedance Count**	**Unit**	**Residential SSL Cancer Endpoint**	**Residential SSL Noncancer Endpoint**	**Minimum RDL**	**P3IF-BA-GRID Y024** 2023-Jun-19**
Arsenic	1	mg/kg	7.07	13	0.3	-
Dibenz(a,h)anthracene[a]	9	mg/kg	0.153	--	0.13	**< 0.16**
n-Nitrosodimethylamine[b]	9	mg/kg	0.0234	0.493	0.02	**< 0.025**

Notes:

* = Low Density Area Sample

** = Buffer Area Sample

[a] Dibenz(a,h)anthracene (analyzed Method 8270D) had an SSL above the DL and LOD but below the LOQ (**Section 4.1.8**). However, this compound is not known to have been used at FWDA.

[b] N-Nitrosodimethylamine (analyzed by Method 8270 SIM) had an SSL below the DL, LOD, and LOQ (**Section 4.1.8**). However, this analyte is not suspected to have been used at Fort Wingate.

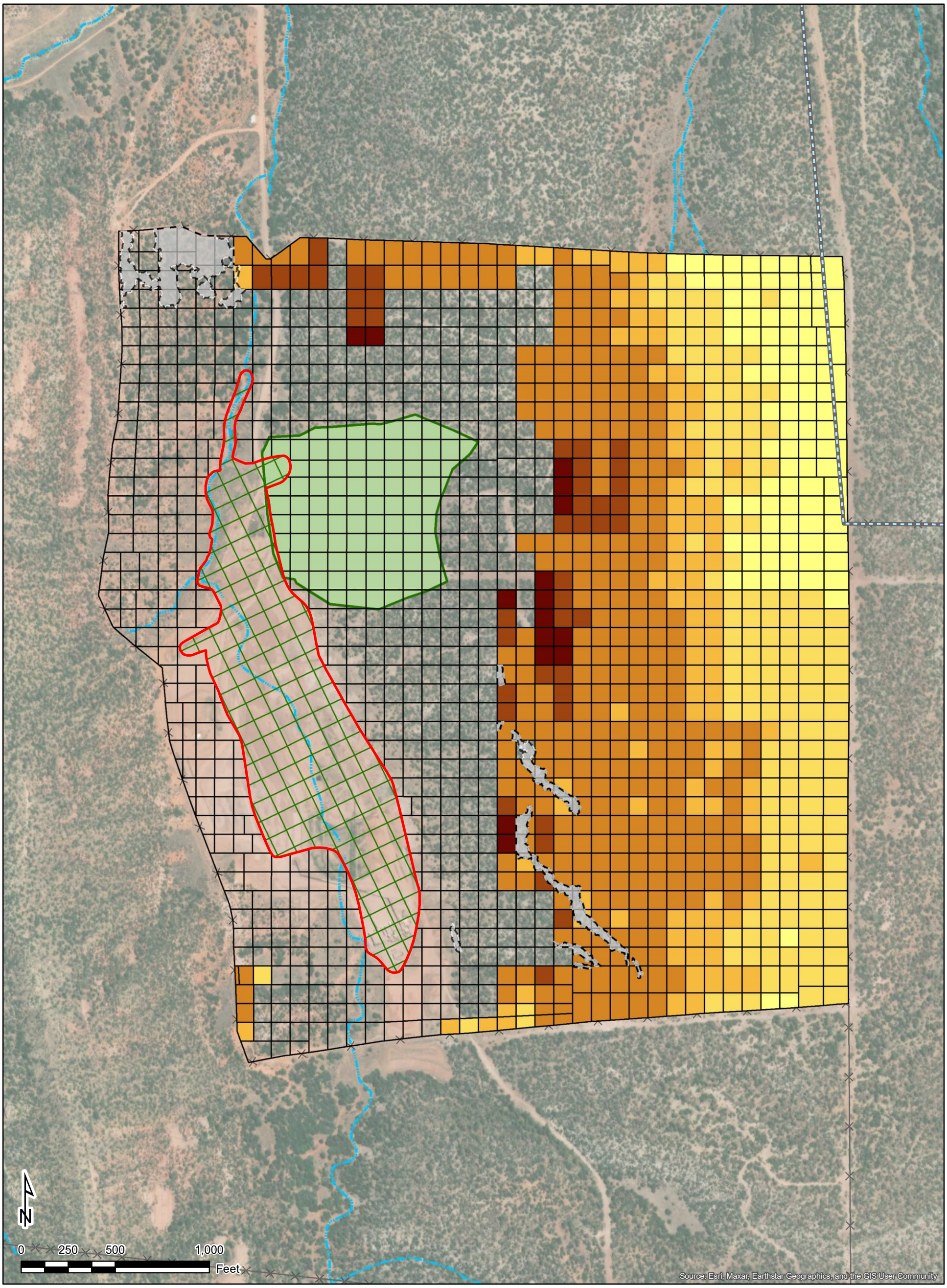
- : No exceedance

--: No SSL available

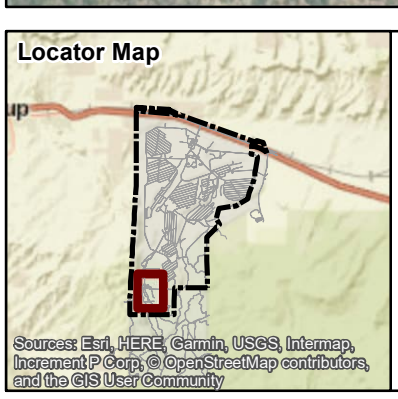
Bold: Detected analyte concentration exceeded SSL.

LOD Exceeded SSL < : Denotes nondetect reported above the SSL.

DL = detection limit
ID = identification
LOD = limit of detection
LOQ = limit of quantitation
mg/kg = milligrams per kilogram
RDL = Reporting Detection Limit
SSL = Soil Screening Level



Locator Map



Legend

- Installation Boundary
- HWMU Boundary
- Parcel 3 Boundary
- AOC 92
- Arroyo
- Fence
- HWMU Grid
- Inner Fence Grid
- Inaccessible Area

Anomalies in Grid

- 0 - 350
- 350 - 700
- 700 - 1,300
- 1,300 - 5,000
- 5,000 - 10,000
- 10,000 - 15,000

Anomaly Density Range
Fort Wingate Depot Activity
McKinley County, New Mexico

Drawn By:	Date:	
JZ	5/28/2024	**Figure 3-1**
Checked By:	Project No.	
JC	60517380	

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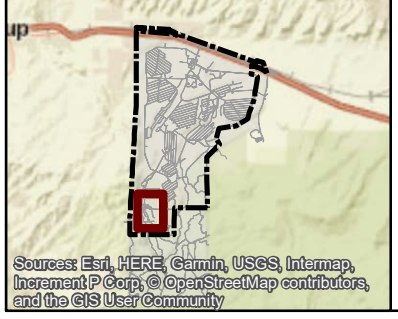
N

0 250 500 1,000

Feet

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Locator Map



Sources: Esri, HERE, Garmin, USGS, Intermap, Increment P Corp, © OpenStreetMap contributors, and the GIS User Community

Legend

- Installation Boundary
- HWMU Boundary
- Parcel 3 Boundary
- AOC 92
- Arroyo
- Fence
- HWMU Grid
- Inner Fence Grid
- Inaccessible Area

MD in Grid (lbs)

- 20 - 200 lbs
- 200 - 400 lbs
- 400 - 800 lbs
- 800 - 1,500 lbs
- 1,500 - 2,700 lbs

Munitions Debris Weight Range
Fort Wingate Depot Activity
McKinley County, New Mexico

Drawn By:	Date:	
JZ	5/28/2024	**Figure 3-2**
Checked By:	Project No.	
JC	60517380	

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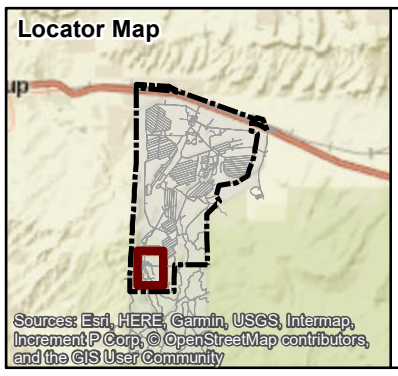
N

0 250 500 1,000

Feet

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Locator Map



Sources: Esri, HERE, Garmin, USGS, Intermap, Increment P Corp, © OpenStreetMap contributors, and the GIS User Community

Legend

- Installation Boundary
- HWMU Boundary
- Parcel 3 Boundary
- AOC 92
- Arroyo
- Fence
- HWMU Grid
- Inner Fence Grid
- Inaccessible Area
- Inner Fence Grid - Ops Complete
- MEC (16,578)

MEC Distribution
Fort Wingate Depot Activity
McKinley County, New Mexico

Drawn By:	Date:	
JZ	5/31/2024	**Figure 3-3**
Checked By:	Project No.	
JC	60517380	

O:\DCS\Projects\ENV\GIS\Fort_Wingate\Parcel_3\Figures\Inner_Fence_rpt\Fig3-3_mec_dist.mxd

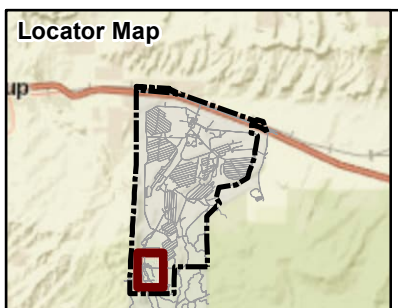
N

0 250 500 1,000

Feet

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Locator Map



Sources: Esri, HERE, Garmin, USGS, Intermap, Increment P Corp, © OpenStreetMap contributors, and the GIS User Community

Legend

- Installation Boundary
- HWMU Boundary
- Parcel 3 Boundary
- AOC 92
- Arroyo
- Fence
- HWMU Grid
- Inner Fence Grid
- Inaccessible Area
- Inner Fence Grid - Ops Complete
- Detonate in Place Location

Detonate in Place Locations
Fort Wingate Depot Activity
McKinley County, New Mexico

Drawn By:	Date:	
JZ	5/28/2024	**Figure 3-4**
Checked By:	Project No.	
JC	60517380	

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4.1 HUMAN HEALTH RISK SCREEN APPROACH

This section describes the general approach used to complete the human health risk screen for the IF of Parcel 3.

4.1.1 Conceptual Site Model (CSM)

One of the first steps in formulating a risk screening for a site is developing a conceptual model of the site that identifies relevant exposure pathways and exposure scenarios. The updated CSM for the IF is discussed below and presented in **Figure 4-1**. As discussed in **Sections 2.4.1** and **3**, because multiple IF grids were excluded (i.e., to safety concerns associated with elevated anomaly densities in grids near the HWMU) from the manual removal operations completed, the updated CSM only applies to areas/grids within the IF where RA activities were successfully completed. As discussed in **Section 6**, additional remedial actions and/or land use controls may be warranted for IF grids/areas where RA activities were not completed, and possibly for depths up to 12 feet bgs where MEC could still be present (not anticipated) based on historical data for the Site.

FWDA's primary mission was to receive, store, maintain, and ship explosives and military munitions, as well as disassemble and dispose of unserviceable or obsolete explosives and other military munitions. The HWMU was where all detonations and burns of explosives and munitions occurred. Based on the release mechanism and conditions within the IF (i.e., dispersion of MEC from OB/OD activities at the HWMU resulting in surface area releases) and the results of the MEC RA (recovered MEC was at or just below the surface), the primary environmental medium impacted was surface soil. Although no subsurface sources of MEC (i.e., deeper than 22 inches bgs) were identified within the manually excavated grids of the IF, as discussed in **Sections 2.4.1** and **6**, based on historical accounts of MEC potentially deposited within the IF to depths up to 12 feet bgs, a remnant subsurface MEC exposure pathway cannot be completely discounted (i.e., for deeper MEC and associated MC). Although unlikely, subsurface soil could also be impacted by leaching and infiltration from associated remnant subsurface MC soil sources. Additionally, if volatile compounds leach to subsurface soil, then the vapor intrusion pathway would be potentially complete (not anticipated).

Sample results from work completed (both historically and currently) at the HWMU indicate that VOCs are infrequently detected and detected at low concentrations in the source area. Remediation work has been occurring at the adjacent HWMU since 2012 (with significantly deeper depths and higher densities of deposited MEC). Analytical results from these activities have indicated very little chemical contamination within the HWMU where significant detonation activities historically occurred (unlike within the IF Area). Although more than 3,250 soil samples have been collected to depths up to 25 feet bgs at the HWMU, less than 100 samples contained MC above their SSLs, indicating that subsurface contamination is even less likely to be a concern for the low density IF area addressed by this Report. However, as shown on **Figure 4-1**, subsurface exposure pathways cannot be completely discounted for the IF based on historical accounts noting that residual MEC could still be present to depths up to 12 feet bgs.

Currently, there is no one living or working within the IF. Additionally, there are no buildings, including commercial/industrial buildings or development within the IF. The area is surrounded by a security fence with locked gates. The fence and gates are checked annually to make sure they still restrict access to the site. Future land use for the IF is anticipated to remain as idle land within a secured fence; therefore, no future human exposure is expected for this site. If the anticipated future land use was to change to residential or commercial use, then residents, industrial workers, and construction workers would be potential future receptors.

Three groups of human receptors were identified as potentially applicable to the site: industrial/occupational workers, residents, and construction workers. NMED Risk Assessment Guidance (2022) indicates that residential and construction receptors have the potential to be exposed to both surface and subsurface soil (0 to 10 feet bgs). Industrial workers have the potential to be exposed to surface soil (0 – 1-foot bgs). As discussed above, based upon the release mechanisms, the primary exposure medium for the IF is surface soil (0 to 1-foot bgs). Therefore, the IF samples were collected from 0-1 foot beneath MEC items after they were removed.

Potentially complete surface soil exposure pathways are provided for each potential future receptor population.

- industrial/occupational worker (incidental ingestion of soil, dermal contact with soil, inhalation of airborne soil particulates and volatile emissions);
- resident (incidental ingestion of soil, dermal contact with soil, inhalation of airborne soil particulates and volatile emissions, and beef ingestion); and,
- construction worker (incidental ingestion of soil, dermal contact with soil, inhalation of airborne soil particulates and volatile emissions).

There are no permanent surface water bodies within the IF; therefore, the surface water exposure pathways were considered incomplete. Groundwater within the IF is being addressed as part of a separate investigation and not addressed in this document.

For sampling purposes, the IF was divided into the Buffer Area and the Low-Density Area based on the density of MEC. The Buffer Area is immediately bounding the HWMU/high-density MEC area. The Low-Density Area is adjacent to the Buffer Area. The sampling convention was retained through the evaluation of risk for consistency. Both the Low-Density and Buffer areas were comprised of multiple 100-foot x 100-foot grids which were individually sampled for MC. The grid size represents a more likely exposure area than the larger Buffer Area and Low-Density Area and is like a residential lot size.

4.1.2 Comparison with Background

All metals data for the Inner Fence was collected using incremental sample methodology. The background data available for FWDA is based on discrete samples; therefore, it was not used for a quantitative comparison with incremental samples. For the Inner Fence risk assessment, all

detected metals were included in the quantitative assessment of risk. If any metal was shown to be a risk driver, a qualitative assessment of the metal concentration using the FWDA background data (Shaw 2010), the 2012 background study (USACE 2013), the December 18, 2013 NMED letter (NMED 2013), and United States Geographical Society (USGS) metals studies (Shacklette, et al. 1984, Smith, et al. 2013) was completed for that metal to determine if site concentrations were consistent with background levels. Qualitative discussions are provided in **Section 4.2** as appropriate.

4.1.2.1 FWDA Background Studies

The FWDA background study (Shaw 2010) included 124 samples. Rigorous statistical tests were performed on these data including an evaluation of outliers. Based on the large data set and the rigorous statistical testing, the 2010 Shaw background study provides an unbiased, adequate, and reasonable representation of background conditions at FWDA.

In accordance with the December 18, 2013, NMED letter, if the arsenic background value of 5.6 mg/kg is exceeded then the result was compared to the background study range of 0.2 - 11.2 mg/kg.

4.1.2.2 USGS Metals Studies

The USGS 1894 *Element concentrations in soils and other surficial materials of the conterminous United States* (Shacklette et al. 1984) included soil or other regolith samples collected at depth of approximately 20 centimeters (8 inches) from locations about 80 kilometers (12 miles) apart, throughout the conterminous United States. In this manner, 1,318 sampling sites were chosen, and the results of the sample analyses for 50 elements were plotted on maps. The arithmetic and geometric mean, the geometric deviation, and a histogram showing frequencies of analytical values were provided for 47 elements. The study found regional geographical differences for metals, including a greater abundance of heavy metals in the western United States.

The *Geochemical and Mineralogical Data for Soils of the Conterminous United States* study (Smith, et al. 2013) began in 2007. The study involved a low-density (1 site per 1,600 square kilometers [995 square miles], 4,857 sites) geochemical and mineralogical survey of soils of the conterminous United States as part of the North American Soil Geochemical Landscapes Project. Sampling and analytical protocols were developed at a workshop in 2003, and pilot studies were conducted from 2004 to 2007 to test and refine these recommended protocols. The final sampling protocol for the national-scale survey included, at each site, a sample from a depth of 0 to 5 centimeters (2 inches), a composite of the soil A horizon, and a deeper sample from the soil C horizon or, if the top of the C horizon was at a depth greater than 1 meter (39 inches), from a depth of approximately 80–100 centimeters (30 inches – 39 inches).

4.1.3 Soil Screening Levels

Screening values used include NMED SSLs for residential, industrial/occupational, and construction worker land use scenarios (NMED 2022, or most current version). If an NMED SSL was not available for an analyte, the most current USEPA RSL (USEPA 2024) was used for that analyte. Carcinogenic RSLs were adjusted to a risk of 1.0E-05, consistent with NMED SSLs. Residential soil RSLs were selected for resident. Industrial soil RSLs were selected for the industrial/occupational worker. USEPA RSLs do not provide a construction worker RSL; therefore, a construction worker SSL was calculated using NMED (2022) construction worker exposure parameters.

The potentially complete soil exposure pathways were evaluated for potential cancer risks and non-cancer hazards through a risk-based screening process and calculation of cumulative risks as outlined below. Risk-based screenings and cumulative risk calculations were completed in accordance with the 2022 NMED risk assessment guidance. Additionally, in accordance with the 2022 NMED risk assessment guidance, non-cancer hazard refinements (e.g., target organ assessments) were used when non-cancer hazards greater than 1.0 were identified for an individual grid. Risk refinement is further discussed in **Section 4.1.8.**

4.1.4 Target Risk Levels

NMED guidance states SSLs are based on 1.0E-05 (1 in 100,000) target excess cancer risk or a target non-cancer hazard quotient of 1.0 for noncarcinogens (NMED 2022). Exceeding NMED SSLs means that further evaluation of chemical concentrations and exposure assumptions may be warranted.

4.1.5 Soil Exposure Intervals

The IF was impacted by kickout from detonation activities in the HWMU; therefore, surface soil was considered the primary medium of concern and the entire data set was used to evaluate potential risks for the IF, resulting in an exposure interval for all receptors (residents, construction workers, and industrial/occupational worker) of 0 to 1 foot (ft) bgs. As discussed in **Section 2.4.1**, because the MEC items manually removed from the completed IF grids were typically recovered from depths of 12 inches or less, subsurface MEC and associated MC exposure pathways were considered insignificant during the collection of RA soil samples and the associated RA risk assessment. However, as shown on **Figure 4-1**, and further discussed in **Section 6**, remnant subsurface exposure pathways (i.e., based on historical accounts of MEC deposited to depths up to 12 feet bgs within the IF Area), cannot be completely discounted for the site, even within the completed RA grids.

4.1.6 Screening Evaluation Exposure Concentrations

For IF discrete sample data sets, the exposure concentration used in the screening evaluation was the detected concentration for each analyte in each grid collected. For IS samples, the exposure concentration used in the screening was the maximum detected concentration of the replicate

samples in each grid collected. These exposure concentrations were used for both the comparison to NMED SSLs and the calculation of cumulative cancer risks and non-cancer hazards.

4.1.7 Screening Evaluation

Consistent with the guidance, screening was performed by directly comparing the concentration of each chemical detected at each sample location with NMED SSLs (NMED 2022) to identify which chemicals, if any, exceed their SSL. The screenings are provided in **Appendix D.1**. No chemicals were eliminated from the risk evaluation based on this step. All detected compounds were included in the calculation of cumulative risk.

4.1.8 Calculation of Cumulative Human Health Risk

NMED guidance indicates that the potential cumulative risks and hazards should be evaluated in the screening evaluation to conclude whether further evaluation may be necessary. Cumulative cancer risks and non-cancer hazards were calculated regardless of whether or not any detected chemical within a grid exceeded its SSL during the screening evaluation. This is consistent with NMED guidance (NMED 2022). Cumulative screening cancer risks and non-cancer hazards were calculated for each grid as follows:

- Site Screening Cancer Risk = (C1/SSL1 + C2/SSL2 + ……Cn/SSLn) x 1.0E-05
- Site Screening Non-cancer Hazard Index = (C1/SSL1 + C2/SSL2 + ……Cn/SSLn) x 1
- Where:

  C1...Cn = Screening exposure concentration for chemical “1” to chemical “n”.

  SSL1…SSLn = Soil screening level for chemical “1” to chemical “n” based on an SSL carcinogenic risk of 1.0E-05 or noncarcinogenic hazard of 1.0. Site risks less than the NMED target cancer level of 1.0E-05 and non-cancer hazard indices less than the NMED target level of 1.0 indicate that concentrations at the site are unlikely to result in adverse health impacts.

It is important to note that the HI is not linear. An HI of 100 does not mean the chances of noncancer health effects are 100 times more likely to occur, or that effects are likely to be more severe than an HI of 1.0. Rather, HIs greater than 1.0 simply indicate that non-cancer health effects are more likely to occur.

Nondetect results were compared to SSLs to assure that the detection limit (DL)/LOD/limit of quantitation (LOQ) were adequate to be detected at SSL concentrations. Historically at FWDA, only two compounds (dibenz(a,h)anthracene and n-nitroso-dimethylamine) have had detection levels that were too high to reach residential SSL levels. However, neither of these two compounds are known or suspected to have been used at FWDA. Nondetect results were not included in the calculation of cumulative cancer risks or non-cancer hazards for IF grids.

4.1.9 Risk Refinement

In accordance with NMED risk guidance (NMED 2022), if the non-cancer hazard index was greater than 1.0, for an individual grid, the grid underwent further, site-specific evaluation. This evaluation included a target organ/system assessment for chemicals with a noncarcinogenic endpoint to determine if noncarcinogenic effects are additive. The process involved calculating non-cancer hazard indices for each target organ or system and assessing whether or not the non-cancer hazard index for an organ or organ system exceeded 1.0. If no target organ/system hazard index exceeded 1.0, then the grid concentrations were not considered to pose any health issues for the receptor scenario being evaluated. No risk refinement of exposure concentrations was completed for any grid based on a noncancer hazard greater than 1.0. The specific target organ/system assessments are discussed in **Section 4.2**.

For excess cancer risks greater than 1.0E-05, the risk refinement consisted of the calculation of a 95 percent (%) upper confidence limit (UCL) concentration for the ISM samples (ITRC 2012). No exposure concentration refinement was completed for discrete samples because only one discrete sample was collected per grid. The specific exposure concentration refinements are discussed in **Section 4.2**. Nondetect data was used in the calculation of 95% UCLs ISM samples by including one-half the DL for each nondetect ISM result.

4.1.10 Dioxins/Furans

Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's toxicity equivalency factors (TEF) (Van den berg, et al 2006) as summarized in the NMED guidance (NMED 2022, Table 2-1). The TEF associated with each congener was applied to the maximum detected concentration of that congener. The summed adjusted values, or toxicity equivalent (TEQ) was compared to the NMED SSL for 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD). A TEQ was calculated for each grid in both the low-density area and buffer area using the maximum detected concentration from each set of replicate samples. For nondetect results, the TEQ calculation used the lowest DL from the replicate samples. The TEQs are shown in the risk screening tables in **Appendix D.1**.

4.1.11 Evaluation of Lead Concentrations

Exposure to lead can result in neurotoxic and developmental effects. The primary receptors of concern are children, whose nervous systems are still undergoing development and who also exhibit behavioral tendencies that increase their likelihood of exposure (e.g., pica). These effects may occur at exposures so low they may be considered to have no threshold and are evaluated based on a blood lead level (rather than the external dose as reflected in the reference dose/reference concentration methodology). Therefore, the risk evaluation and toxicological approach used by USEPA and other agencies for lead is unique from other chemicals. For residential exposures, USEPA recommends the Integrated Exposure Uptake Biokinetic (IEUBK) Model for Lead in Children for setting site-specific preliminary risk-based remediation goals. The adult lead exposure model (ALM) is the model currently used by USEPA to evaluate adult exposures in the workplace and is based on a pregnant mother's capacity to contribute to fetal

blood lead levels. The models for lead back-calculate to a soil concentration that would not exceed an estimated blood-lead concentration of 5 micrograms per deciliter. The NMED lead SSL for residential exposure is 200 mg/kg. The NMED lead SSL for the industrial/occupational exposure is 8.00E+02 mg/kg. Non-cancer hazard quotients are not calculated for lead because there is no established threshold value. For screening, the maximum detected concentration was presented simply as a comparison with the receptor-specific SSL. Additional evaluation using the lead models and risk refinement were not completed for lead because all the detected maximum concentrations were below the residential SSL (200 mg/kg) and the industrial/occupational SSL (800 mg/kg).

4.1.12 Vapor Intrusion Risks

Volatile organics having a Henry's Law constant greater than 1.0E-05 atmospheres–cubic meter/per mole (atm-m^3/mole) and a molecular weight less than 200 grams per mole are considered relevant to evaluation of the vapor intrusion pathway (NMED 2022). Currently, there are no buildings located within the IF; therefore, the current vapor intrusion pathway is considered incomplete. Vapor intrusion represents a potentially complete pathway for future receptors if a building was constructed in the area and VOC emissions become concentrated in indoor spaces. Sample results from work currently being completed at the HWMU indicate that VOCs are not detected at high concentrations (above SSLs) as a result of HWMU activities (AECOM 2024). Because the IF was impacted by kickout from the HWMU, it is expected that VOC concentrations in the IF would be lower than in the HWMU (the source area). Therefore, in accordance with Section 2.5 of the NMED risk guidance (NMED 2022), a qualitative assessment of potential vapor intrusion risk was completed and included in **Section 4.2.3** Uncertainties.

4.1.13 Beef Ingestion

NMED risk guidance (NMED 2022, Section 2.6) indicates two acres as the size of parcel requiring evaluation of the beef ingestion pathway. The IF in its entirety could provide enough land surface for grazing purposes. Additionally, grazing is a viable future land use for the area.

Therefore, in accordance with NMED risk guidance (NMED 2022), a qualitative assessment of ingestion of beef from cattle grazing on the IF was completed and included in **Section 4.2.3** Uncertainties.

4.1.14 Soil to Groundwater Migration

The soil to groundwater migration pathway was evaluated by comparing the maximum detected concentration for each chemical to available NMED soil to groundwater migration SSLs. If no SSL was available from NMED the chemical was considered to have no standard available. The low density and buffer areas were evaluated separately in **Tables 4-4** and **4-7**, respectively. Chemicals without soil-to-groundwater screening levels are noted in the tables.

4.1.15 Uncertainties

There are several sources of uncertainties associated with a human health risk screening. **Section 4.2.**3 presents and addresses the uncertainties encountered during the risk screening process.

4.2 HUMAN HEALTH RISK SCREEN RESULTS

This section presents the results of the risk screening for the IF of FWDA.

4.2.1 Low Density Grids

A total of 94 grids were sampled using incremental sampling for explosives and metals in the low-density area. These grids were evaluated individually for human health risks using the maximum detected concentration for each chemical from the replicate samples. None of the low density grids posed unacceptable cancer risks or adverse health effects for the industrial worker scenario. Several grids showed potentially unacceptable cancer risks (>1.0E-05) or adverse health effects (HQ/HI greater than 1.0) for residents and/or construction workers. **Tables 4-1** and **4-2** list all the low density grids with the potential to pose unacceptable cancer risks or adverse health effects for the residential and construction worker scenarios. The primary contributors for all these grids were metals, specifically aluminum, arsenic, barium, chromium, cobalt, iron, manganese, and/or thallium. **Table 4-3** presents the background metals data from FWDA and USGS metal reference studies (Shaw 2010, USGS 2013, respectively) and the low density and buffer area grid metals data. Risk refinements based on target organ/system assessments and a discussion of background were completed for these grids and are discussed below. All the low density individual grid 95% UCLs were greater than the maximum detected concentration of the replicate samples. Therefore, the 95% UCLs were not used in the risk refinements for hazard indices greater than 1.0.

Forty-eight low density grids had hazard indices greater than 1.0 for the residential scenario and 15 low density grids had hazard indices greater than 1.0 for the construction worker scenario (see **Table 4-1**). The primary contributors for all these grids were metals (aluminum, arsenic, barium, chromium, cobalt, iron, manganese, and/or thallium). The target organ assessments for these grids showed that no target organ/system had a hazard index greater than 1.0. Therefore, these grids were considered to pose no unacceptable adverse health effects to residents or construction workers.

Seventy-seven low density grids had target organ assessments where the additive effects on the nervous system by aluminum and manganese resulted in hazard greater than 1.0 for the construction worker scenario (see **Table 4-2**). Therefore, these grids may pose unacceptable adverse health effects for construction workers. Based on qualitative evaluation with background, **Table 4-3** shows low density grid manganese concentrations ranging from 190 mg/kg to 930 mg/kg are within the FWDA background range of 37.7 mg/kg to 2,240 mg/kg and the USGS reference ranges (<2 mg/kg to 12,000 mg/kg). Therefore, manganese concentrations

in these low density grids may be naturally-occurring and not related to site activities and grid risk/hazards may been over estimated. However, as discussed in **Section 4.1.2**, because the available background data for metals at FWDA were obtained using discrete sampling approaches, these qualitative conclusions for the incremental sample results for metals are considered preliminary.

Grid AL39 had a cancer risk of 1.2E-05 for residents. The only contributor to excess cancer risk was arsenic. The maximum arsenic concentration (8.6 mg/kg) exceeded the qualitative background value of 5.6 mg/kg established for FWDA; however, it was within the FWDA background range of 0.2 mg/kg to 11.2 mg/kg and the USGS reference studies with maximum detected concentrations ranging from 97 mg/kg – 1,110 mg/kg. The arsenic concentrations in AL39 appear to be within qualitative background levels and may not be related to site activities. Therefore, the excess cancer risk associated with arsenic in Grid AL39 was considered to be potentially related to naturally occurring concentrations rather than site-related activities. However, as discussed in **Section 4.1.2**, because the available background data for metals at FWDA were obtained using discrete sampling approaches, these qualitative conclusions for the incremental sample results for metals are considered preliminary.

All lead concentrations from the low-density grids were below the NMED residential SSL (200 mg/kg); therefore, no further evaluation of lead concentrations was necessary.

Based on these results, potential excess cancer risks and noncancer hazards were below the target risk of 1.0E-05 and the hazard threshold of 1.0 for organic compounds. Therefore, there are no significant risks and no further evaluation of the current and future resident, site worker or construction worker scenarios is necessary for organic compounds. The individual grid human health risk screenings are provided in **Appendix D.1**.

The soil to groundwater migration pathway evaluation is provided in **Table 4-4**. The comparison showed the detected concentrations of 2-amino-4,6-dinitrotoluene (5 grids), 4-amino-2,6-dinitrotoluene (1 grid) and Tetryl (1 grid) exceeded the soil to groundwater migration SSLs. Therefore, explosives have the potential to impact groundwater in the vicinity of the associated grids. Additionally, detected concentrations of arsenic (1 grid), cobalt (multiple grids), and iron (all grids) exceeded the migration SSLs. The qualitative comparison of metals results to FWDA background levels and established naturally-occurring ranges from USGS indicated that the results were consistent with background/naturally-occurring ranges and may not be site-related. However, as discussed in **Section 4.1.2**, because the available background data for metals at FWDA were obtained using discrete sampling approaches, these qualitative conclusions for the incremental sample results for metals are considered preliminary.

The individual grid human health risk screening are provided in **Appendix D.1**.

4.2.2 Buffer Area Grids

A total of 76 grids were sampled using discrete sampling (VOCs, SVOCs, polychlorinated biphenyls, dioxins/furans, cyanide, perchlorate, nitrate) and incremental sampling (explosives

and metals) in the buffer area. These grids were evaluated individually for human health risks using the maximum detected concentration for each chemical from the discrete and incremental samples.

Excess cancer risks for all 76 grids were below the NMED target cancer risk of 1.0E-05. All industrial worker hazard indices were below 1.0. Several buffer area grids showed the potential for adverse health effects (HQ/HI greater than 1.0) for residents and/or construction workers. **Tables 4-5** and **4-6** list all the buffer area grids with the potential to pose unacceptable adverse health effects for the residential and construction worker scenarios. The primary contributors for all these grids were metals, specifically aluminum, arsenic, barium, chromium, cobalt, iron, manganese, and/or thallium. **Table 4-3** presents the background metals data from FWDA and USGS metal reference studies and the buffer area grid metals data. Risk refinements based on target organ/system assessments and a discussion of background were completed for these grids and are discussed below. All the buffer area individual grid 95% UCLs were greater than the maximum detected concentration of the replicate samples. Therefore, the 95% UCLs were not used in the risk refinements for hazard indices greater than 1.0.

Thirty-four buffer area grids had hazard indices greater than 1.0 for the residential scenario and 16 grids had hazard indices greater than 1.0 for the construction worker scenario (see **Table 4-5**). The primary contributors for all these grids were metals (aluminum, arsenic, barium, chromium, cobalt, iron, manganese, and/or thallium). The target organ assessments for these grids showed that no target organ/system had a hazard index greater than 1.0. Therefore, these grids were considered to pose no unacceptable adverse health effects to residents or construction workers.

Thirty-five buffer area grids had target organ assessments where the additive effects on the nervous system by aluminum and manganese resulted in hazard greater than 1.0 for the construction worker scenario (see **Table 4-6)**. Twenty buffer area grids had hazard indices greater than 1.0 due to manganese. Therefore, these grids may pose unacceptable adverse health effects for construction workers. Based on qualitative evaluation with background, **Table 4-3** shows buffer area grid aluminum concentrations ranging from 5,800 mg/kg to 33,000 mg/kg are within the USGS reference ranges (700 mg/kg to >10,000 mg/kg and 10,000 mg/kg to 60,000 mg/kg). Additionally, buffer area manganese concentrations ranging from 190 mg/kg to 790 mg/kg are within the FWDA background range of 37.7 mg/kg to 2,240 mg/kg and the USGS reference ranges (<2 mg/kg to 12,000 mg/kg). Therefore, aluminum and manganese concentrations in these buffer area grids may be naturally-occurring and may not be related to site activities and grid risk/hazards may have been over estimated. However, as discussed in **Section 4.1.2**, because the available background data for metals at FWDA were obtained using discrete sampling approaches, these qualitative conclusions for the incremental sample results for metals are considered preliminary.

All lead concentrations from the buffer area grids were below the NMED residential SSL (200 mg/kg); therefore, no further evaluation of lead concentrations was necessary.

Based on these results, the buffer area is unlikely to pose any unacceptable cancer risks or adverse health effects for current and future residents, site workers, or construction workers. The individual grid human health risk screens for the buffer are provided in **Appendix D.1**.

The soil to groundwater migration pathway evaluation for Buffer Area grids is provided in **Table 4-7**. One VOC (1,2-dibromo-3-chloropropane) had an LOD, both maximum and minimum, above its respective groundwater migration SSL. However, because laboratory technology was not available to detect this chemical at the level of its soil to groundwater SSL during completion of this IF RA, additional evaluation of the analyte will be completed during future groundwater sampling activities to be conducted, including the IF Area, during the on-going Parcel 3 Groundwater RCRA Facility Investigation (RFI) Supplemental Sampling as is further discussed in **Section 6**.

No SVOCS were detected at concentrations above their groundwater migration SSLs; however, several SVOCS had LODs, both maximum and minimum, above their groundwater migration SSLs. Several of these SVOCS are unable to be detected at concentrations as low as the SSLs and they have not been detected in any Inner Fence samples. Any potential impacts to groundwater in the vicinity of the grids would be dependent on the depth to groundwater and whether or not the compounds are actually present in soil.

The comparison showed the detected concentrations of 2-amino-4,6-dinitrotoluene (1 grid), 4-amino-2,6-dinitrotoluene (9 grids), RDX (1 grid), and Tetryl (1 grid) exceeded the soil to groundwater migration SSLs. Therefore, there is potential for groundwater to be impacted in the vicinity of these grids. Several explosives had LODs, both maximum and minimum, that exceeded the groundwater migration SSLs. Any potential impacts to groundwater in the vicinity of the grids would be dependent on the depth to groundwater and whether or not the compounds are actually present in soil below detectable levels. However, as discussed in **Section 6**, additional RFI groundwater sampling within the IF Area will be completed to further evaluate the potential migration of site contaminants from soil to groundwater at the site.

Table 4-7 shows two PCBs have LODs above their groundwater migration SSLs. While there is the potential for groundwater to be impacted by PCBs, no PCBs were detected in any Inner Fence soil samples.

Two metals were detected at concentrations above their groundwater migration SSLs: cobalt (10 grids) and iron (all grids). The qualitative assessment of metals to FWDA background levels and established naturally-occurring ranges from USGS indicated that these metals results may be within background/naturally-occurring ranges. However, as discussed in **Section 4.1.2**, because the available background data for metals at FWDA were obtained using discrete sampling approaches, the qualitative conclusions for the incremental sample results for metals are considered preliminary. Additional evaluation of IF Area metals concentrations and the potential for migration to groundwater will be completed during the on-going Parcel 3 Groundwater RFI Supplemental Sampling as discussed in **Section 6**.

4.2.3 Uncertainties Associated with the Human Health Risk Screening

There are several sources of uncertainties associated with a human health risk screening. These are discussed below.

General Risk Assessment Uncertainties

- Samples were analyzed using USEPA-approved procedures, and were subjected to USEPA data validation procedures, to assure that data were suitable for use in decision-making. However, sample analysis is subject to uncertainties associated with precision and accuracy, and detection of chemicals at low concentrations. Analytical precision and accuracy are evaluated through laboratory quality assurance programs that have been reviewed by project stakeholders. Uncertainties associated with precision and accuracy of analysis are generally random and may lead to over or underestimation of risks. These errors are typically of low magnitude and are unlikely to have a significant impact on the results of the risk assessment when compared to other sources of uncertainty in the risk assessment.
- It was assumed that samples collected were representative of the area to which various populations may be exposed. However, the collected samples may not be completely representative, due to biases in sampling and to random variability of samples. In addition, soils are not homogeneously distributed in the environment. Random variability of the media sampled may result in either an over or underestimation of actual chemical concentrations, and thus, site risks. VSP software was used to determine the quantity of samples required to statistically demonstrate if residual contamination poses a risk to receptors. VSP software supports the development of a defensible sampling plan based on statistical sampling theory and the statistical analysis of sample results to support confident decision making. Therefore, samples collected were considered to representative as possible and any remaining uncertainties are unlikely to significantly impact the results of the risk assessment.
- Chemical concentrations used to evaluate potential site risks are based on the available environmental soil. Environmental sampling is designed to identify and fully characterize the type and extent of contamination at a site. Therefore, environmental sampling is biased toward finding contamination and it is unlikely contaminant concentrations have been underestimated. Sampling software (VSP) was used to determine the sampling plan for the IF investigation to assure 95 percent confidence that at least 97 percent of the grids in the decision unit (low-density area) were acceptable (i.e., below SSLs). The use of this software minimized the uncertainties associated with the IF characterization activities. Additionally, every buffer area grid that could be safely sampled was sampled. Therefore, any uncertainties associated with contaminant concentrations in the IF have been minimized and would have no significant impact on the results of the risk assessment.
- Risk assessment is an uncertain process which requires both scientific data and science-based assumptions. Risk assessments are conducted to infer risks below the range of observable events in people and studies of laboratory animals. For example, regulatory agencies typically attempt to protect populations from exposure to doses of chemicals that may pose a cancer risk of one in one million or greater. It is virtually impossible to measure the impact of

a one-in-one-million cancer risk on a population where one-third of that population is already expected to be diagnosed with cancer, even in the absence of a particular chemical exposure (USEPA 1990b; 1992).

- This risk assessment evaluated the toxicity or risk associated with individual chemicals and then combined them to estimate risk as it related to chemical mixtures. However, simply adding risks ignores potential synergistic or antagonistic interactions, as well as differences in target organ specificities and differences in mechanisms of action that could lead to either underestimation or overestimation of total risk. The synergistic and antagonistic interactions and target organ specificities and mechanisms of action between chemicals is not fully understood; therefore, the overall impact on the risk assessment results cannot be assessed.
- The residential SSL assumes person is present 24 hours a day, 350 days per year for 26 years (noncancer) or 70 years (cancer). These are conservative assumptions. In today's culture, it is not uncommon for people to leave their homes on a regular basis for work, playdates, social engagements, errands, sporting events, etc. While the exposure assumptions for residents are likely to overestimate potential site risks for most future residents, the exposure assumptions are designed to be protective of the most conservative exposure scenarios. Therefore, while the risks for residents may have been overestimated for a typical residential scenario, it is not considered to be exaggerated beyond what potential future residential risks could be and are within acceptable levels.
- There are no residents, workers, or construction workers currently located at the IF. The IF is surrounded by a security fence with locked gates. The fence and gates are checked annually to make sure they are still restricting access to the site. Future land use for the IF is anticipated to remain as idle land within a secured fence; therefore, no future human exposure is expected for this site. Therefore, the exposure scenarios represent a major source of uncertainty which could overestimate actual site risks based on the projected future land use. If the anticipated future land use was to change to residential or commercial use, then residents, industrial workers, and construction workers would be potential future receptors and the estimated risks would be representative of potential future risks for those receptors.
- Maximum detected concentrations for discrete samples were used in the estimate of site risks. Generally, the use of maximum detected concentrations likely overestimates site risks because receptors are unlikely to spend the entire exposure duration and frequency assumed by the SSLs in contact with the maximum concentrations. The use of the VSP software to design the sampling plan minimized the uncertainty associated with sample concentrations and representation of the sampled areas. However, no samples were collected beneath MEC where the highest likelihood of residual contamination would be located. Therefore, site risks may have been underestimated.
- The currently accepted qualitative background study for FWDA (Shaw 2010) is comprised of discrete sample data. The metals data for the Inner Fence area was collected using ISM. For the human health risk screen, all detected metals were included in the quantitative calculation of site cancer risks and hazards. If metals posed a potential cancer risk or hazard, a qualitative assessment was made based on the comparison of the range of detected metals concentrations for the low density and buffer area to the FWDA detected range and USGS

metal reference ranges. No statistical population comparisons were completed due to difference in sampling methodologies between the site data and reference studies (i.e., discrete, ISM, composite). The FWDA background study (Shaw 2010) was comprised of 124 samples (including duplicates). The USGS reference studies (1984 and 2013) included over 1,300 samples (USGS 1984) and approximately 4,800 samples in each of three soil horizons. Metals detected within the range of the FWDA background and USGS ranges were considered to be potentially naturally-occurring. However, additional evaluation is planned for future RFI activities planned at the IF.

- USEPA cancer slope factors used to calculate SSLs are highly conservative estimates of dose-response relationships and probably likely result in a significant overstatement of actual cancer risk. Cancer slope factors are calculated using the 95% upper confidence limit (UCL) on a dose-response curve estimated by a linear mathematical model that extrapolates from short-term, high-dose animal exposures to long-term, low-dose human exposures. USEPA guidance states the cancer SFs are upper-bound estimates of potency.

- The following should be considered in order to interpret the significance of the cancer risk estimates. The National Oil and Hazardous Substances Pollution Contingency Plan (USEPA 1990b) states, "For known or suspected carcinogens, acceptable exposure levels are generally concentration levels that represent an excess upper-bound lifetime cancer risk to an individual of between 1E-04 and 1E-06." These values are equivalent to a 1 in 10,000 to 1 in 1,000,000 chance of getting cancer from the exposure. These risk levels are very low and would not be measurable or discernible (compared to the background cancer risk of approximately 1 in 3) in individuals or even in a large population. For example, a risk level of 1 in 10,000 (1E-04) would increase an individual's chance of getting cancer from the background risk of 1 in 3 to 1.0001 in 3. The Guidance on Risk Characterization for Risk Managers and Risk Assessors (USEPA 1992) concurs with the 1E-04 to 1E-06 target risk range.

- Surrogate compounds were used in the risk assessment. 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene. The use of surrogates during the screening phase may have resulted in a chemical being removed as a chemical of potential concern (COPC) based on the currently available screening criteria. In the future, criteria specific to that chemical may become available and indicate the surrogate used in this assessment was not protective and associated risks were underestimated. Similarly, future information could indicate that surrogate presents higher risks than the chemical specific toxicities. In this case, the site risks would have been overestimated and were thus protective.

Exposure Pathway Uncertainties

- Beef ingestion is a potentially complete pathway for the IF of FWDA. However, all chemicals detected in the Low Density area were below their residential SSLs, except for arsenic which resulted in an excess cancer risk of 12E-05. A qualitative assessment of background concentrations indicated that arsenic was likely present at naturally -occurring concentrations. Additionally, residential cumulative cancer risks and hazards did not pose any acceptable excess cancer risks or adverse health effects for the Low Density area. Similarly, in the Buffer Area, all detected chemicals were below their residential SSLs. Residential cumulative cancer risks and hazards did not pose any acceptable excess cancer risks or adverse health effects for the Buffer Area. Finally, **Table 4-8** shows that the maximum detected concentrations of metals did not exceed the screening values for the pronghorn antelope, a larger game receptor. Therefore, the beef ingestion pathway is considered to pose no unacceptable cancer risks or non-cancer hazards for future populations who might raise and eat cattle in the low-density and/or buffer area of the IF. It is important to note, however, that soil analytical/risk assessment results in nearby high anomaly/MEC density areas (e.g., adjacent HWMU grids) could have different results than this human health risk assessment.

- Vapor intrusion was not evaluated quantitatively in the risk screening for the IF. The data set for the IF was limited to shallow soils (3 feet bgs or shallower) because the IF was received kickout from the HWMU which impacted surface soils. Based on the risk screen completed, shallow soils show no apparent risk via the vapor intrusion pathway due to very low levels of volatile organic compounds. Low levels of VOCs are consistent with historical and current soil results from the HWMU. Vapor intrusion is generally dependent upon the shallowest groundwater layer and subsurface soil. These environmental media were not sampled as part of this investigation; therefore, vapor intrusion risk could not be evaluated quantitatively for the IF. Potential site risks may have been underestimated based on the inability to quantitatively assess the vapor intrusion pathway. Leaching and infiltration could lead to subsurface soil/shallow groundwater contamination; however, New Mexico is located in the arid southwest and receives limited rainfall. Volatile compounds were not widely or regularly detected in the Inner Fence area at concentrations exceeding groundwater migration SSLs. Although several volatile compounds had LODs above the groundwater migration SSLs, these chemicals were also not detected in any Inner Fence samples indicating they may not be present in Inner Fence soils. Therefore, any underestimation of risk would be considered minor and not impact the quantitative risks results for the IF. However, the migration to groundwater pathway will be further evaluated with additional groundwater sampling activities conducted within the IF Area during on-going Parcel 3 Groundwater RFI Supplemental Sampling as is further discussed in **Section 6**.

Data Uncertainties

- As documented in the NMED-approved Work Plan, VSP statistical sampling software was utilized to determine the quantity of samples required to statistically demonstrate whether or not residual contamination could pose a risk to receptors and reduce any uncertainties associated with the data obtained and evaluated for risk. VSP is an industry standard

software tool that supports the development of a defensible sampling plan based on statistical sampling theory and the statistical analysis of sample results to support confident decision making. The program was developed with the support of numerous government agencies (i.e., U.S. Department of Energy, USEPA, and DoD) to ensure that the right type, quality, and quantity of data are generated in support of remedial decision making. As detailed in **Section 2.8.1.1**, to reduce data uncertainty, the risk assessment for the analytical data generated relied on a VSP-based ISM and collocated discrete sample design for the RA-completed grids within the buffer and low-density areas of the IF.

TABLE 4-1
LOW DENSITY GRIDS PASSING TARGET ORGAN/SYSTEM ASSESSMENTS
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Low Density Grid	Receptor
AC34	Res
AE27	CW
AD34	CW
AE38	Res
AF29	CW
AF30	Res
AF34	Res
AH28	CW
AH39	Res
AI26	CW
AI29	Res
AI31	Res
AJ26	Res
AJ27	Res
AJ31	Res
AJ33	Res
AK28	Res
AK36	Res
AL27	Res
AL34	Res, CW
AL39	Res
AM29	Res
AM33	Res
AN27	Res
AN28	Res
AN38	Res
AO26	Res
AQ15	Res
AQ22	CW
H35	Res
L37	Res
M28	Res
M32	CW
M39	Res
N27	Res

TABLE 4-1
LOW DENSITY GRIDS PASSING TARGET ORGAN/SYSTEM ASSESSMENTS
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Low Density Grid	Receptor
N28	Res
N37	Res
O27	Res
O32	CW
O37	Res
P32	CW
P33	CW
Q26	Res
Q29	CW
Q38	CW
Q39	Res
S26	Res
S29	CW
T23	Res
T28	Res
T39	Res
U28	Res
U33	CW
U35	Res
U37	Res
V33	Res
W26	Res
W28	Res
W31	Res
W34	Res
W39	Res
Z29	Res

CW = construction worker

Res = resident

TABLE 4-2
LOW DENSITY GRIDS WITH CANCER RISK AND HAZARD EXCEEDANCES
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Low Density Grid	Cancer Risk	Receptor	Organ System	Primary Contributors
AL39	1.20E-05	Res	NA	As
Low Density Grid	**Hazard**	**Receptor**	**Organ System**	**Primary Contributors**
AA32	1.14	CW	Nervous	Al, Mn
AB27	1.4	CW	Nervous	Al, Mn
AB38	1.38	CW	Nervous	Al, Mn
AC34	1.2	CW	Nervous	Al, Mn
AD28	1.06	CW	Nervous	Al, Mn
AE38	1.54	CW	Nervous	Al, Mn
AF30	1.18	CW	Nervous	Al, Mn
AF32	1.11	CW	Nervous	Al, Mn
AF34	1.1	CW	Nervous	Al, Mn
AH39	1.3	CW	Nervous	Al, Mn
AI29	1.46	CW	Nervous	Al, Mn
AI31	1.38	CW	Nervous	Al, Mn
AJ26	1.31	CW	Nervous	Al, Mn
AJ27	1.25	CW	Nervous	Al, Mn
AJ31	1.76	CW	Nervous	Al, Mn
AJ33	1.37	CW	Nervous	Al, Mn
AK28	1.17	CW	Nervous	Al, Mn
AK36	1.62	CW	Nervous	Al, Mn
AL27	1.05	CW	Nervous	Al, Mn
AL39	1.20E-05	Res	NA	As
AM29	1.4	CW	Nervous	Al, Mn
AM33	1.2	CW	Nervous	Al, Mn
AN27	1.5	CW	Nervous	Al, Mn
AN28	1.6	CW	Nervous	Al, Mn
AN38	1.4	CW	Nervous	Al, Mn
AO26	1.1	CW	Nervous	Al, Mn
AP28	1.1	CW	NA	Mn
AQ15	1.1	CW	NA	Mn
C27	1.2	CW	Nervous	Al, Mn
C35	1.4	CW	NA	Mn
C37	2	CW	NA	Mn
E27	1.2	CW	Nervous	Al, Mn
F32	1.2	CW	NA	Mn

TABLE 4-2
LOW DENSITY GRIDS WITH CANCER RISK AND HAZARD EXCEEDANCES
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Low Density Grid	Hazard	Receptor	Organ System	Primary Contributors
G30	1.3	CW	Nervous	Al, Mn
H35	1.8	CW	NA	Mn
H39	1.3	CW	NA	Mn
I29	1.1	CW	Nervous	Al, Mn
I30	1.2	CW	Nervous	Al, Mn
I33	1.1	CW	NA	Mn
I38	1.1	CW	NA	Mn
K30	1.2	CW	NA	Mn
K34	1.2	CW	NA	Mn
L29	1.1	CW	Nervous	Al, Mn
L34	1.4	CW	Nervous	Al, Mn
L37	1.6	CW	NA	Mn
M28	1.2	CW	Nervous	Al, Mn
M39	1.1	CW	NA	Mn
N27	1.2	CW	Nervous	Al, Mn
N28	1.4	CW	Nervous	Al, Mn
N37	1.4	CW	Nervous	Al, Mn
O27	1.3	CW	NA	Mn
O37	1.3	CW	Nervous	Al, Mn
Q26	1.1	CW	NA	Mn
Q39	1.3	CW	Nervous	Al, Mn
R24	1.3	CW	NA	Mn
R32	1.3	CW	Nervous	Al, Mn
S26	1.5	CW	Nervous	Al, Mn
S36	1.2	CW	Nervous	Al, Mn
T23	1.4	CW	Nervous	Al, Mn
T28	1.2	CW	Nervous	Al, Mn
T32	1.4	CW	Nervous	Al, Mn
T39	1.4	CW	Nervous	Al, Mn
U28	1.3	CW	Nervous	Al, Mn
U32	1.4	CW	Nervous	Al, Mn
U35	1.3	CW	Nervous	Al, Mn
U37	1.2	CW	Nervous	Al, Mn
V30	1.4	CW	Nervous	Al, Mn
V33	1.2	CW	Nervous	Al, Mn
V36	1.2	CW	Nervous	Al, Mn
W26	1.1	CW	NA	Mn

TABLE 4-2
LOW DENSITY GRIDS WITH CANCER RISK AND HAZARD EXCEEDANCES
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Low Density Grid	Hazard	Receptor	Organ System	Primary Contributors
W28	1.1	CW	NA	Mn
W31	1.1	CW	Nervous	Al, Mn
W34	1.3	CW	Nervous	Al, Mn
W39	1.3	CW	Nervous	Al, Mn
X25	1.1	CW	NA	Mn
X33	1.2	CW	Nervous	Al, Mn
X36	1.1	CW	Nervous	Al, Mn
Z29	1.1	CW	Nervous	Al, Mn

CW = construction worker

Al = aluminum

As = arsenic

Mn = manganese

NA = not applicable

TABLE 4-3
COMPARISON OF INNER FENCE METALS CONCENTRATIONS TO FWDA BACKGROUND AND ESTABLISHED LITERATURE VALUES
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Element	Study	Number of Samples	Minimum Concentration	Maximum Concentration	Typical Range	Site Concentrations Within FWDA Background Ranges/USGS Reference Ranges?
Aluminum[1]	FDWA Background Study (Shaw 2010)	112	1,070	27,200	--	3 LD Grids (AJ31, AN27, AP28; 28,000 to 30,000 mg/kg) 3 BA Grids (AP11, K22, P22; 29,000 to 38,000 mg/kg) greater than upper range for FWDA, but withing the USGS and Jackson study ranges
	USGS 1984	1,318 Locations	700	>10,000	--	
	Jackson 1964*	--	--	--	10,000 - 60,000	
	Low Density Area	285	8,600	38,000	--	
	Buffer Area	227	5,800	33,000	--	
Arsenic	FDWA Background Study (Shaw 2010)	112	0.18	11.2	--	Yes
	USACE (2013)	100	0.6	4.7(14)	--	
	Jackson 1964	--	--	--	--	
	USGS 1984	1,318 Locations	<0.1	97	--	
	USGS 1984 - Western U.S.**	--	<0.1	97	--	
	USGS 2013 0 -5 cm (0-2 inches)	4,841	<0.6	830	--	
	USGS A Horizon[3]	4,813	<0.6	1,110	--	
	USGS 2013 C Horizon[4]	4,780	<0.6	397	--	
	Low Density Area	285	0.62	8.6	--	
	Buffer Area	227	0.58	2.1	--	
Barium	FDWA Background Study (Shaw 2010)	112	25.9	662	--	2 LD Grids (U28, W28; 670 mg/kg, 790 mg/kg) 2 BA Grids (K22, Y24; 740 mg/kg, 820 mg/kg) greater than upper range for FWDA, but within the USGS ranges
	USGS 1984	1,318 Locations	10	5,000	--	
	USGS 1984 - Western U.S.**	--	70	5,000	--	
	Jackson 1964*	--	--	--	--	
	USGS 2013 0 -5 cm (0-2 inches)	4,841	5	4,770	--	
	USGS A Horizon[3]	4,813	6	4,850	--	
	USGS 2013 C Horizon[4]	4,780	5	9,360	--	
	Low Density Area	285	80	790	--	
	Buffer Area	227	94	820	--	

TABLE 4-3
COMPARISON OF INNER FENCE METALS CONCENTRATIONS TO FWDA BACKGROUND AND ESTABLISHED LITERATURE VALUES
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Element	Study	Number of Samples	Minimum Concentration	Maximum Concentration	Typical Range	Site Concentrations Within FWDA Background Ranges/USGS Reference Ranges?
Chromium	FDWA Background Study (Shaw 2010)	112	0.222	23.7	--	LD = Yes 2 BA Grids(R22, U22; 24 mg/kg, 32 mg/kg, 62 mg/kg) greater than upper range for FWDA, but within the USGS ranges
	USGS 1984	1,318 Locations	1	2,000	--	
	USGS 1984 - Western U.S.**	--	3	2,000	--	
	Jackson 1964*	--	--	--	5 - 3,000	
	USGS 2013 0 -5 cm (0-2 inches)	4,841	<1	4,120	--	
	USGS A Horizon[3]	4,813	<1	3,850	--	
	USGS 2013 C Horizon[4]	4,780	<1	4,620	--	
	Low Density Area	285	5.3	22	--	
	Buffer Area	227	5	62	--	
Cobalt	FDWA Background Study (Shaw 2010)	112	0.407	16.5	--	Yes
	USGS 1984	1,318 Locations	<3	70	--	
	USGS 1984 - Western U.S.**	--	<3	50	--	
	Jackson 1964*	--	--	--	--	
	USGS 2013 0 -5 cm (0-2 inches)	4,841	<0.1	216	--	
	USGS A Horizon[3]	4,813	<0.1	184	--	
	USGS 2013 C Horizon[4]	4,780	<0.1	316	--	
	Low Density Area	285	2.5	7.2	--	
	Buffer Area	227	2.4	8.2	--	
Iron[1]	FDWA Background Study (Shaw 2010)	112	2,240	27,600	--	Yes
	USGS 1984	1,318 Locations	100	>100,000	--	
	Jackson 1964*	--	--	--	--	
	Low Density Area	285	3,900	19,000	--	
	Buffer Area	227	6,000	23,000	--	
Manganese	FDWA Background Study (Shaw 2010)	112	37.7	2,240	--	Yes
	USGS 1984	1,318 Locations	<2	7,000	--	
	USGS 1984 - Western U.S.**	--	30	5,000	--	
	Jackson 1964*	--	--	--	--	
	USGS 2013 0 -5 cm (0-2 inches)	4,841	<5	7,780	--	
	USGS A Horizon[3]	4,813	<5	6,850	--	
	USGS 2013 C Horizon[4]	4,780	<5	12,000	--	
	Low Density Area	285	190	930	--	
	Buffer Area	227	190	790	--	

TABLE 4-3
COMPARISON OF INNER FENCE METALS CONCENTRATIONS TO FWDA BACKGROUND AND ESTABLISHED LITERATURE VALUES
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Element	Study	Number of Samples	Minimum Concentration	Maximum Concentration	Typical Range	Site Concentrations Within FWDA Background Ranges/USGS Reference Ranges?
Thallium	FDWA Background Study (Shaw 2010)	112	0.00964	7.97	--	
	USGS 1984	--	--	--	--	
	USGS 1984 - Western U.S.**	--	--	--	--	
	Jackson 1964*	--	--	--	--	
	USGS 2013 0 -5 cm (0-2 inches)	4,841	<0.1	8.8	--	Yes
	USGS A Horizon[3]	4,813	<0.1	11.5	--	
	USGS 2013 C Horizon[4]	4,780	<0.1	4.3	--	
	Low Density Area	285	0.024	0.2	--	
	Buffer Area	227	0.027	0.19	--	

[1] These metals concentrations were presented on a percent by weight in the USACE 2013 document; therefore, the results were not used in this assessment.

[2] Western United States is defined as west of the 96th Meridian (USGS 1984). In the U.S., the 96th Meridian passes through Minnesota, Iowa, Nebraska, Kansas, Oklahoma, and Texas.

[3] The A Horizon was not specifically defined in the the USGS 2013 document.

[4] If the top of the soil C horizon was at a depth greater than 1 meter (39 inches), the sample was collected from a depth of approximately 80 - 100 centimeters (30 - 39 inches).

*As presented in USGS 1984.

Abbreviations and Acronyms

-- = no data presented in cited documents
% = percent
< = less than
BA =Buffer Area
cm = centimeter
FWDA = Fort Wingate Depot Activity
LD = Low Density Area
UCL = upper confidence limt
U.S. = United States
USGS = United States Geological Survey
UTL = upper tolerance limit

TABLE 4-4
EVALUATION OF SOIL TO GROUNDWATER MIGRATION PATHWAY FOR LOW DENSITY GRIDS
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Maximum Detected Concentration			NMED Soil-To-Grounwater SSL (mg/kg)	Source (1,2)	Is SSL Exceeded? Y/N	Grids with Exceedances
EXPLOSIVES (mg/kg)									
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.15	U		NS	NS	N	
1,3-Dinitrobenzene	99-65-0	mg/kg	0.15	U		NS	NS	N	
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.15	U		0.861	NMED	N	
2,4-Dinitrotoluene	121-14-2	mg/kg	0.15	U		0.0492	NMED	N	
2,6-Dinitrotoluene	606-20-2	mg/kg	0.15	U		0.0102	NMED	N	
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.22	J		0.023	NMED	N	AF30, AL34, H35, I38, M39
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.15	U		0.0458	NMED	N	
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.15	U		0.025	NMED	N	
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.22	J		0.023	NMED	N	AF30
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.15	U		0.613	NMED	N	
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.15	U		0.0593	NMED	N	
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	43	J		5.59	NMED	N	S26
Nitrobenzene	98-95-3	mg/kg	0.15	U		0.0144	NMED	N	
Nitroglycerine	55-63-0	mg/kg	0.3	U		0.0136	NMED	N	
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.15	U		19.4	NMED	N	
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.5	U		NS	NS	N	
METALS (mg/kg)									
Aluminum	7429-90-5	mg/kg	30,000			59,700	NMED	N	
Antimony	7440-36-0	mg/kg	0.62			6.56	NMED	N	
Arsenic*	7440-38-2	mg/kg	8.6			5.83	NMED	Y	AL39
Barium	7440-39-3	mg/kg	790			2,700	NMED	N	
Beryllium	7440-41-7	mg/kg	1.4	J		196	NMED	N	
Cadmium	7440-43-9	mg/kg	3.6			9.39	NMED	N	
Calcium	7440-70-2	mg/kg	60,000			NA	NMED	N	
Chromium (Total) (2)	7440-47-3	mg/kg	22			205,000	NMED	N	
Cobalt*	7440-48-4	mg/kg	7.2			5.4	NMED	Y	AA32, AB27, AB38, AE38, AF34, AH39, AI29, AI31, AJ26, AJ27, AJ31, AK28, AK36, AL27, AL39, AM29, AM33, AN27, AN28, AN38, AP28, H35, L37, M28, N27, N28, O27, Q39, S26, S36, T28, T39, U28, U35, W26, W28, W31, W34, W39, Z29

TABLE 4-4
EVALUATION OF SOIL TO GROUNDWATER MIGRATION PATHWAY FOR LOW DENSITY GRIDS
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Maximum Detected Concentration			NMED Soil-To-Grounwater SSL (mg/kg)	Source (1,2)	Is SSL Exceeded? Y/N	Grids with Exceedances
METALS, continued (mg/kg)									
Copper	7440-50-8	mg/kg	220	J		915	NMED	N	
Iron*	7439-89-6	mg/kg	19,000			6,960	NMED	Y	All LD Grids
Lead	7439-92-1	mg/kg	18			NS	NS	N	
Magnesium	7439-95-4	mg/kg	10,000			NA	NMED	N	
Manganese	7439-96-5	mg/kg	930			2,630	NMED	N	
Mercury (Elemental)	7439-97-6	mg/kg	1.2	J		2.09	NMED	N	
Nickel	7440-02-0	mg/kg	17			485	NMED	N	
Potassium	7440-09-7	mg/kg	3,000			NA	NMED	N	
Selenium	7782-49-2	mg/kg	1.9			10.2	NMED	N	
Silver	7440-22-4	mg/kg	0.22	J		13.8	NMED	N	
Sodium	7440-23-5	mg/kg	120			NA	NMED	N	
Thallium	7440-28-0	mg/kg	0.2	J		2.85	NMED	N	
Vanadium	7440-62-2	mg/kg	42			1,260	NMED	N	
Zinc	7440-66-6	mg/kg	46			7,410	NMED	N	

Notes:

[1] NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update).

[2] Chromium screening value is for Total Chromium.

*A qualitative review of background and naturally-occurring levels shows that detected arsenic, cobalt, and iron concentrations may be naturally-occurring levels and may not be site related.

CAS = Chemical Abstracts Service

J = Estimated

mg/kg = milligrams per kilogram

N = no

NS = No Standard

SSL = soil screening level

U = Nondetect

Y = yes

TABLE 4-5
BUFFER AREA GRIDS PASSING TARGET ORGAN/SYSTEM ASSESSMENTS
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Low Density Grid	Receptor
AB25	Res, CW
AF25	CW
AG25	Res
AH24	CW
AI23	Res
AI24	CW
AJ23	Res, CW
AK23	Res
AL23	Res
AL24	Res
AL25	CW
AM25	Res
AN25	Res
AP10	Res
AP11	Res
AP12	Res
AP14	Res
AP15	Res
AP18	CW
AP19	CW
AP20	CW
AP21	CW
AP22	CW
AP25	CW
AQ23	CW
AQ24	CW
B8	CW
B20	Res
B21	Res
B22	Res
C8	CW

TABLE 4-5
BUFFER AREA GRIDS PASSING TARGET ORGAN/SYSTEM ASSESSMENTS
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Low Density Grid	Receptor
H25	Res
J22	Res
J23	Res
J25	Res
M22	Res
N22	Res
O22	Res
P22	Res
R22	Res
T22	Res
U22	Res
W22	Res
W23	Res
W24	Res
X24	Res
Y24	Res
Z24	Res

CW = construction worker

Res = resident

TABLE 4-6
BUFFER AREA GRIDS WITH HAZARD EXCEEDANCES
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Low Density Grid	Cancer Risk/Hazard	Receptor	Organ System	Primary Contributors
AA24	1.2	CW	Nervous	Al, Mn
AB24	1.1	CW	Nervous	Al, Mn
AC25	1.9	CW	NA	Mn
AD25	1.9	CW	NA	Mn
AE25	1.2	CW	Nervous	Al, Mn
AG25	1.2	CW	Nervous	Al, Mn
AI23	1.2	CW	Nervous	Al, Mn
AK23	1.4	CW	Nervous	Al, Mn
AL23	1.3	CW	Nervous	Al, Mn
AL24	1.2	CW	Nervous	Al, Mn
AM25	1.1	CW	Nervous	Al, Mn
AN25	1.2	CW	Nervous	Al, Mn
AO25	1.2	CW	Nervous	Al, Mn
AP9	1.4	CW	Nervous	Al, Mn
AP10	1.3	CW	Nervous	Al, Mn
AP11	1.5	CW	Nervous	Al, Mn
AP12	1.4	CW	Nervous	Al, Mn
AP14	1.4	CW	Nervous	Al, Mn
AP15	1.4	CW	Nervous	Al, Mn
AP16	1.3	CW	Nervous	Al, Mn
AP17	1.1	CW	Nervous	Al, Mn
B20	1.4	CW	Nervous	Al, Mn
B21	1.2	CW	NA	Mn
B22	1.1	CW	NA	Mn
C22	1.4	CW	Nervous	Al, Mn
D22	1.3	CW	Nervous	Al, Mn
E22	1.3	CW	Nervous	Al, Mn
E23	1.2	CW	Nervous	Al, Mn
E24	1.3	CW	Nervous	Al, Mn
E25	1.2	CW	Nervous	Al, Mn
E26	1.5	CW	Nervous	Al, Mn
F26	1.1	CW	NA	Mn
H25	1.1	CW	NA	Mn
I25	1.3	CW	NA	Mn
J22	1.2	CW	NA	Mn

TABLE 4-6
BUFFER AREA GRIDS WITH HAZARD EXCEEDANCES
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Low Density Grid	Cancer Risk/Hazard	Receptor	Organ System	Primary Contributors
J23	1.6	CW	NA	Mn
J24	1.4	CW	NA	Mn
J25	1.5	CW	Nervous	Al, Mn
K22	1.1	CW	NA	Mn
M22	1.6	CW	NA	Mn
N22	1.6	CW	NA	Mn
O22	1.4	CW	Nervous	Al, Mn
P22	1.8	CW	Nervous	Al, Mn
Q22	1.6	CW	NA	Mn
R22	1.5	CW	Nervous	Al, Mn
S22	1.1	CW	Nervous	Al, Mn
T22	1.3	CW	Nervous	Al, Mn
U22	1.2	CW	Nervous	Al, Mn
V22	1.4	CW	Nervous	Al, Mn
W22	1.4	CW	NA	Mn
W23	1.4	CW	NA	Mn
W24	1.2	CW	NA	Mn
X24	1.5	CW	NA	Mn
Y24	1.6	CW	NA	Mn
Z24	1.7	CW	NA	Mn

CW = construction worker

Al = aluminum

Mn = manganese

NA = not applicable

TABLE 4-7
EVALUATION OF THE SOIL TO GROUNDWATER PATHWAY FOR BUFFER AREA GRIDS
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF		NMED Soil-To-Grounwater SSL (mg/kg)	Source (1,2)	Is SSL Exceeded? Y/N	Grids with Exceedances
VOLATILE ORGANIC COMPOUNDS (mg/kg)											
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0042	U				0.036	NMED	N	
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0042	U				51.1	NMED	N	
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0042	U				0.00481	NMED	N	
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0042	U				0.0268	NMED	N	
1,1-Dichloroethane	75-34-3	mg/kg	0.0042	U				0.136	NMED	N	
1,1-Dichloroethene	75-35-4	mg/kg	0.0042	U				1.95	NMED	N	
1,1-Dichloropropene	563-58-6	mg/kg	0.0042	U				0.0281	NMED[S]	N	
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0042	U				NS	NS	N	
1,2,3-Trichloropropane	96-18-4	mg/kg	0.01	U				0.0000582	NMED	N	Min LOD = 0.0025
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0042	U				3.1	NMED	N	
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0042	U				NS	NS	N	
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.01	U				0.00139	NMED	N	Min LOD = 0.0025
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0042	U				0.000352	NMED	N	
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0042	U				9.08	NMED	N	
1,2-Dichloroethane	107-06-2	mg/kg	0.0042	U				0.0238	NMED	N	
1,2-Dichloropropane	78-87-5	mg/kg	0.0042	U				0.0277	NMED	N	
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0042	U				NS	NS	N	
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0042	U				1.12	NMED[S]	N	
1,3-Dichloropropane	142-28-9	mg/kg	0.0042	U				NS	NS	N	
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0042	U				1.12	NMED	N	
2,2-Dichloropropane	594-20-7	mg/kg	0.0042	U				0.0277	NMED[S]	N	
2-Butanone	78-93-3	mg/kg	0.14					20.1	NMED	N	
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0042	U				3.56	NMED	N	
2-Hexanone	591-78-6	mg/kg	0.34	J				NS	NS	N	
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0042	U				NS	NS	N	
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0042	U				4.8	NMED	N	
Acetone	67-64-1	mg/kg	3.1					49.8	NMED	N	
Benzene	71-43-2	mg/kg	0.0039					0.0418	NMED	N	
Bromobenzene	108-86-1	mg/kg	0.0042	U				NS	NS	N	
Bromochloromethane	74-97-5	mg/kg	0.0042	U				NS	NS	N	
Bromodichloromethane	75-27-4	mg/kg	0.0042	U				0.00621	NMED	N	
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0042	U				0.147	NMED	N	
Bromomethane	74-83-9	mg/kg	0.026					0.0343	NMED	N	
Carbon Disulfide	75-15-0	mg/kg	0.17					4.42	NMED	N	

TABLE 4-7
EVALUATION OF THE SOIL TO GROUNDWATER PATHWAY FOR BUFFER AREA GRIDS
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF		NMED Soil-To-Grounwater SSL (mg/kg)	Source (1,2)	Is SSL Exceeded? Y/N	Grids with Exceedances
VOLATILE ORGANIC COMPOUNDS, continued (mg/kg)											
Carbon Tetrachloride	56-23-5	mg/kg	0.0042	U				0.0367	NMED	N	
Chlorobenzene	108-90-7	mg/kg	0.0042	U				1.08	NMED	N	
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0042	U				107	NMED	N	
Chloroform	67-66-3	mg/kg	0.0042	U				0.0109	NMED	N	
Chloromethane	74-87-3	mg/kg	0.0081					0.0952	NMED	N	
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0042	U				0.352	NMED	N	
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0042	U				0.0281	NMED[S]	N	
Dibromochloromethane	124-48-1	mg/kg	0.0042	U				0.00755	NMED	N	
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0042	U				0.0335	NMED	N	
Dichlorodifluoromethane	75-71-8	mg/kg	0.0042	U				7.23	NMED	N	
Ethylbenzene	100-41-4	mg/kg	0.0042	U				12.3	NMED	N	
Hexachlorobutadiene	87-68-3	mg/kg	0.0042	U				0.0413	NMED	N	
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0042	U				11.4	NMED	N	
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.011					2.97	NMED[S]	N	
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0042	U				0.553	NMED	N	
Methylene Chloride	75-09-2	mg/kg	0.021	U				0.471	NMED	N	
n-Butylbenzene	104-51-8	mg/kg	0.0042	U				NS	NS	N	
n-Propylbenzene	103-65-1	mg/kg	0.0042	U				NS	NS	N	
Naphthalene	91-20-3	mg/kg	0.0042	U				0.0583	NMED	N	
o-Xylene	95-47-6	mg/kg	0.0052	U				2.98	NMED	N	
p-Isopropyltoluene	99-87-6	mg/kg	0.01					11.4	NMED[S]	N	
sec-Butylbenzene	135-98-8	mg/kg	0.0042	U				NS	NS	N	
Styrene	100-42-5	mg/kg	0.0042	U				20.6	NMED	N	
tert-Butylbenzene	98-06-6	mg/kg	0.0042	U				NS	NS	N	
Tetrachloroethene	127-18-4	mg/kg	0.0042	U				0.321	NMED	N	
Toluene	108-88-3	mg/kg	0.032					12.1	NMED	N	
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0042	U				0.503	NMED	N	
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0042	U				0.0281	NMED[S]	N	
Trichloroethene	79-01-6	mg/kg	0.0042	U				0.031	NMED	N	
Trichlorofluoromethane	75-69-4	mg/kg	0.0042	U				15.7	NMED	N	
Vinyl Chloride	75-01-4	mg/kg	0.0042	U				0.0134	NMED	N	

TABLE 4-7
EVALUATION OF THE SOIL TO GROUNDWATER PATHWAY FOR BUFFER AREA GRIDS
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF		NMED Soil-To-Grounwater SSL (mg/kg)	Source (1,2)	Is SSL Exceeded? Y/N	Grids with Exceedances
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)											
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.36	UJ				3.1	NMED	N	
1,2-Dichlorobenzene	95-50-1	mg/kg	0.36	UJ				9.08	NMED	N	
1,3-Dichlorobenzene	541-73-1	mg/kg	0.36	UJ				1.12	NMED[S]	N	
1,4-Dichlorobenzene	106-46-7	mg/kg	0.36	UJ				1.12	NMED	N	
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.36	UJ				66.2	NMED	N	
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.36	UJ				0.674	NMED	N	
2,4-Dichlorophenol	120-83-2	mg/kg	0.36	UJ				0.825	NMED	N	
2,4-Dimethylphenol	105-67-9	mg/kg	0.36	UJ				6.45	NMED	N	
2,4-Dinitrophenol	51-28-5	mg/kg	0.36	UJ				0.669	NMED	N	
2,4-Dinitrotoluene	121-14-2	mg/kg	0.36	UJ				0.0492	NMED	N	
2,6-Dinitrotoluene	606-20-2	mg/kg	0.36	UJ				0.0102	NMED	N	
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.36	UJ				57	NMED	N	
2-Chlorophenol	95-57-8	mg/kg	0.36	UJ				1.15	NMED	N	
2-Methylnaphthalene	91-57-6	mg/kg	0.36	UJ				2.76	NMED	N	
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.36	UJ				NS	NS	N	
2-Nitroaniline	88-74-4	mg/kg	0.36	UJ				NS	NS	N	
2-Nitrophenol	88-75-5	mg/kg	0.36	UJ				NS	NS	N	
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.36	UJ				0.124	NMED	N	
3-Nitroaniline	99-09-2	mg/kg	0.36	UJ				NS	NS	N	
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.36	UJ				0.0398	NMED	N	
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.36	UJ				NS	NS	N	
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.36	UJ				NS	NS	N	
4-Chloroaniline	106-47-8	mg/kg	0.36	UJ				NS	NS	N	
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.36	UJ				NS	NS	N	
4-Nitroaniline	100-01-6	mg/kg	0.36	UJ				NS	NS	N	
4-Nitrophenol	100-02-7	mg/kg	0.36	UJ				NS	NS	N	
Acenaphthene	83-32-9	mg/kg	0.36	UJ				82.5	NMED	N	
Acenaphthylene	208-96-8	mg/kg	0.36	UJ				192	NMED[S]	N	
Anthracene	120-12-7	mg/kg	0.36	UJ				851	NMED	N	
Benzo(a)anthracene	56-55-3	mg/kg	0.36	UJ				0.637	NMED	N	
Benzo(a)pyrene	50-32-8	mg/kg	0.28	UJ				4.42	NMED	N	
Benzo(b)fluoranthene	205-99-2	mg/kg	0.36	UJ				6.17	NMED	N	
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.36	UJ				192	NMED[S]	N	
Benzo(k)fluoranthene	207-08-9	mg/kg	0.36	UJ				60.5	NMED	N	
Benzoic Acid	65-85-0	mg/kg	0.36	UJ				NS	NS	N	
Benzyl Alcohol	100-51-6	mg/kg	0.36	UJ				NS	NS	N	

TABLE 4-7
EVALUATION OF THE SOIL TO GROUNDWATER PATHWAY FOR BUFFER AREA GRIDS
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF		NMED Soil-To-Grounwater SSL (mg/kg)	Source (1,2)	Is SSL Exceeded? Y/N	Grids with Exceedances
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued											
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.36	UJ				NS	NS	N	
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.36	UJ				0.000605	NMED	N	Min LOD = 0.17
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.36	UJ				0.0475	NMED	N	Min LOD = 0.17
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.21	J				200	NMED	N	
Butylbenzylphthalate	85-68-7	mg/kg	0.36	UJ				NS	NS	N	
Carbazole	86-74-8	mg/kg	0.36	UJ				NS	NS	N	
Chrysene	218-01-9	mg/kg	0.36	UJ				186	NMED	N	
Di-n-butylphthalate	84-74-2	mg/kg	0.072	J				33.8	NMED	N	
Di-n-octylphthalate	117-84-0	mg/kg	0.36	UJ				NS	NS	N	
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.28	UJ				1.97	NMED	N	
Dibenzofuran	132-64-9	mg/kg	0.36	UJ				NS	NS	N	
Diethylphthalate	84-66-2	mg/kg	0.36	UJ				97.9	NMED	N	
Dimethylphthalate	131-11-3	mg/kg	0.36	UJ				3.57	NMED	N	
Fluoranthene	206-44-0	mg/kg	0.36	UJ				1,340	NMED	N	
Fluorene	86-73-7	mg/kg	0.36	UJ				80	NMED	N	
Hexachlorobenzene	118-74-1	mg/kg	0.36	UJ				0.189	NMED	N	Min LOD = 0.17
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.36	UJ				0.0413	NMED	N	Min LOD = 0.17
Hexachloroethane	67-72-1	mg/kg	0.36	UJ				0.032	NMED	N	Min LOD = 0.17
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.36	UJ				20.1	NMED	N	
Isophorone	78-59-1	mg/kg	0.36	UJ				4.23	NMED	N	
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.36	UJ				NS	NS	N	Min LOD = 0.17
N-Nitrosodimethylamine	62-75-9	mg/kg	0.043	UJ				0.0000204	NMED	N	Min LOD = 0.02
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.36	UJ				10	NMED	N	
Naphthalene	91-20-3	mg/kg	0.36	UJ				0.0583	NMED	N	Min LOD = 0.17
Nitrobenzene	98-95-3	mg/kg	0.36	UJ				0.0144	NMED	N	Min LOD = 0.17
Pentachlorophenol	87-86-5	mg/kg	0.36	UJ				0.0152	NMED	N	Min LOD = 0.17
Phenanthrene	85-01-8	mg/kg	0.36	UJ				85.9	NMED	N	
Phenol	108-95-2	mg/kg	0.36	UJ				52.3	NMED	N	
Pyrene	129-00-0	mg/kg	0.36	UJ				192	NMED	N	

TABLE 4-7
EVALUATION OF THE SOIL TO GROUNDWATER PATHWAY FOR BUFFER AREA GRIDS
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF		NMED Soil-To-Grounwater SSL (mg/kg)	Source (1,2)	Is SSL Exceeded? Y/N	Grids with Exceedances
EXPLOSIVES (mg/kg)											
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.15	UJ				NS	NS	N	
1,3-Dinitrobenzene	99-65-0	mg/kg	0.15	UJ				NS	NS	N	
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.15	UJ				0.861	NMED	N	
2,4-Dinitrotoluene	121-14-2	mg/kg	0.15	UJ				0.0492	NMED		Min LOD = 0.073
2,6-Dinitrotoluene	606-20-2	mg/kg	0.15	UJ				0.0102	NMED		Min LOD = 0.073
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.22					0.023	NMED	Y	AF30
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.15	UJ				0.0458	NMED		Min LOD = 0.073
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.15	UJ				0.025	NMED		Min LOD = 0.073
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.22					0.023	NMED	Y	AF30, AL34, E23, H35, I38, M39, O27, V22, W22
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.15	UJ				0.613	NMED	N	
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.096					0.0593	NMED	Y	C8, L22
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	43					5.59	NMED	Y	S26
Nitrobenzene	98-95-3	mg/kg	0.15	UJ				0.0144	NMED		Min LOD = 0.073
Nitroglycerine	55-63-0	mg/kg	0.3	UJ				0.0136	NMED		Min LOD = 0.15
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.15	UJ				19.4	NMED	N	
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.5	UJ				NS	NS	N	
POLYCHLORINATED BIPHENYLS (mg/kg)											
Aroclor 1016	12674-11-2	mg/kg	0.024	U				2.01	NMED	N	
Aroclor 1221	11104-28-2	mg/kg	0.024	U				0.0143	NMED	Y	Min LOD = 0.019
Aroclor 1232	11141-16-5	mg/kg	0.012	U				0.0143	NMED	Y	Min LOD = 0.0093
Aroclor 1242	53469-21-9	mg/kg	0.012	U				0.184	NMED	N	
Aroclor 1248	12672-29-6	mg/kg	0.012	U				0.181	NMED	N	
Aroclor 1254	11097-69-1	mg/kg	0.012	U				0.308	NMED	N	
Aroclor 1260	11096-82-5	mg/kg	0.012	U				0.825	NMED	N	

TABLE 4-7
EVALUATION OF THE SOIL TO GROUNDWATER PATHWAY FOR BUFFER AREA GRIDS
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF		NMED Soil-To-Grounwater SSL (mg/kg)	Source (1,2)	Is SSL Exceeded? Y/N	Grids with Exceedances
DIOXINS/FURANS (mg/kg) (2)											
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg	0.0000000015		0.00000510	0.0003		NS	NMED	NS	
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.000000023		0.00008	0.0003		NS	NMED	NS	
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg	0.000000035		0.00000350	0.01		NS	NMED	NS	
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.00000013		0.0000130	0.01		NS	NMED	NS	
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg	0.0000000025		0.00000025	0.01		NS	NMED	NS	
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg	0.00000001		0.00000010	0.1		NS	NMED	NS	
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg	0.000000017		0.00000017	0.1		NS	NMED	NS	
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg	0.000000012		0.000000120	0.1		NS	NMED	NS	
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg	0.000000025		0.000000250	0.1		NS	NMED	NS	
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg	0.000000006		0.00000006	0.1		NS	NMED	NS	
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg	0.000000016		0.000000160	0.1		NS	NMED	NS	
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg	0.0000000039		0.00000013	0.03		NS	NMED	NS	
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg	0.00000025		0.0000003	1		NS	NMED	NS	
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg	0.000000043		0.00000043	0.1		NS	NMED	NS	
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg	0.000000063		0.00000021	0.3		NS	NMED	NS	
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg	0.00000006		0.00000060	0.1		NS	NMED	NS	
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.00000044	1		NS	NMED	NS	
TEQ		mg/kg	0.000000697					0.000224	NMED	N	
METALS (mg/kg)											
Aluminum	7429-90-5	mg/kg	33,000					59,700	NMED	N	
Antimony	7440-36-0	mg/kg	0.62	J				6.56	NMED	N	
Arsenic	7440-38-2	mg/kg	2.1					5.83	NMED	N	
Barium	7440-39-3	mg/kg	820					2,700	NMED	N	
Beryllium	7440-41-7	mg/kg	1.7	J				196	NMED	N	
Cadmium	7440-43-9	mg/kg	1.9					9.39	NMED	N	
Calcium	7440-70-2	mg/kg	50,000					NA	NMED	NA	
Chromium (Total) (3)	7440-47-3	mg/kg	62					205,000	NMED	N	
Cobalt	7440-48-4	mg/kg	8.2					5.4	NMED	Y	AG25, AI23, AK23, AL23, AL24, AN25, AP11, P22, X24, Y24
Copper	7440-50-8	mg/kg	670	J				915	NMED	N	
Iron	7439-89-6	mg/kg	23,000					6,960	NMED	All Grids	
Lead	7439-92-1	mg/kg	24					NS	NS	N	
Magnesium	7439-95-4	mg/kg	16,000					NA	NMED	NA	
Manganese	7439-96-5	mg/kg	790					2,630	NMED	N	
Mercury (Elemental)	7439-97-6	mg/kg	1.9	J				2.09	NMED	N	
Nickel	7440-02-0	mg/kg	21					485	NMED	N	

TABLE 4-7
EVALUATION OF THE SOIL TO GROUNDWATER PATHWAY FOR BUFFER AREA GRIDS
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF		NMED Soil-To-Grounwater SSL (mg/kg)	Source (1,2)	Is SSL Exceeded? Y/N	Grids with Exceedances
METALS, continued (mg/kg)											
Potassium	7440-09-7	mg/kg	3,400					NA	NMED	NA	
Selenium	7782-49-2	mg/kg	2.3					10.2	NMED	N	
Silver	7440-22-4	mg/kg	0.48					13.8	NMED	N	
Sodium	7440-23-5	mg/kg	190					NA	NMED	NA	
Thallium	7440-28-0	mg/kg	0.19	J				2.85	NMED	N	
Vanadium	7440-62-2	mg/kg	28					1,260	NMED	N	
Zinc	7440-66-6	mg/kg	60					7,410	NMED	N	
OTHER PARAMETERS (mg/kg)											
Cyanide	57-12-5	mg/kg	0.21	J				0.713	NMED	N	
Nitrate	14797-55-8	mg/kg	58					425	NMED	N	
Perchlorate	14797-73-0	mg/kg	0.001	J				0.117	NMED	N	

Notes:

[s] = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update).

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service

DL = Detection limit

J = Estimated

LOD = Limit of detection

LOQ = Limit of Quantitation

mg/kg = milligrams per kilogram

NS = No Standard

TEF = Toxicity Equivalency Factor

TEQ = Toxicity Equivalency Quotient

TABLE 4-7
EVALUATION OF THE SOIL TO GROUNDWATER PATHWAY FOR BUFFER AREA GRIDS
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result	Raw Data Result	TEF		NMED Soil-To-Grounwater SSL (mg/kg)	Source (1,2)	Is SSL Exceeded? Y/N	Grids with Exceedances

U = Nondetect

UJ = Estimated Nondetect

TABLE 4-8
EVALUATION OF THE BEEF INGESTION PATHWAY
FORT WINGATE DEPOT ACTIVITY
McKINLEY COUNTY, NEW MEXICO

Constituent	Tier 1 TRVs* (mg/kg)	Site Concentration** (mg/kg)	Site Concentration Exceeds TRV? Y/N
Arenic	36.1	8.6	N
Cobalt	57.7	8.2	N
Lead	173	24	N
Manganese	5770	930	N
Nickel	289	21	N
Silver	2.89	0.48	N
Vanadium	289	42	N
Zinc	2890	60	N

*TRVs for the pronghorn from NMED 2017

**Concentration shown is the maximum detected concentration of the low density and buffer area data.

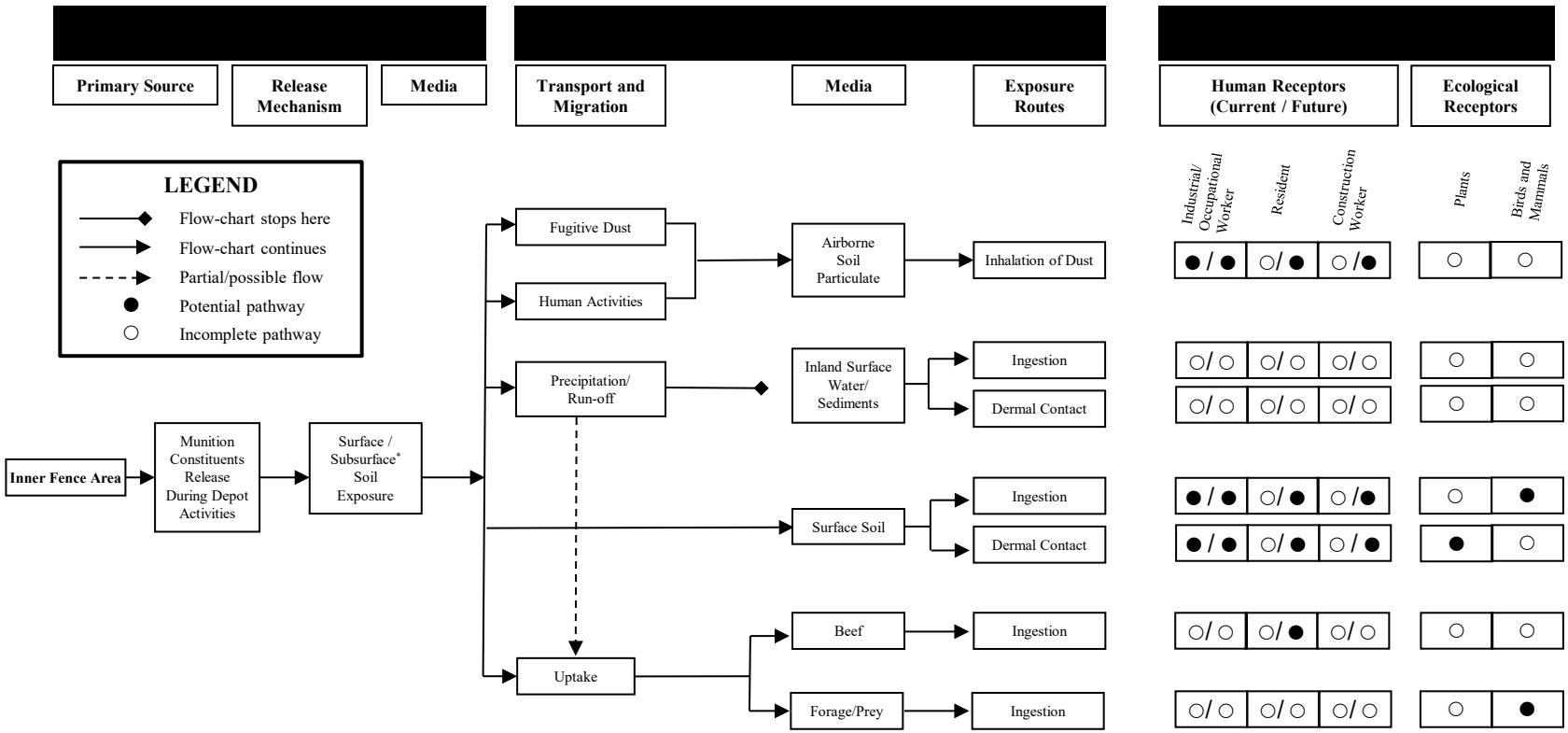
mg/kg = milligram per kilogram

N = no

TRV = toxicit reference value

Y = yes

FIGURE 4-1
INNER FENCE AREA SITE CONCEPTUAL EXPOSURE MODEL
FORT WINGATE DEPOT ACTIVITY, McKINLEY COUNTY, NEW MEXICO



*Subsurface soil exposures to MC were considered minor pathways and were not specifically evaluated in the risk assessment because the release mechanism and historical HWMU data indicate subsurface soil is not a medium of concern for the Inner Fence area. However, as discussed in **Sections 2.4.1** and **6** a remnant subsurface exposure pathway (i.e., for MEC/associated MC at depths up to 12 feet bgs cannot be completely discounted, even within the completed RA grids). Vapor intrusion was considered a minor pathway and was not evaluated quantitatively in this risk assessment. Vapor intrusion is discussed qualitatively in **Section 4**.

5.1 ECOLOGICAL RISK SCREEN APPROACH

The ecological evaluation was conducted in general accordance with NMED's *Risk Assessment Guidance for Site Investigations and Remediation, Volume 2, Soil Screening Guidance for Ecological Risk Assessments* (NMED 2017). NMED methodology is divided into two phases for completing an ecological risk assessment:

- Phase I – Scoping and Screening Assessments
  - Scoping Assessment
  - Screening Level Ecological Risk Assessments (SLERA) (Tiers 1 and 2)
- Phase II – Site-Specific Assessments
  - Site-Specific Ecological Risk Assessment (Tier 3)

5.1.1 Scoping Assessment

The Scoping Assessment served as the initial information gathering and evaluation for the ecological risk assessment process. The Scoping Assessment consisted of the following steps:

- Compiled and Assessed Basic Site Information (a Site Assessment Checklist provided in NMED Guidance may be used)
- Conducted Site Visit
- Identified Preliminary Contaminants of Potential Ecological Concern
- Developed a Preliminary Conceptual Site Exposure Model. This is referred to as the Ecological Conceptual Exposure Model (ESCM) in this document
- Prepared a Scoping Assessment

The detailed Scoping Assessment is provided in **Section 5.2.1**. A Technical Decision Point at the conclusion of the Scoping Assessment concluded that further ecological investigation is warranted in a Tier 1 screening-level evaluation.

5.1.2 Tier 1 Screening-Level Ecological Risk Assessment Methodology

The scoping assessment indicated complete exposure pathways The Tier 1 SLERA is the next step. The Tier 1 SLERA uses information collected during the Scoping Assessment and contains the following:

- Characterization of the environmental setting, including current conditions and future land uses.
- Identification of known or likely chemicals of potential ecological concern (COPECs) based on site activities.

- Evaluation of the fate and transport pathways of COPECs to identify those that form a complete link from source to potential receptor.
- Identification of the environmental values to be protected (the assessment endpoints), particularly noting the presence or potential presence of protected species or habitats.
- Identification of the impacted media, complete exposure pathways, and exposure routes.
- Species likely to be impacted and selection of representative receptors.

Given the information compiled, the Tier 1 SLERA determined further evaluation is necessary based on:

- Assessment of the potential magnitude of exposure using the maximum detected concentration and conservative Tier 1 exposure assumptions.
- Identification of COPECs with the potential to cause adverse effects to ecological receptors based on conservative exposure assumptions and no-observed adverse effect level (NOAEL) toxicity reference values (TRVs).

Another Technical Decision Point followed the Tier 1 SLERA which determined further evaluation is warranted in a Tier 2 SLERA. Detailed results of the Tier 1 SLERA are presented in **Section 5.2.2**.

5.1.3 Tier 2 Screening-Level Ecological Risk Assessment Methodology

Less conservative methodologies were applied in Tier 2. A more reasonable representation of the exposure concentration was used expressed as the 95% UCL of the mean rather than the maximum detected concentration. For birds and mammals, exposure models using more representative estimates of receptor characteristics were employed (e.g., average body weight and ingestion estimates). In addition, NMED recommends a lowest-observed-adverse-effects level (LOAEL) TRV as a benchmark more representative of population risks than the NOAEL. Detailed results of the Tier 2 SLERA are presented in **Section 5.2.3**.

5.1.4 Tier 3 Ecological Risk Assessment Methodology

Tier 3 includes additional quantitative analyses (e.g., biota studies to evaluate impacts at the site) or corrective actions (e.g., removals). Tier 3 is not included in the scope of the current evaluation.

5.2 ECOLOGICAL RISK SCREEN RESULTS

The ecological risk screening approach was presented in **Section 5.1**. Detailed results are presented in the following subsections.

5.2.1 Scoping Assessment

As discussed previously, the Scoping Assessment serves as the initial information gathering and evaluation for the ecological risk assessment process.

5.2.1.1 Basic Site Information

An overview of the Site was provided in **Sections 1.3 through 1.6**. The focus of this section is on the environmental setting. The majority of this information was obtained from the *Final Resource Restoration Plan and Environmental Assessment for the Fort Wingate Depot Activity Site* (Navajo Nation, New Mexico Office of Natural Resources Trustee, US Department of Army, Zuni Tribe, 2024),

Because of the FWDA's location and the range of topographic elevations found at the site, the property provides suitable conditions to support three different life zones comprised of various cold desert and semiarid vegetative communities. These include the Upper Sonoran Life Zone, the Transition Life Zone, and the Montane Life Zone (ERM, 1997). The Transition Zone occurs in the higher elevations and the mountain slopes of the Zuni Mountains in the central and southern section of the FWDA. This zone forms a transitional area where the flora and fauna from the lower Upper Sonoran and the higher Montane Life Zones mix. The lower elevations of the Transition Life Zone are represented by open piñon-juniper forests, shrublands, and some grassland communities. The Montane Life Zone is restricted to the higher elevations of the Zuni Mountains along the southern third of the FWDA where ponderosa pine forests dominate (ERM, 1997). The IF lies within the Transition Life Zone.

Desert Scrubland and Piñon/Juniper Woodland occupy the majority of land area near FWDA (ERM, 1997). The desert shrubland community is primarily dominated by big sagebrush, fourwing saltbrush, golden rabbitbrush, and black greasewood. However, other shrub species such as dune broom, winterfat, broom snakeweed, Mormon tea, mock heather, antelope brush, and spineless horsebrush also occur interspersed among the dominant shrubs. The species in the herbaceous stratum of this community include western wheatgrass, ring muhly, wild oats, blue grama, alfileria, needle and thread, bottlebrush squirrel tail, and various forbs (NMSU, 2011).

The piñon/juniper woodland community is dominated by piñon and juniper trees usually less than 30 feet tall that have short, twisted trunks and wide, spreading crowns. This community is best characterized by its widely spaced, mixed stand of piñons and junipers that occur in dry and rocky or gravely terrain (NatureServe, 2023).

Specific species of pine and junipers that are located in this community include two needle piñon pine, one-seed juniper, and Utah juniper (NatureServe, 2023). The shrub stratum of this community is similar to species found in the desert scrubland community, and includes species such as big sagebrush, antelope brush, cliff rose, fourwing saltbrush, golden rabbitbrush, tomatillo, broom snakeweed, dune broom, Mormon tea, and shadscale. The species in the herbaceous stratum of this community included many of the same grasses and forbs found in the

desert scrubland and grassland communities. Additional flora in the herbaceous stratum include species such as cushion cactus and prickly pear cactus (NMSU, 2011).

5.2.1.2 Site Visit

Site visits were conducted in conjunction with site assessment and sampling activities. A Scoping Assessment Checklist is provided in **Appendix D.2**, Attachment A. Additional detail is provided in the following sections.

5.2.1.3 Special-Status Species and/or Environments

Consideration was given to the possible presence of threatened and endangered species as well as sensitive environments. There are no known National Parks or National Monuments, Wilderness Areas, Wildlife refuges, Nations Lakeshore Recreational Areas, designated game management areas, or other resources defined in NMED Guidance as sensitive environments, except as discussed below.

A report of threatened and endangered species for McKinley County was obtained from the Biota Information System of New Mexico (BISON-M) (**Appendix D.2**, Attachment 2). BISON-M contains accounts for all vertebrate and many invertebrate species that occur in New Mexico, including all threatened and endangered species (NMDGF, 2024). The following table presents the species that are listed as threatened or endangered or are candidates for listing that have been observed in McKinley County.

Insert 5-1: Federal- and State-Listed Species in McKinley County

Common Name	Scientific Name	Federal Status	State Status	Applicability to FWDA
Bald Eagle	*Haliaeetus leucocephalus*	Delisted, MBTA	Threatened, SGCN	Not applicable
Peregrine Falcon	*Falco peregrinus*	Delisted, MBTA	Threatened, SGCN	Not applicable
Least Tern	*Sternula antillarum*	Delisted, MBTA	Endangered	Not applicable
Costa's Hummingbird	*Calypte costae*	MBTA	Threatened, SGCN	Not applicable
Yellow-billed cuckoo (western population)	*Coccyzus americanus occidentalis*	Threatened, MBTA	SGCN	Not applicable
Mexican Spotted Owl	*Strix occidentalis lucida*	Threatened, MBTA	SGCN	Not applicable
Southwestern Willow Flycatcher	*Empidonax traillii extimus*	Endangered, MBTA	Endangered, SGCN	Not applicable
Gray Vireo	*Vireo vicinior*	MBTA	Threatened, SGCN	Applicable
Zuni Bluehead Sucker	*Catastomus discobolus yarrowi*	Endangered	Endangered, SGCN	Not applicable

SGCN – Species of Greatest Conservation Need
MBTA – Migratory Bird Treaty Act

Source: Biota Information System of New Mexico, New Mexico Game & Fish (Accessed 24Feb2024).

Each is discussed below:

Bald Eagle - Bald eagles are primarily water-oriented, and the majority of the populations occurring in New Mexico are found near streams and lakes (NMACP 2024). Because there are no bodies of water on or in the vicinity, bald eagles would unlikely be associated with the IF.

Peregrine Falcon - According to the New Mexico Avian Conservation Partner (NMACP, 2024), in New Mexico, almost all nests are constructed on ledges on relatively tall cliffs in remote areas with minimal human disturbance. The BISON-M distribution map shows peregrine falcon habitat on portions of Fort Wingate, which includes small portions of the IF. Enderson and Craig (1997) found home ranges in Colorado ranged from 358 – 1,508 square kilometers ($km^{2)}$ (about 88,000 - >350,000 acres). Although peregrine falcon habitat may occur in or near the IF, the potential contribution to a diet obtained within the IF would be inconsequential as the IF (assuming a sampling area of 180 acres) comprises only about 0.2% of the most conservative home range of the peregrine falcon.

Least Tern – Least terns in the interior of North America breed along major river systems and occasionally at lakes. The New Mexico population of least terns is found in Bitter Lake National Wildlife Reserve near Roswell in Chaves County (NMACP, 2024) and occasionally along the Pecos River valley. Because there are no bodies of water representative of least tern habitat on or in the vicinity of the Fort Wingate, least terns are not considered a concern for this evaluation. The BISON-M distribution map does not indicate any least tern habitat in the vicinity of Fort Wingate.

Costa's Hummingbird - Costa's Hummingbird is a desert scrub species of the southwestern United States and northern Mexico, with only a limited and irregular presence in southern New Mexico. It is reliant on nectar-producing native vegetation along the interface of desert and foothill/montane shrub habitats. In New Mexico, Costa's Hummingbird is an uncommon and sporadic breeder in the southwest and south-central mountains. It occurs most regularly in Guadalupe Canyon, and inside canyons along the lower Gila River from Cliff south. It may be irregular in other small desert ranges, especially in the San Andres mountains in Dona Ana County (NMACP, 2024). The BISON-M distribution map does not indicate any Costa's hummingbird habitat in the vicinity of Fort Wingate.

Yellow-billed Cuckoo - In New Mexico, the yellow-billed cuckoo is found in riparian zones with dense understory vegetation, most commonly in the south and along major drainages NMACP 2024). The BISON-M distribution map for the yellow-billed cuckoo does not indicate any habitat in the vicinity of Fort Wingate.

Mexican Spotted Owl - The Mexican Spotted Owl prefers mature forest with a closed canopy and complex vertical structure. In New Mexico, Spotted Owls occur in summer and winter throughout the state, except for in the eastern plains. They are more abundant in the south (NMACP 2024). BISON-M indicates there is FWS-listed critical habitat to the southeast of Fort Wingate. However, there is no habitat indicated on Fort Wingate or in the vicinity of the IF.

Southwestern Willow Flycatcher - The southwestern subspecies of the Willow Flycatcher has been federally listed as endangered since 1995, with critical habitat being designated in 2005. In New Mexico, Southwestern Willow Flycatcher breeds almost exclusively along the Gila River and Rio Grande. Scattered historical breeding records are also known from the Canadian, Chama, San Francisco, San Juan, and Zuni River drainages. Throughout the southwest, Southwestern willow flycatchers nest near lentic water, such as slow moving streams, river backwaters, oxbows, or marshy areas (NMACP, 2024).

The BISON-M distribution map for the southwestern willow flycatcher does not indicate any habitat in the vicinity of or within Fort Wingate.

Gray Vireo – The gray vireo is strongly associated with pinyon-juniper and scrub-oak habitat across its small breeding range in the southwestern United States and northern Mexico. In New Mexico, Gray Vireos are locally distributed across the western two-thirds of the state. Gray Vireos typically prefer open pinyon-juniper woodland or juniper savannah with a shrub component. In New Mexico, the species occurs in chaparral-juniper, pinyon-juniper, and pinyon-madrone associations. It also occurs in mid-elevation montane shrub habitats with rocky slopes and scattered conifers. Gray vireos arrive in New Mexico from mid to late-April, and generally depart by mid-August. Gray vireos are mostly insectivorous during the breeding season, foraging on the ground and in shrubs and trees up to 16 feet. (NMACP, 2024). BISON-M indicates potential gray vireo habitat within portions of the IF.

Zuni Bluehead Sucker – As reported in BISON-M, Zuni bluehead suckers generally occur in flowing pools and swift areas and streams. The distribution of C.d. yarrowi as of 2009 is limited to three localities and roughly two habitat types: Tampico Springs (headwater isolated spring), Agua Remora (headwater isolated spring), and Rio Nutria (canyon-bound river mainstem) with most fish found in the canyon-bound Rio Nutria. There are no aquatic habitats on or near the IF characteristic of habitat requirements of the Zuni bluehead sucker.

The U. S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) tool was also accessed (USFWS, 2024). IPaC is a tool which generates a list of species and other resources such as critical habitats under USFWS jurisdiction that are known or expected to be on or near the project area (**Appendix D.2**, Attachment 3). The Mexican spotted owl, yellow-billed cuckoo, and Zuni bluehead sucker are included in the IPaC report. These were discussed above. Also included in the IPaC report are the monarch butterfly (Danaus plexippus – candidate) and Zuni fleabane (Erigeron rhizomatus – threatened). The golden eagle (Aguilia chrysaetos) was also noted. The golden eagle is not listed as a bird of conservation concern, but is protected under the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act. Each is discussed below:

Monarch butterfly – The monarch is a candidate species and not yet listed or proposed for listing. The Southwest Monarch Study (SMS, 2024) has studied monarch behavior in the southwestern United States, including New Mexico. To date, no overwintering monarchs have been observed in New Mexico, but have been documented during the early sprig migration in

late March and early April. By July, summer breeding monarchs are reported throughout the southwest range.

Monarch butterflies require healthy and abundant milkweed plants for laying eggs and as a food source for larvae or caterpillars. They also feed on the nectar of many flowers (USFWS, 2024b). Monarchs dwell above-ground and would not be expected to be directly exposed to soils. The monarch butterfly was not retained for evaluation in the IF.

Zuni fleabane – Zuni fleabane is an herbaceous perennial plant found in nearly barren detrital clay hillsides with soils derived from shales of the Chinle or Baca formations. This plant is known from three locations in the Zuni Mountains near Fort Wingate, 28 locations in the Sawtooth and northwest Datil mountains, and at least 3 locations in the Chuska Mountains on the Navajo Nation (New Mexico Rare Plant Technical Council, 2024). The potential presence of Zuni fleabane within the IF cannot be discounted. The Zuni fleabane will be evaluated as a part of the vegetative plant community.

Golden Eagle – The golden eagle is a carnivorous bird of prey. Food ranges from insects, small mammals, snakes, and turtles, to skunks, prairie dogs, marmots, ground squirrels, to rare extremes of full-grown deer, antelopes, and also great horned owls, magpies, domestic pigeons, and cranes. The golden eagle eats carrion but rarely attacks healthy pigs, sheep, deer, or other large mammals (BISON-M). Due to the wide-ranging foraging behavior of the golden eagle, the potential contribution of prey associated with the IF is considered inconsequential.

In conclusion, based on the behavior and habitat requirements of the species noted above, only the gray vireo and Zuni fleabane may potentially be present on or near the IF. Based on the diet of the gray vireo primarily as an insectivore, the horned lark will be used as a species representative of the gray vireo. The plant community will be the focus of the evaluation for the Zuni fleabane.

5.2.1.4 Preliminary Contaminants of Potential Ecological Concern

COPECs are chemicals which may pose a threat to individual species or biological communities. For the purposes of the Scoping Assessment, all chemicals known or suspected of being released at the site are considered COPECs. The preliminary COPECs identified for the IF included VOCs, SVOCs, PCBs, dioxins/furans, and inorganics. Individual COPECs are those constituents listed in **Appendix B**.

5.2.1.5 Ecological Conceptual Site Model

The Ecological Conceptual Site Model (ECSM) provided a summary of potentially complete exposure pathways, along with potentially exposed receptor types. The ECSM was used in conjunction with the scoping assessment to determine whether further ecological assessment (i.e., Screening-Level Assessment, Site-Specific Assessment) and/or interim measures are required (NMED, 2017).

As discussed previously, FWDA's primary mission was to receive, store, maintain, and ship explosives and military munitions, as well as disassemble and dispose of unserviceable or obsolete explosives and other military munitions. The HWMU within the IF was where all detonations and burns of explosives and munitions occurred. Based on the release mechanism and conditions within the IF (i.e., kickout and subsequent dispersion of MEC from OB/OD activities at the HWMU) resulting in releases to the surrounding area, the primary environmental medium impacted outside the HWMU was surface soil. Although subsurface soil could have been impacted by leaching and infiltration from surface soil for mobile constituents (such as VOCs), the potential was considered low as VOCs, if present, would likely quickly volatilize from surface soils, particularly in an arid environment. As a result, the inhalation pathway for potential receptors was considered incomplete. If mobile constituents in surface soil leached to subsurface soil, then exposures could be potentially complete, although this is considered a very minor pathway based on the release mechanism from the HWMU and was not evaluated.

Thus, the exposure medium of interest for this evaluation was surface soil. The potential routes by which ecological receptors may be exposed to site-related COPECs are illustrated in the ecological ECSM (**Figure 5-1**). The ECSM illustrates those exposure pathways that are potentially complete and were evaluated in the SLERA. These include the following:

- Terrestrial plants – direct contact with surface soils
- Birds and mammals – incidental ingestion of surface soil, and ingestion of forage or prey that have accumulated chemicals through bioaccumulative processes.

Some exposure pathways have been combined with others or cannot be quantitatively evaluated because of a lack of available information for the exposure evaluation. These were considered uncertainties in this SLERA. Examples of these potential exposure pathways include dermal and inhalation exposures for birds and mammals. Although these pathways are not quantitatively evaluated they were considered relatively minor exposure pathways relative to other exposure pathways. The inhalation pathway generally is not quantified for ecological receptors and was not considered a significant pathway (USEPA 1993). Additionally, while direct dermal contact with soil could potentially occur via digging or probing for food, most soil does not reach the epidermis of wildlife because of the presence of fur or feathers, and therefore, was not quantified. The inhalation and dermal exposure pathways may contribute to overall exposure, but their contribution is considered *de minimus*.

5.2.1.6 Scoping Assessment Summary

The Scoping Assessment identified ecological habitat at the site, preliminary COPECs, and potentially complete exposure pathways. The Technical Decision Point concluded from the Scoping Assessment is that further evaluation in a Tier 1 SLERA is warranted.

5.2.2 Tier 1 Screening-Level Ecological Risk Assessment

The Tier 1 SLERA uses information collected during the Scoping Assessment, and adds the following steps:

- Identification of species likely to be exposed to site-related chemicals, and, from among those, selection of representative receptors.
- Assessment of the potential magnitude of exposure using the maximum detected concentration and conservative Tier 1 exposure models.
- Identification of COPECs with the potential to cause adverse effects to ecological receptors based on conservative exposure assumptions and TRVs.

The detailed Tier 1 SLERA methodology is expanded in **Sections 5.2.2.1 to 5.2.2.7**, culminating in the Tier 1 evaluation results, uncertainties and conclusions (**Sections 5.2.2.8 to 5.2.2.10**).

5.2.2.1 Assessment Endpoints

Assessment endpoints (AEs) are the ecological values to be protected and are selected to ensure the survival and reproduction of all ecological receptors to maintain populations (NMED, 2017). NMED guidance (NMED 2017) has identified species or communities typical of most habitats within the State that should be considered for ecological risk assessment, which are: plant community, deer mouse (small mammalian omnivore), horned lark (avian omnivore), kit fox (mammalian carnivore), pronghorn (large game herbivore) and red-tailed hawk (avian carnivore).

Section 5.2.2.2 presents information supporting the decision that only four of the six categories of representative categories identified by NMED require evaluation in the IF area at FWDA. These receptor categories and their AEs are:

- Viability and Function of the Terrestrial Plant Community
- Survival, Growth and Reproduction of small mammalian omnivores (representative species deer mouse)
- Survival, Growth and Reproduction of avian omnivores (representative species horned lark)
- Survival, Growth and Reproduction of avian carnivore populations (representative species red-tailed hawk).
- Survival, Growth and Reproduction of mammalian carnivore populations (representative species kit fox).
- Survival, Growth and Reproduction of large herbivore populations (representative species pronghorn antelope).

5.2.2.2 Selection of Representative Receptor Species

As noted in **Section 5.2.2.1**, NMED guidance (NMED 2017) has identified species or communities typical of most habitats within the State that should be considered for ecological risk assessment: plant community, deer mouse (small mammalian omnivore), horned lark (avian

omnivore), kit fox (mammalian carnivore), pronghorn (large game herbivore) and red-tailed hawk (avian carnivore) requiring evaluation in the IF area at FWDA.

The kit fox, pronghorn and red-tailed hawk are wide-ranging receptors with home ranges of 2,767 acres, 3,422 acres and 1,770 acres, respectively. Per NMED guidance, risks to these wide-ranging species are assumed to be negligible when the areas of potential contamination are less than 10% of the species' home range. Approximately 180 acres were sampled within the IF. Based upon the IF acreage and the acreage associated with 10% of their home range, two receptors do not require further evaluation in the SLERA: 1) the kit fox – 10% of its home range is 279 acres, which is greater than the IF acreage; and 2) the pronghorn antelope - 10% of its home range would be 342 acres, which is also greater than the IF acreage.

Accounting for the home range exclusion, the kit fox and pronghorn antelope would not necessarily require evaluation. However, both have been retained to provide a relative risk contribution that might also be considered should data become available for other areas within or in proximity to the sampled IF area. Thus, the receptors retained for further evaluation within the IF are: plant community, deer mouse (small mammalian omnivore), horned lark (avian omnivore), red-tailed hawk (avian carnivore), kit fox (mammalian carnivore) and the pronghorn antelope (large mammalian herbivore). The plant community represents primary producers that form the foundation of the food chain, converting inorganic source materials into organic materials that are used as a food source by upper trophic level receptors. Plants also provide structure within the environment and habitat for other wildlife.

The deer mouse (*Peromyscus spp.*) was selected as a representative of the many small omnivorous mammals that may inhabit the site. Deer mouse is a collective name for a number of species of field mice or white-footed mice. In New Mexico, *Peromyscus maniculatus* is the most common of the genus (MNDGF 2016). Deer mice occur in many habitats and their diet may depend on location and season. According to USEPA (1993), diet items include vegetable matter (primarily, seeds, fruits, berries) and invertebrates (caterpillars of many species of insects, as well as adults). Per NMED Guidance (NMED, 2017), the deer mouse may be exposed to soils depths from 0-10 ft.

The horned lark (*Eremophila alpestris*) is found at many elevations in New Mexico deserts and prairies, but favors bare, dry ground and areas of short, sparse vegetation. The horned lark forages primarily on the ground and feeds on seeds and insects (Cornell 2024). As per NMED guidance, the proportion of plant matter to animal matter is 75:25. Per NMED Guidance (NMED, 2017), the horned larked may be exposed to surface soils (0-1 ft). The horned lark is considered an ecological receptor representing small birds.

As reported in NMED (2017), the red-tailed hawk (*Buteo jamaicensis*) is a top carnivore avian key receptor. The red-tailed hawk is widespread throughout New Mexico and is one of the most common birds of prey. It hunts primarily rodents, rabbits, birds, and reptiles. The red-tailed hawk has a large home range size (1770 acres). Per NMED Guidance (NMED, 2017) the red-tailed hawk may be exposed to surface soils (0-1 ft). The diet is based on a composition of 100% prey.

As described in NMED (2017), the kit fox (Vulpes macrotis) is native to the western United States and Mexico. Its diet consists mostly of small mammals, although its diet may also consist of plant matter during certain times of the year. It is selected as a key receptor because it is common in New Mexico, and the surrounding area at most sites in New Mexico provides suitable habitat for the kit fox. The kit fox has a large home range size (2767 acres) (Zoellick & Smith, 1992). Per NMED Guidance (NMED, 2017) kit fox may be exposed to both surface and subsurface soils (0-10 ft). The diet is based on a composition of 100% prey.

NMED (2017) describes the pronghorn antelope (Antilocapra americana) as a popular big game species that occurs in western Canada, United States, and northern Mexico. Its diet consists mainly of sagebrush and other shrubs, grasses, and forbs. The pronghorn is selected as a key receptor representative of large herbivorous species of wildlife. The pronghorn has a large home range size (3422 acres) (Reynolds, 1984). It is assumed that 100% of the diet is from grazing vegetation.

5.2.2.3 Data Usability

Prior to use in the human health and ecological risk assessments, all site data were validated and qualified following the QA/QC procedures described in the Work Plan (AECOM 2021). Data validation included procedures outlined in USEPA Risk Assessment Guidance for Superfund, Volume I: Human Health Evaluation Manual (USEPA 1989) and in the Guidance for Data Usability in Risk Assessment (USEPA 1990b). Sample results were assigned appropriate qualifiers during data validation, and applied in the SLERA as follows:

- Data were considered usable for risk assessment purposes if 1) they were not qualified or 2) were estimated (J-qualified).
- Data were not used if rejected (R-qualified) or if non-detect (U-qualified) in the field sample based on their presence in corresponding laboratory or field blanks. Other non-detect data for chemicals were considered useable in the risk assessments.
- Samples collected for QA/QC purposes (e.g., matrix spike/matrix spike duplicate) were used in the risk assessments.
- For duplicate samples, the higher of the parent and duplicate result was used.
- When calculating toxicity equivalents (TEQs) for dioxins/furans, non-detects were given a value of zero (see also **Section 5.2.2.7**).

5.2.2.4 Soil Intervals Used in the SLERA

NMED guidance recognizes two soil depths for ecological receptors: (1) animals that feed primarily at the surface or create only shallow burrows are considered to be exposed to surface and shallow-subsurface soil down to one foot. All representative receptors selected for this evaluation are considered to be exposed to surface soils. Plants and animals whose roots or burrows extend past one foot are considered to be exposed to soil down to 10 feet below the surface. Among the representative receptors selected for this evaluation, this applies to plants

and the deer mouse. As discussed in development of the ECSM **(Section 5.2.1.5)**, the HWMU was where all detonations and burns of explosives and munitions occurred. Based on the release mechanism and conditions within the IF (i.e., dispersion of MEC from OB/OD activities at the HWMU resulting in surface area releases) and the results of the MEC RA (recovered MEC was at or just below the surface), the primary environmental medium impacted was surface soil. Therefore, for purposes of this SLERA, only surface soils were used to evaluate potential exposures. The uncertainty associated with this assumption is discussed in the uncertainty analysis (**Section 5.2.2.9**). It is important to note that, as discussed in **Section 2.4.1**, the MEC items removed from the low density manually excavated grids of the IF during this RA, were typically recovered from depths less than 12 inches bgs and the deepest MEC item was recovered from a depth of 22 inches bgs. However, because historical accounts note that MEC could be deposited to depths up to 12 feet bgs within the IF Area, the potential for a remnant subsurface MEC/associated MC hazard cannot be completely discounted within the remediated and sampled IF grids/areas.

5.2.2.5 Comparison with Background

All metals data for the Inner Fence were collected using incremental sample methodology. The background data available for FWDA were based on discrete samples; therefore, it is not appropriate to use the FWDA background data for a quantitative comparison with incremental samples. For the Inner Fence SLERA, all detected metals were included in the quantitative assessment of risk. Potential non-site related risks associated with background were calculated (**Section 5.2.3.4**) to provide an additional line of supporting information for use in risk management decision making.

5.2.2.6 Ecological Screening Levels

NMED guidance (2017) has derived ecological screening levels (ESLs) for a number of typical representative species. These ESLs have been derived for New Mexico plant and animal species (specifically, the plant community, deer mouse, horned lark, kit fox, pronghorn, and red-tailed hawk) using conservative assumptions about exposure. In Tier 1, exposure concentrations are representative by the maximum detected concentration. Other conservative assumptions include minimum body weight and maximum dietary intake. Tier 1 TRVs are represented by a NOAEL. Preferential ESLs applied in Tier 1 were obtained directly from pre-calculated values presented in NMED guidance (NMED 2017). The ESLs are conservative by nature in indicating the potential for risk with the opportunity for refining conservative screening criteria with more realistic assumptions in a Tier 2 SLERA.

It is noted that ESLs were missing for several constituents which were detected in surface soils. These included:

- Acetone – plants
- 2-Butanone – horned lark, red-tailed hawk, plants
- Benzene – horned lark, red-tailed hawk

- Bis(2-ethylhexyl)phthalate – pronghorn, plants
- Bromomethane - deer mouse, horned lark, red-tailed hawk, kit fox, plants
- Chloromethane - deer mouse, horned lark, red-tailed hawk, kit fox, plants
- Chromium – plants
- Cyanide – plants
- Di-n-butylphthalate – pronghorn
- Dioxins/Furans – pronghorn, plants
- 2-Hexanone – plants
- Isopropyltoluene - deer mouse, horned lark, red-tailed hawk, kit fox, pronghorn, plants
- Toluene - horned lark, red-tailed hawk, pronghorn, plants
- 1,3-Trinitrobenzene – pronghorn
- 2,4,6-Trinitrotoluene – pronghorn
- 4-Amino-2,6-dinitrotoluene - pronghorn
- HMX - horned lark, red-tailed hawk, pronghorn
- RDX – pronghorn, plants
- Tetryl - horned lark, red-tailed hawk, pronghorn
- Antimony - horned lark, red-tailed hawk, pronghorn
- Barium - pronghorn
- Beryllium - horned lark, red-tailed hawk, pronghorn
- Cadmium – pronghorn
- Copper – pronghorn
- Mercury – pronghorn
- Selenium – pronghorn
- Thallium – pronghorn
- Cyanide - pronghorn
- Nitrate - deer mouse, horned lark, red-tailed hawk, kit fox, pronghorn, plants

A search was conducted from additional sources including the following:

- Los Alamos National Laboratory Ecorisk Database (Version 4.3) (N3B, 2022)
- USEPA Region 4 Ecological Risk Assessment Supplemental Guidance (USEPA, 2018)

- USEPA ECOTOX Knowledgebase (online database) (USEPA, 2024)
- USEPA Interim Ecological Soil Screening Level Documents (USEPA, 2003-2008)
- Toxicological Benchmarks for Contaminants of Potential Concern for Effects on Terrestrial Plants: 1997 Revision (Efroymson et al., 1997)
- Toxicological Benchmarks for Wildlife: 1996 Revision (Sample et al. 1996)

Additional ESLs were identified from the USEPA ECOTOX Knowledgebase for plants for bis(2-ethylhexyl)phthalate (1.07 mg/kg; Yuan et al. 2020), and RDX (6.33 mg/kg; Windfield et al. 2004). The highest no-observed effect level above the lowest lowest-observed effect level with the database was selected as an ESL.

USEPA publishes Ecological Soil Screening documents for aluminum and iron. Rather than numerical ESLs, pH levels in soils are noted as narrative screening endpoints. In well-aerated soils between pH 5 and 8, iron is not expected to be toxic to plants (USEPA 2003b). Iron is also not considered to be bioaccumulative and thus is not considered a concern for higher trophic levels (e.g., birds and mammals) (USEPA 2018). Similarly, USEPA soil screening guidance (USEPA 2003a) indicates aluminum is only a concern at sites where the soil pH is less than 5.5. The US Department of Agriculture (USDA) reports the Fort Wingate soil series is neutral (pH 7.0-7.2) in the surface soil horizons (USDA 2006). Therefore, neither aluminum nor iron were considered COPECs.

No additional information for the remaining COPECs and receptors was identified. In addition, no reliable surrogate values were identified. The absence of ESLs is discussed further in the Tier 1 Uncertainty Analysis (**Section 5.2.2.9**).

5.2.2.7 Exposure Concentrations

Tier 1 exposures were estimated using the maximum detected concentration of a chemical as the representative EPC within the IF.

The approach for evaluating dioxins/furans is different than that for other constituents. The relative toxicity of each congener is used to calculate an EPC to be compared with the ESL for TCDD, the most toxic congener. For each congener, a congener-specific TEF is applied to generate a TCDD TEQ for that congener. Van den Berg et al. (1998) has noted birds and mammals have slightly different sensitivities to some of the congeners; therefore, TEQs were calculated separately for mammals and birds. TEFs are summarized below (Van den Berg et al. 1998; Van den Berg et al. 2006):

Insert 5-2: Dioxin/Furan Toxicity Equivalency Factors

Dioxin and Furan Congeners	Mammalian TEF	Avian TEF
Chlorinated dibenzo-p-dioxins		
2,3,7,8-TCDD	1	1

Dioxin and Furan Congeners	Mammalian TEF	Avian TEF
1,2,3,7,8-PeCDD	1	1
1,2,3,4,7,8-HxCDD	0.1	0.05
1,2,3,6,7,8-HxCDD	0.1	0.01
1,2,3,7,8,9-HxCDD	0.1	0.1
1,2,3,4,6,7,8-HpCDD	0.01	0.001
OCDD	0.0003	0.0001
Chlorinated dibenzofurans		
2,3,7,8-TCDF	0.1	1
1,2,3,7,8-PeCDF	0.03	0.1
2,3,4,7,8-PeCDF	0.3	1
1,2,3,4,7,8-HxCDF	0.1	0.1
1,2,3,6,7,8-HxCDF	0.1	0.1
1,2,3,7,8,9-HxCDF	0.1	0.1
2,3,4,6,7,8-HxCDF	0.1	0.1
1,2,3,4,6,7,8-HpCDF	0.01	0.01
1,2,3,4,7,8,9-HpCDF	0.01	0.01
OCDF	0.0003	0.0001

For screening purposes in Tier 1, the maximum detected concentration of a congener was multiplied by the appropriate TEF to generate a toxicity equivalent for that congener. The congener TEQs were then summed for a total maximum-based TEQ for birds and mammals for screening against ESLs. Only detected values were included in calculation of the TEQs.

5.2.2.8 Tier 1 SLERA Results

By definition, the SLERA functions to screen and identify which sites, chemicals, pathways, and receptors may be a potential concern. Exceedance of an ESL does not imply that a risk is present since the ESL represents a "no-effects" concentration. However, a cumulative hazard (HI – hazard index) exceeding 1.0 indicates a potential for risk and that further analysis is warranted, generally in a Tier 2 SLERA.

In Tier 1, a screening-level hazard quotient (SLHQ) is calculated for each COPEC. The SLHQ is the ratio of the exposure concentration (maximum detected in Tier 1), to the chemical-specific ESL for each receptor.

$$SLHQ = (Maximum/ESL)$$

NMED recommends the summation of SLHQs for each representative receptor (referred to as the HI).

$$HI = SLHQ_1 + SLHQ_2 + \ldots + SLHQn$$

The HI is calculated for each representative receptor as the exposure pathways and sensitivities vary between receptors. If the HI is less than 1.0 for a receptor, further evaluation of that receptor

is not warranted. As with SLHQs, an HI greater than 1.0 does not automatically signify risk but that further evaluation is warranted.

Results of the Tier 1 SLERA results are provided in the following tables:

- **Table 5-1** – Tier 1 Screening Results for Plants
- **Table 5-2** – Tier 1 Screening Results for the Deer Mouse
- **Table 5-3** - Tier 1 Screening Results for the Horned Lark
- **Table 5-4** – Tier 1 Screening Results for the Red-Tailed Hawk
- **Table 5-5** – Tier 1 Screening Results for the Kit Fox
- **Table 5-6** – Tier 1 Screening Results for the Pronghorn Antelope

Resulting cumulative Tier 1 screening HIs are as follows:

- Plants – 35
- Deer Mouse - 35
- Horned Lark - 100
- Red-Tailed Hawk – 13
- Kit Fox – 7.9
- Pronghorn Antelope – 1.1

HIs exceeded one for each of the representative receptors in the Tier 1 evaluation. This was associated almost exclusively with metals in surface soils. For plants, SLHQs were highest for the following:

- Arsenic (0.48)
- Barium (6.9)
- Beryllium (0.72)
- Cobalt (0.63)
- Copper (9.6)
- Manganese (4.2)
- Nickel (0.55)
- Selenium (4.4)
- Thallium (4.0)
- Vanadium (70)
- Zinc (0.46).

Most notable COPEC-specific Tier 1 SLHQs for the deer mouse included the following:

- Antimony (1.2)
- Arsenic (0.9)
- Barium (1.7)
- Cadmium (0.51)
- Chromium (2.8)
- Cobalt (0.12)
- Copper (13)
- Lead (0.56)
- Manganese (2.0)
- Nickel (1.4)
- Selenium (1.8)
- Thallium (3.1)
- Vanadium (1.1)

Key COPEC-specific SLHQ results for the horned lark included the following:

- Arsenic (0.81)
- Barium (2.4)
- Cadmium (0.52)
- Chromium (4.9)
- Cobalt (0.23)
- Copper (35)
- Lead (3.1)
- Manganese (1.1)
- Mercury (21)
- Selenium (1.7)
- Vanadium (26)
- Zinc (0.23)

Notable inorganic SLHQs for the red-tailed hawk included the following:

- Barium (0.31)

- Chromium (0.64)
- Copper (4.6)
- Lead (0.40)
- Mercury (2.7)
- Selenium (0.22)
- Vanadium (3.4).

The highest SLHQs for the kit fox included the following:

- Antimony (0.26)
- Barium (0.39)
- Chromium (0.64)
- Copper (3.0)
- Lead (0.49)
- Manganese (0.45)
- Mercury (0.033)
- Nickel (0.31)
- Selenium (0.40)
- Thallium (0.70)
- Vanadium (0.25).

Although none of the individual constituents for the pronghorn antelope exceeded an SLHQ of 1, several contributed to a cumulative SLHQ slightly greater than one:

- Arsenic (0.24)
- Cobalt (0.14)
- Lead (0.14)
- Manganese (0.16)
- Silver (0.17)
- Vanadium (0.15)

All inorganics with a Tier 1 SLHQ above 0.1 were carried forward to Tier 2.

There are also noteworthy organic constituents as well. Among explosives constituents, the maximum concentration of methyl-2,4,6-trinitrophenylnitramine (tetryl) exceeded its ESL in sample P31F-SS-IS-SO-S526 (43J mg/kg), resulting in a Tier 1 SLHQ of 3.6 for the deer mouse.

This was a J-qualified (estimated) concentration in a single ISM sample replicate, and tetryl was not detected in the other two replicate samples collected at this location. This was the only detection of tetryl in the entirety of the IF (among a total of 167 ISM sample locations in which it was analyzed). This represents a detection frequency of less than 1%. The SLHQ for RDX was 1.4 for plants but was only detected in 2 of 167 sample locations (detection frequency 1%). Among semi-volatile organics, di-n-butylphthalate had a Tier 1 SLHQ of 0.11 for the horned lark. There were only two detects among 73 discrete samples (i.e., less than 3%), neither of which exceeded the Tier 1 ESL. Bis(2-ethylhexyl)phthalate had an SLHQ of 0.2 for plants and was detected in 1 of 73 samples (frequency of detection 1%). Based on the above discussion, none of the organic constituents were carried forward to Tier 2. Tier 1 SLHQs for all other organics were below 0.1 and were not retained for evaluation in Tier 2.

5.2.2.9 Uncertainties in the Tier 1 SLERA

The absence of ESLs for many COPECs represents a data gap that contributes to uncertainties in the risk evaluation. This could lead to an underestimate of potential risks. A list of detected analytes for which ESLs were unavailable was provided in **Section 5.2.2.6**.

VOC detections were limited to only a few analytes. Detections were infrequent, and due to fate and transport mechanisms, are unlikely to be persistent in surface soils. In addition, VOCs generally have low log-octanol water partition coefficients, rendering them unlikely to bioaccumulate and be a concern for higher trophic-level receptors. Similarly, SVOC detections were very infrequent, and of low concentration relative to TRVs where available. Although the absence of ESLs for detected analytes could result in an underestimate of potential risks, uncertainty is considered low.

It is also informative regarding the absence of detects among analytes for which no ESLs are available. For example, there were 84 sample analyses (including duplicates) at discrete sample locations, which were analyzed for VOCs, SVOCs, PCBs, dioxins/furans, and other analytes. In addition, explosives and metals were analyzed in ISM samples at up to 169 locations, and in excess of 500 replicates. It is compelling evidence based on the vast number of analytes not detected among all samples that non-detect constituents are not site related. Therefore, the uncertainty associated with the absence of ESLs is considered low.

The only plant ESL NMED provides for chromium is that for hexavalent chromium, which is much more toxic than trivalent chromium. The IF is not believed to have received plating waste or other material that may have contained hexavalent chromium. Therefore, use of the ESL for hexavalent chromium is likely to result in an overestimate of the plant SLHQ for chromium.

The NMED Tier 1 process incorporates conservative assumption to err on the side of over-estimating potential risks. Uncertainties in these assumptions that tend to overestimate potential risks include (but are not limited to): the extent to which the maximum represents the true exposure concentration, the incorporation of minimum body weights and maximum ingestion rates, the use of a conservative no-effects value as a screening criterion, and the contribution of background to exposure estimates for metals.

5.2.2.10 Tier 1 SLERA Conclusions

It is concluded that a Tier 2 Evaluation is warranted for specific metals. **Insert 5-3 below** summarizes the COPECs carried forward for the Tier 2 evaluation.

Insert 5-3: Summary of Tier 2 COPECs

Birds and Mammalian Receptors of Interest	Plants
Antimony	Arsenic
Arsenic	Barium
Barium	Beryllium
Beryllium	Cadmium
Cadmium	Cobalt
Chromium (Total)	Copper
Cobalt	Lead
Copper	Manganese
Lead	Nickel
Manganese	Selenium
Mercury (elemental)	Thallium
Nickel	Vanadium
Selenium	Zinc
Thallium	
Vanadium	
Zinc	

5.2.3 Tier 2 Screening-Level Ecological Risk Assessment Methodology

In the Tier 2 SLERA, less conservative methodologies are applied. A more reasonable representation of the exposure concentration is used (**Section 5.2.3.2**) and NMED recommends a LOAEL TRV as a benchmark more representative of population risks (**Section 5.2.3.3**).

NMED does not have LOAEL-based ESLs for receptors other than plants. Rather, an ingestion exposure model approach is recommended by NMED (2017) for higher trophic level receptors. The model is used to estimate an average exposure dose to be compared with an oral LOAEL TRV. This dose is generally expressed as:

$$\text{Exposure Dose} = (\text{Cplant} \times \text{IRplant} + \text{Cinv} \times \text{IRinv} + \text{Cprey} \times \text{IRprey}) \times \text{AUF/BW}$$

Where:

Exposure dose	=	Ingested dose (mg COPEC per kg of body weight per day)
Cplant	=	Concentration of COPEC in plants (mg/kg dw)
Cinv	=	Concentration of COPEC in invertebrates (mg/kg dw)
Cprey	=	Concentration of COPEC in prey (mg/kg dw)
Dw	=	Dry weight

IRplant	=	Ingestion rate of plants (mg/day dw)
IRinv	=	Ingestion rate of invertebrates (mg/day dw)
IRprey	=	Ingestion rate of prey (mg/day dw)
AUF	=	Are use factor (unitless ratio of site area to home range)
BW	=	Body weight (kg)

This model was adjusted for each receptor to reflect receptor-specific body weights, ingestion rates and dietary composition of plants, invertebrates and prey, and chemical-specific uptake of COPECs into each of the diet items, consistent with NMED (2017). Specifically, the average adult body weights and average daily ingestion rates were applied. The receptor assumptions used for the Tier 2 SLERA are presented in **Table 5-7**.

The AUF is a unitless ratio of the ecological exposure area (EEA) to the home range of the receptor. The entirety of the IF (*sans* the HWMU area) is estimated at 251 acres. A total of 180 acres was sampled during this investigation. Habitat is relatively uniform within the area of interest. The home ranges (foraging ranges) for the birds and mammals representing the assessment endpoints are: deer mouse, 0.3 acres; horned lark, 4.0 acres; and red-tailed hawk, 1,770 acres. Although the home ranges of the deer mouse and horned lark are less than the sampled area, the goal in the ecological risk assessment is to maintain populations, which is also applicable to plants. Therefore, the entirety of the sampled area of 180 acres was selected as the EEA for this evaluation. An AUF of 0.102 was applied for the red-tailed hawk, assuming a total foraging area of 1,770 acres (180 acres/1,770 acres = 0.102). An AUF of 0.105 was applied for the kit fox, assuming a total foraging area of 1,713 acres (180 acres/1,713 acres = 0.105). An AUF of 0.0526 was applied for the pronghorn, assuming a total foraging area of 3,422 acres (180 acres/3,422 acres = 0.0526). An AUF of one is applied if the area of the home range is less than the area of the EEA. Therefore, an AUF of one was applied in Tier 2 for the deer mouse and horned lark.

An ingestion model is not applied for plants. Rather, the exposure concentration is calculated based on the soil concentration.

5.2.3.1 Bio-Uptake Factors

Concentrations of COPECs in dietary items (plant and animal matter) were predicted by applying biouptake factors or algorithms relating concentrations in soil with concentrations in dietary tissues. While NMED (2015) recommends specific plant uptake factors for metals, they are based on a single source (Baes et al. 1984). The source NMED recommends for uptake into animal matter also contains a compilation of plant uptake factors: Attachment 4-1, Exposure Factors and Bioaccumulation Models for Derivation of Wildlife Eco-SSLs (USEPA 2007a) as part of the Guidance for Developing Ecological Soil Screening Levels (Eco-SSLs). Since USEPA (2007) presents uptake factors that include empirical data from Baes et al. (1984), as well as more recent data, the uptake factors (or algorithms) from USEPA (2007) were

preferentially selected for this SLERA. A summary of uptake factors and their sources is presented in **Table 5-8**.

5.2.3.2 Exposure Point Concentrations

In the Tier 2 analyses, NMED recommends a more reasonable EPC as represented by the lower of the 95% UCL of the mean or the maximum. As the COPECs retained in Tier 2 were from incremental samples, the ITRC incremental sample calculator was used to calculate 95% UCLs. A summary of Tier 2 EPCs is presented in **Table 5-9**. Detailed calculations are provided in **Appendix D.3**.

5.2.3.3 Effects Assessment

The potential for toxic effects is identified by comparing site EPCs or doses with TRVs. NMED (2017) guidance was the source of the LOAEL-based TRVs applied in the Tier 2 SLERA.

5.2.3.4 Tier 2 Risk Characterization

In order to evaluate whether exposures may exceed potential effects levels, the exposure concentration or dose in Tier 2 is compared with a LOAEL TRV to provide a risk estimation. For each COPEC and receptor, Similar to Tier 1, Tier 2 SLHQs are generated by dividing the exposure dose or concentration by the TRV. The uncertainties associated with assumptions used in estimating potential risks are discussed to qualify the confidence in the risk estimation. The uncertainties (**Section 5.2.3.5**) are subsequently discussed in the context of the SLHQs and HIs in a final SLERA risk characterization summary (**Section 5.2.3.6**).

Tier 2 SLERA results are provided in the following tables:

- **Table 5-10** – Tier 2 Average Daily Doses
- **Table 5-11** – Tier 2 HIs

Resulting Tier 2 screening HIs are as follows:

- Plants – 2.3
- Deer Mouse – 0.32
- Horned Lark – 2.0
- Red-Tailed Hawk – 0.0091
- Kit Fox – 0.010
- Pronghorn Antelope – 0.0017

HIs for the deer mouse, red-tailed hawk, kit fox and pronghorn antelope were less than one, indicating no unacceptable risks are present for these receptors and the assessment endpoints they represent. The HI for plants (2.3) was influenced mostly by the SLHQ for barium (0.97),

and to a lesser extent manganese (0.36) and selenium (0.35). For the horned lark, the HI was influenced by SLHQs for vanadium (0.62), copper (0.46), selenium (0.34), lead (0.24), and mercury (0.18). However, each of these results was also highly influenced by background metals concentrations. In order to better quantify this, the Tier 2 exposure model was used to estimate background HIs. The 95% UCL of background metal concentrations, obtained from the Soil Background Study and Data Evaluation Report (Shaw 2010) were placed in the Tier 2 exposure model.

Calculated risks associated solely based on background concentrations are provided in the following tables:

- **Table 5-12** – Background Average Daily Doses for the Bird and Mammal Receptors of Interest
- **Table 5-13** – Background HIs for Plants and Bird and Mammal Receptors of Interest

A summary of calculated risks associated solely with background concentration in comparison with IF HIs are as follows:

Comparison of IF and Background Hazard Indices

Receptor of Interest	Inner Fence Area	Background
Plants	2.3	1.7
Deer Mouse	0.32	0.14
Horned Lark	2.0	1.2
Red-Tailed Hawk	0.0091	0.0068
Kit Fox	0.010	0.0067
Pronghorn Antelope	0.0017	0.0021

5.2.3.5 Tier 2 Uncertainty Analysis

Many of the uncertainties in Tier 2 are common to Tier 1 as discussed previously (see **Section 5.2.2.9**). The absence of ESLs for some COPECs represents a data gap that contributes to uncertainties in the risk evaluation and could result in an underestimate of potential risks. NOAELs were applied during Tier 1; however, LOAEL TRVs as applied in Tier 2 reduce the potential for overestimation of potential risks. In addition, there are many possible modes of toxicity so summing SLHQs when the receptor-specific mode of toxicity cannot be readily defined and limits the interpretation of the results. Summation of the SLHQs also does not take into account additive, synergistic or antagonistic effects among the COPECs. These limitations could lead to an overestimate or underestimate of potential risks.

Exposure concentrations in the SLERA were derived from surface soils and did not include subsurface soils. The rationale for focusing on surface soils was described in development of the

ECSM (see **Section 5.2.1.5**). The potential that COPECs may be present in subsurface soils could lead to an underestimate in potential site risks.

The entirety of the sampled area of 180 acres was selected as the EEA for this evaluation. For receptors with home ranges less than 180 acres (e.g., deer mouse, horned lark), as well as plants, potential risks may be underestimated within subareas of the EEA. However, because the evaluation is to consider the population as a whole, uncertainty is considered low.

5.2.3.6 Tier 2 Risk Characterization Summary

Tier 2 HIs were less than one for the deer mouse, red-tailed hawk, kit fox, and pronghorn antelope. Tier 2 HIs slightly exceeded one for the horned lark (2.0) and plants (2.3) (see **Section 5.2.3.4** and **Table 5-11**). An HI equal to or in excess of 1 does not indicate that adverse effects will occur, but suggests there is a low potential for adverse effects.

5.2.4 Inner Fence Tier 1 and Tier 2 SLERA Conclusions

A Scoping Assessment concluded that the IF contains terrestrial ecological habitat and potentially complete pathways for ecological receptors. A summary of Tier 1 and Tier 2 SLHQs and HIs is presented in **Table 5-14**. Calculated risks associated with background exposures are provided as an additional line of information for use in risk management decision making. The following conclusions are drawn for each of the assessment endpoints identified for the evaluation.

Viability and Function of the Terrestrial Plant Community – The Tier 2 HI for the plant community in the IF was 2.3. A Tier 2 HI equal to or in excess of 1 does not indicate that adverse effects will occur, but suggests there is a low potential for adverse effects. This is also relevant to evaluation of the Zuni fleabane, which was identified as a component of the plant community. The Zuni fleabane is listed as a federally threatened species. It is also notable that the background HI was 1.2, which also suggests a potential for adverse effects related to non-site related naturally occurring conditions, and highlights the uncertainty in the risk evaluation.

Survival, Growth and Reproduction of Omnivorous Mammalian Populations – The deer mouse was selected as a representative of omnivorous mammals. The Tier 2 HI was less than one in the IF (0.32). It is concluded that there are no unacceptable risks to omnivorous mammalian populations.

Survival, Growth and Reproduction of Omnivorous Avian Populations – Omnivorous birds were represented by the horned lark. The Tier 2 HI for the horned lark was 2.0. An HI equal to or in excess of 1 does not indicate that adverse effects will occur, but there is a low potential for adverse effects. The horned lark was also used as a species representative of the gray vireo. The gray vireo is a state-listed threatened species and is listed under the Federal Migratory Bird Treaty Act. It is also notable that the background HI was 1.2, which also suggests a potential for adverse effects related to non-site related naturally occurring conditions, and highlights the uncertainty in the risk evaluation.

Survival, Growth and Reproduction of Carnivorous Avian Populations - The red-tailed hawk was selected as a representative of carnivorous birds. The Tier 2 HI was 0.009. It is concluded that there are no unacceptable risks to carnivorous avian populations.

Survival, Growth and Reproduction of Carnivorous Mammal Populations - The kit fox was selected as a representative of carnivorous mammals. The Tier 2 HI was 0.010. It is concluded that there are no unacceptable risks to carnivorous mammal populations.

Survival, Growth and Reproduction of Large Herbivorous Mammal Populations - The pronghorn antelope was selected as a representative of large herbivorous mammals. The Tier 2 HI was 0.0017. It is concluded that there are no unacceptable risks to large herbivorous mammal populations.

TABLE 5-1
TIER 1 SCREENING RESULTS FOR PLANTS
FORT WINGATE DEPOT ACTIVITY
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Plants Tier 1 ESL[1]	Does Concentration Exceed Plants ESL (Y/N)	Plant Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)							
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.001 - 0.0042	U	NS	NA	NA
1,1,1-Trichloroethane	71-55-6	mg/kg	0.001 - 0.0042	U	NS	NA	NA
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.001 - 0.0042	U	NS	NA	NA
1,1,2-Trichloroethane	79-00-5	mg/kg	0.001 - 0.0042	U	NS	NA	NA
1,1-Dichloroethane	75-34-3	mg/kg	0.001 - 0.0042	U	NS	NA	NA
1,1-Dichloroethene	75-35-4	mg/kg	0.001 - 0.0042	U	NS	NA	NA
1,1-Dichloropropene	563-58-6	mg/kg	0.001 - 0.0042	U	NS	NA	NA
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.001 - 0.0042	U	NS	NA	NA
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0025 - 0.01	U	NS	NA	NA
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.001 - 0.0042	U	NS	NA	NA
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.001 - 0.0042	U	NS	NA	NA
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0025 - 0.01	U	NS	NA	NA
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.001 - 0.0042	U	NS	NA	NA
1,2-Dichlorobenzene	95-50-1	mg/kg	0.001 - 0.0042	U	NS	NA	NA
1,2-Dichloroethane	107-06-2	mg/kg	0.001 - 0.0042	U	NS	NA	NA
1,2-Dichloropropane	78-87-5	mg/kg	0.001 - 0.0042	U	NS	NA	NA
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.001 - 0.0042	U	NS	NA	NA
1,3-Dichlorobenzene	541-73-1	mg/kg	0.001 - 0.0042	U	NS	NA	NA
1,3-Dichloropropane	142-28-9	mg/kg	0.001 - 0.0042	U	NS	NA	NA
1,4-Dichlorobenzene	106-46-7	mg/kg	0.001 - 0.0042	U	NS	NA	NA
2,2-Dichloropropane	594-20-7	mg/kg	0.001 - 0.0042	U	NS	NA	NA
2-Butanone	78-93-3	mg/kg	0.14		NS	NA	NA
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.001 - 0.0042	U	NS	NA	NA
2-Hexanone	591-78-6	mg/kg	0.34		NS	NA	NA
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.001 - 0.0042	U	NS	NA	NA
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.001 - 0.0042	U	NS	NA	NA
Acetone	67-64-1	mg/kg	3.1		NS	NA	NA
Benzene	71-43-2	mg/kg	0.0077		NS	NA	NA
Bromobenzene	108-86-1	mg/kg	0.001 - 0.0042	U	NS	NA	NA
Bromochloromethane	74-97-5	mg/kg	0.001 - 0.0042	U	NS	NA	NA
Bromodichloromethane	75-27-4	mg/kg	0.001 - 0.0042	U	NS	NA	NA
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.001 - 0.0042	U	NS	NA	NA
Bromomethane	74-83-9	mg/kg	0.026		NS	NA	NA
Carbon Disulfide	75-15-0	mg/kg	0.17		NS	NA	NA
Carbon Tetrachloride	56-23-5	mg/kg	0.001 - 0.0042	U	NS	NA	NA
Chlorobenzene	108-90-7	mg/kg	0.001 - 0.0042	U	NS	NA	NA
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.001 - 0.0042	U	NS	NA	NA
Chloroform	67-66-3	mg/kg	0.001 - 0.0042	U	NS	NA	NA
Chloromethane	74-87-3	mg/kg	0.0081		NS	NA	NA
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.001 - 0.0042	U	NS	NA	NA
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.001 - 0.0042	U	NS	NA	NA
Dibromochloromethane	124-48-1	mg/kg	0.001 - 0.0042	U	NS	NA	NA
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.001 - 0.0042	U	NS	NA	NA
Dichlorodifluoromethane	75-71-8	mg/kg	0.001 - 0.0042	U	NS	NA	NA
Ethylbenzene	100-41-4	mg/kg	0.001 - 0.0042	U	NS	NA	NA
Hexachlorobutadiene	87-68-3	mg/kg	0.001 - 0.0042	U	NS	NA	NA
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.001 - 0.0042	U	NS	NA	NA
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.011		NS	NA	NA
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.001 - 0.0042	U	NS	NA	NA
Methylene Chloride	75-09-2	mg/kg	0.0051 - 0.021	U	1,670	N	NA
n-Butylbenzene	104-51-8	mg/kg	0.001 - 0.0042	U	NS	NA	NA
n-Propylbenzene	103-65-1	mg/kg	0.001 - 0.0042	U	NS	NA	NA
Naphthalene	91-20-3	mg/kg	0.001 - 0.0042	U	NS	NA	NA
o-Xylene	95-47-6	mg/kg	0.0013 - 0.0052	U	NS	NA	NA
p-Isopropyltoluene	99-87-6	mg/kg	0.020		NS	NA	NA
sec-Butylbenzene	135-98-8	mg/kg	0.001 - 0.0042	U	NS	NA	NA
Styrene	100-42-5	mg/kg	0.001 - 0.0042	U	3.2	N	NA
tert-Butylbenzene	98-06-6	mg/kg	0.001 - 0.0042	U	NS	NA	NA
Tetrachloroethene	127-18-4	mg/kg	0.001 - 0.0042	U	10	N	NA
Toluene	108-88-3	mg/kg	0.032		200	N	0.00016
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.001 - 0.0042	U	NS	NA	NA
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.001 - 0.0042	U	NS	NA	NA
Trichloroethene	79-01-6	mg/kg	0.001 - 0.0042	U	NS	NA	NA
Trichlorofluoromethane	75-69-4	mg/kg	0.001 - 0.0042	U	NS	NA	NA
Vinyl Chloride	75-01-4	mg/kg	0.001 - 0.0042	U	NS	NA	NA

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FORT WINGATE DEPOT ACTIVITY
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Plants Tier 1 ESL[1]	Does Concentration Exceed Plants ESL (Y/N)	Plant Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)							
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17 - 0.36	U	NS	NA	NA
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17 - 0.36	U	NS	NA	NA
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17 - 0.36	U	NS	NA	NA
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17 - 0.36	U	NS	NA	NA
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17 - 0.36	U	NS	NA	NA
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17 - 0.36	U	NS	NA	NA
2,4-Dichlorophenol	120-83-2	mg/kg	0.17 - 0.36	U	NS	NA	NA
2,4-Dimethylphenol	105-67-9	mg/kg	0.17 - 0.36	U	NS	NA	NA
2,4-Dinitrophenol	51-28-5	mg/kg	0.17 - 0.36	U	NS	NA	NA
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17 - 0.36	U	NS	NA	NA
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17 - 0.36	U	NS	NA	NA
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17 - 0.36	U	NS	NA	NA
2-Chlorophenol	95-57-8	mg/kg	0.17 - 0.36	U	NS	NA	NA
2-Methylnaphthalene	91-57-6	mg/kg	0.17 - 0.36	U	NS	NA	NA
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17 - 0.36	U	0.67	N	NA
2-Nitroaniline	88-74-4	mg/kg	0.17 - 0.36	U	NS	NA	NA
2-Nitrophenol	88-75-5	mg/kg	0.17 - 0.36	U	NS	NA	NA
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17 - 0.36	U	NS	NA	NA
3-Nitroaniline	99-09-2	mg/kg	0.17 - 0.36	U	NS	NA	NA
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17 - 0.36	U	NS	NA	NA
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17 - 0.36	U	NS	NA	NA
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17 - 0.36	U	NS	NA	NA
4-Chloroaniline	106-47-8	mg/kg	0.17 - 0.36	U	NS	NA	NA
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17 - 0.36	U	NS	NA	NA
4-Nitroaniline	100-01-6	mg/kg	0.17 - 0.36	U	NS	NA	NA
4-Nitrophenol	100-02-7	mg/kg	0.17 - 0.36	U	NS	NA	NA
Acenaphthene	83-32-9	mg/kg	0.17 - 0.36	U	0.25	N	NA
Acenaphthylene	208-96-8	mg/kg	0.17 - 0.36	U	NS	NA	NA
Anthracene	120-12-7	mg/kg	0.17 - 0.36	U	6.88	N	NA
Benzo(a)anthracene	56-55-3	mg/kg	0.17 - 0.36	U	18	N	NA
Benzo(a)pyrene	50-32-8	mg/kg	0.13 - 0.28	U	NS	NA	NA
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17 - 0.36	U	18	N	NA
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17 - 0.36	U	NS	NA	NA
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17 - 0.36	U	NS	NA	NA
Benzoic Acid	65-85-0	mg/kg	0.17 - 0.36	U	NS	NA	NA
Benzyl Alcohol	100-51-6	mg/kg	0.17 - 0.36	U	NS	NA	NA
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17 - 0.36	U	NS	NA	NA
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17 - 0.36	U	NS	NA	NA
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17 - 0.36	U	NS	NA	NA
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.21		1.07	N	0.20
Butylbenzylphthalate	85-68-7	mg/kg	0.17 - 0.36	U	NS	NA	NA
Carbazole	86-74-8	mg/kg	0.17 - 0.36	U	NS	NA	NA
Chrysene	218-01-9	mg/kg	0.17 - 0.36	U	NS	NA	NA
Di-n-butylphthalate	84-74-2	mg/kg	0.072		167	N	0.00043
Di-n-octylphthalate	117-84-0	mg/kg	0.17 - 0.36	U	NS	NA	NA
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13 - 0.28	U	NS	NA	NA
Dibenzofuran	132-64-9	mg/kg	0.17 - 0.36	U	6.17	N	NA
Diethylphthalate	84-66-2	mg/kg	0.17 - 0.36	U	100	N	NA
Dimethylphthalate	131-11-3	mg/kg	0.17 - 0.36	U	NS	NA	NA
Fluoranthene	206-44-0	mg/kg	0.17 - 0.36	U	NS	NA	NA
Fluorene	86-73-7	mg/kg	0.17 - 0.36	U	NS	NA	NA
Hexachlorobenzene	118-74-1	mg/kg	0.17 - 0.36	U	10	N	NA
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17 - 0.36	U	NS	NA	NA
Hexachloroethane	67-72-1	mg/kg	0.17 - 0.36	U	NS	NA	NA
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17 - 0.36	U	NS	NA	NA
Isophorone	78-59-1	mg/kg	0.17 - 0.36	U	NS	NA	NA
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17 - 0.36	U	NS	NA	NA
N-Nitrosodimethylamine	62-75-9	mg/kg	0.02 - 0.043	U	NS	NA	NA
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17 - 0.36	U	NS	NA	NA
Naphthalene	91-20-3	mg/kg	0.17 - 0.36	U	1	N	NA
Nitrobenzene	98-95-3	mg/kg	0.17 - 0.36	U	NS	NA	NA
Pentachlorophenol	87-86-5	mg/kg	0.17 - 0.36	U	5	N	NA
Phenanthrene	85-01-8	mg/kg	0.17 - 0.36	U	NS	NA	NA
Phenol	108-95-2	mg/kg	0.17 - 0.36	U	0.79	N	NA
Pyrene	129-00-0	mg/kg	0.17 - 0.36	U	NS	NA	NA

TABLE 5-1
TIER 1 SCREENING RESULTS FOR PLANTS
FORT WINGATE DEPOT ACTIVITY
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Plants Tier 1 ESL[1]	Does Concentration Exceed Plants ESL (Y/N)	Plant Estimated Hazard Quotient
EXPLOSIVES (mg/kg)							
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.3		NS	NA	NA
1,3-Dinitrobenzene	99-65-0	mg/kg	0.073 - 0.15	U	NS	NA	NA
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.97		62.1	N	0.016
2,4-Dinitrotoluene	121-14-2	mg/kg	0.073 - 0.15	U	6	N	NA
2,6-Dinitrotoluene	606-20-2	mg/kg	0.073 - 0.15	U	NS	NA	NA
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.22	U	14	N	NA
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.073 - 0.15	U	NS	NA	NA
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.073 - 0.15	U	NS	NA	NA
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.22	U	33	N	NA
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.073 - 0.15	U	NS	NA	NA
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	8.8		6.33	Y	1.4
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	43	J	NS	NA	NA
Nitrobenzene	98-95-3	mg/kg	0.073 - 0.15	U	NS	NA	NA
Nitroglycerine	55-63-0	mg/kg	0.15 - 0.3	U	21	N	NA
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	3.10		2,740	N	0.0011
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.24 - 0.5	U	NS	NA	NA
POLYCHLORINATED BIPHENYLS (mg/kg)							
Aroclor 1016	12674-11-2	mg/kg	0.018 - 0.022	U	NS	NA	NA
Aroclor 1221	11104-28-2	mg/kg	0.018 - 0.022	U	NS	NA	NA
Aroclor 1232	11141-16-5	mg/kg	0.0092 - 0.11	U	NS	NA	NA
Aroclor 1242	53469-21-9	mg/kg	0.0092 - 0.11	U	NS	NA	NA
Aroclor 1248	12672-29-6	mg/kg	0.0092 - 0.11	U	NS	NA	NA
Aroclor 1254	11097-69-1	mg/kg	0.0092 - 0.11	U	163	N	NA
Aroclor 1260	11096-82-5	mg/kg	0.0092 - 0.11	U	NS	NA	NA
DIOXINS/FURANS (mg/kg)							
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg	0.0000051		NS	NA	NA
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.000075		NS	NA	NA
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg	0.0000035		NS	NA	NA
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.000013		NS	NA	NA
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg	0.00000025		NS	NA	NA
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg	0.0000001		NS	NA	NA
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg	0.00000017		NS	NA	NA
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg	0.00000012		NS	NA	NA
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg	0.00000025		NS	NA	NA
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg	0.000000059		NS	NA	NA
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg	0.00000016		NS	NA	NA
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg	0.00000013		NS	NA	NA
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg	0.00000025		NS	NA	NA
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg	0.00000043		NS	NA	NA
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg	0.00000021		NS	NA	NA
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg	0.0000006		NS	NA	NA
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg	0.000000035 - 0.00000044	U	NS	NA	NA
TEQ**		mg/kg	0.000099		NS	NA	NA

TABLE 5-1
TIER 1 SCREENING RESULTS FOR PLANTS
FORT WINGATE DEPOT ACTIVITY
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Plants Tier 1 ESL[1]	Does Concentration Exceed Plants ESL (Y/N)	Plant Estimated Hazard Quotient
METALS (mg/kg)							
Aluminum	7429-90-5	mg/kg	38,000		footnote (3)	N	NA
Antimony	7440-36-0	mg/kg	0.62		11.4	N	0.054
Arsenic	7440-38-2	mg/kg	8.6		18	N	0.48
Barium	7440-39-3	mg/kg	820		118	Y	6.9
Beryllium	7440-41-7	mg/kg	1.8		2.5	N	0.72
Cadmium	7440-43-9	mg/kg	3.6		32	N	0.11
Calcium	7440-70-2	mg/kg	60,000		NS	NA	NA
Chromium (Total) (2)	7440-47-3	mg/kg	62		NS	NA	NA
Cobalt	7440-48-4	mg/kg	8.2		13	N	0.63
Copper	7440-50-8	mg/kg	670		70	Y	9.6
Iron	7439-89-6	mg/kg	23,000		NS	NA	NA
Lead	7439-92-1	mg/kg	24		120	N	0.20
Magnesium	7439-95-4	mg/kg	17,000		NS	NA	NA
Manganese	7439-96-5	mg/kg	930		220	Y	4.2
Mercury (Elemental)	7439-97-6	mg/kg	1.9		34.9	N	0.054
Nickel	7440-02-0	mg/kg	21		38	N	0.55
Potassium	7440-09-7	mg/kg	3,400		NS	NA	NA
Selenium	7782-49-2	mg/kg	2.3		0.52	Y	4.4
Silver	7440-22-4	mg/kg	0.48		560	N	0.00086
Sodium	7440-23-5	mg/kg	430		NS	NA	NA
Thallium	7440-28-0	mg/kg	0.2		0.05	Y	4.0
Vanadium	7440-62-2	mg/kg	42		60	N	0.70
Zinc	7440-66-6	mg/kg	73		160	N	0.46
OTHER PARAMETERS (mg/kg)							
Cyanide	57-12-5	mg/kg	0.21		NS	NA	NA
Nitrate	14797-55-8	mg/kg	58		NS	NA	NA
Perchlorate	14797-73-0	mg/kg	0.033	U	NS	NA	NA
					Cumulative Plant Hazard		**35**
					Exceeds Target Level		**Y**

Notes:

1) New Mexico Environment Department Ecological Soil Screening Levels. March 2017 Update.

2) Chromium screening value is for Total Chromium.

3) pH-dependent. Not a concern at the Inner Fence Area. See Text.

TEQ maximum was calculated using the ProUCL dataset. See **Appendix D, Attachment 3.

Shaded values exceed ecological screening levels.

CAS = Chemical Abstracts Service

ESL = Ecological Screening Level

J = Estimated

mg/kg = milligrams per kilogram

NA = Not applicable

NS = No Standard

U = Nondetect

TABLE 5-2
TIER 1 SCREEENING RESULTS FOR THE DEER MOUSE
FORT WINGATE DEPOT ACTIVITY
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Deer Mouse Tier 1 ESL (1)	Does Concentration Exceed Deer Mouse ESL (Y/N)	Deer Mouse Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)									
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
1,1,1-Trichloroethane	71-55-6	mg/kg	0.001 - 0.0042	U	NA	NA	9,080	N	NA
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.001 - 0.0042	U	NA	NA	403	N	NA
1,1,2-Trichloroethane	79-00-5	mg/kg	0.001 - 0.0042	U	NA	NA	35.5	N	NA
1,1-Dichloroethane	75-34-3	mg/kg	0.001 - 0.0042	U	NA	NA	3,470	N	NA
1,1-Dichloroethene	75-35-4	mg/kg	0.001 - 0.0042	U	NA	NA	273	N	NA
1,1-Dichloropropene	563-58-6	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0025 - 0.01	U	NA	NA	NS	NA	NA
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.001 - 0.0042	U	NA	NA	13.5	N	NA
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0025 - 0.01	U	NA	NA	NS	NA	NA
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
1,2-Dichlorobenzene	95-50-1	mg/kg	0.001 - 0.0042	U	NA	NA	22.7	N	NA
1,2-Dichloroethane	107-06-2	mg/kg	0.001 - 0.0042	U	NA	NA	452	N	NA
1,2-Dichloropropane	78-87-5	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
1,3-Dichlorobenzene	541-73-1	mg/kg	0.001 - 0.0042	U	NA	NA	22.7	N	NA
1,3-Dichloropropane	142-28-9	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
1,4-Dichlorobenzene	106-46-7	mg/kg	0.001 - 0.0042	U	NA	NA	22.7	N	NA
2,2-Dichloropropane	594-20-7	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
2-Butanone	78-93-3	mg/kg	0.14		NA	NA	16,100	N	0.0000087
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
2-Hexanone	591-78-6	mg/kg	0.34		NA	NA	75.2	N	0.0045
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.001 - 0.0042	U	NA	NA	227	N	NA
Acetone	67-64-1	mg/kg	3.1		NA	NA	90.9	N	0.034
Benzene	71-43-2	mg/kg	0.0077		NA	NA	240	N	0.000032
Bromobenzene	108-86-1	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Bromochloromethane	74-97-5	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Bromodichloromethane	75-27-4	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Bromomethane	74-83-9	mg/kg	0.026		NA	NA	NS	NA	NA
Carbon Disulfide	75-15-0	mg/kg	0.17		NA	NA	2.27	N	0.075
Carbon Tetrachloride	56-23-5	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Chlorobenzene	108-90-7	mg/kg	0.001 - 0.0042	U	NA	NA	545	N	NA
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Chloroform	67-66-3	mg/kg	0.001 - 0.0042	U	NA	NA	136	N	NA
Chloromethane	74-87-3	mg/kg	0.0081		NA	NA	NS	NA	NA
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.001 - 0.0042	U	NA	NA	411	N	NA
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Dibromochloromethane	124-48-1	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Dichlorodifluoromethane	75-71-8	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Ethylbenzene	100-41-4	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Hexachlorobutadiene	87-68-3	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.011		NA	NA	NS	NA	NA
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Methylene Chloride	75-09-2	mg/kg	0.0051 - 0.021	U	NA	NA	53.2	N	NA
n-Butylbenzene	104-51-8	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
n-Propylbenzene	103-65-1	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Naphthalene	91-20-3	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
o-Xylene	95-47-6	mg/kg	0.0013 - 0.0052	U	NA	NA	NS	NA	NA
p-Isopropyltoluene	99-87-6	mg/kg	0.02		NA	NA	NS	NA	NA
sec-Butylbenzene	135-98-8	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Styrene	100-42-5	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
tert-Butylbenzene	98-06-6	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Tetrachloroethene	127-18-4	mg/kg	0.001 - 0.0042	U	NA	NA	18.2	N	NA
Toluene	108-88-3	mg/kg	0.032		NA	NA	236	N	0.000136
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.001 - 0.0042	U	NA	NA	411	N	NA
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Trichloroethene	79-01-6	mg/kg	0.001 - 0.0042	U	NA	NA	909	N	NA
Trichlorofluoromethane	75-69-4	mg/kg	0.001 - 0.0042	U	NA	NA	1,930	N	NA
Vinyl Chloride	75-01-4	mg/kg	0.001 - 0.0042	U	NA	NA	1.55	N	NA

TABLE 5-2
TIER 1 SCREEENING RESULTS FOR THE DEER MOUSE
FORT WINGATE DEPOT ACTIVITY
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Deer Mouse Tier 1 ESL (1)	Does Concentration Exceed Deer Mouse ESL (Y/N)	Deer Mouse Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)									
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
2,4-Dichlorophenol	120-83-2	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
2,4-Dimethylphenol	105-67-9	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
2,4-Dinitrophenol	51-28-5	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
2-Chlorophenol	95-57-8	mg/kg	0.17 - 0.36	U	NA	NA	4.55	N	NA
2-Methylnaphthalene	91-57-6	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17 - 0.36	U	NA	NA	2,000	N	NA
2-Nitroaniline	88-74-4	mg/kg	0.17 - 0.36	U	NA	NA	27.3	N	NA
2-Nitrophenol	88-75-5	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
3-Nitroaniline	99-09-2	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
4-Chloroaniline	106-47-8	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
4-Nitroaniline	100-01-6	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
4-Nitrophenol	100-02-7	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Acenaphthene	83-32-9	mg/kg	0.17 - 0.36	U	NA	NA	636	N	NA
Acenaphthylene	208-96-8	mg/kg	0.17 - 0.36	U	NA	NA	636	N	NA
Anthracene	120-12-7	mg/kg	0.17 - 0.36	U	NA	NA	909	N	NA
Benzo(a)anthracene	56-55-3	mg/kg	0.17 - 0.36	U	NA	NA	1.55	N	NA
Benzo(a)pyrene	50-32-8	mg/kg	0.13 - 0.28	U	NA	NA	50.7	N	NA
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17 - 0.36	U	NA	NA	36.4	N	NA
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17 - 0.36	U	NA	NA	68.2	N	NA
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17 - 0.36	U	NA	NA	65.4	N	NA
Benzoic Acid	65-85-0	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Benzyl Alcohol	100-51-6	mg/kg	0.17 - 0.36	U	NA	NA	1,300	N	NA
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.21		NA	NA	166	N	0.0013
Butylbenzylphthalate	85-68-7	mg/kg	0.17 - 0.36	U	NA	NA	1,450	N	NA
Carbazole	86-74-8	mg/kg	0.17 - 0.36	U	NA	NA	207	N	NA
Chrysene	218-01-9	mg/kg	0.17 - 0.36	U	NA	NA	1.55	N	NA
Di-n-butylphthalate	84-74-2	mg/kg	0.072		NA	NA	12,200	N	0.0000059
Di-n-octylphthalate	117-84-0	mg/kg	0.17 - 0.36	U	NA	NA	592	N	NA
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13 - 0.28	U	NA	NA	12.1	N	NA
Dibenzofuran	132-64-9	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Diethylphthalate	84-66-2	mg/kg	0.17 - 0.36	U	NA	NA	41,800	N	NA
Dimethylphthalate	131-11-3	mg/kg	0.17 - 0.36	U	NA	NA	618	N	NA
Fluoranthene	206-44-0	mg/kg	0.17 - 0.36	U	NA	NA	114	N	NA
Fluorene	86-73-7	mg/kg	0.17 - 0.36	U	NA	NA	1,140	N	NA
Hexachlorobenzene	118-74-1	mg/kg	0.17 - 0.36	U	NA	NA	64.5	N	NA
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Hexachloroethane	67-72-1	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17 - 0.36	U	NA	NA	65.4	N	NA
Isophorone	78-59-1	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
N-Nitrosodimethylamine	62-75-9	mg/kg	0.02 - 0.043	U	NA	NA	NS	NA	NA
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Naphthalene	91-20-3	mg/kg	0.17 - 0.36	U	NA	NA	130	N	NA
Nitrobenzene	98-95-3	mg/kg	0.17 - 0.36	U	NA	NA	53.6	N	NA
Pentachlorophenol	87-86-5	mg/kg	0.17 - 0.36	U	NA	NA	76.5	N	NA
Phenanthrene	85-01-8	mg/kg	0.17 - 0.36	U	NA	NA	46.7	N	NA
Phenol	108-95-2	mg/kg	0.17 - 0.36	U	NA	NA	545	N	NA
Pyrene	129-00-0	mg/kg	0.17 - 0.36	U	NA	NA	68.2	N	NA

TABLE 5-2
TIER 1 SCREEENING RESULTS FOR THE DEER MOUSE
FORT WINGATE DEPOT ACTIVITY
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Deer Mouse Tier 1 ESL (1)	Does Concentration Exceed Deer Mouse ESL (Y/N)	Deer Mouse Estimated Hazard Quotient
EXPLOSIVES (mg/kg)									
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.3		NA	NA	122	N	NA
1,3-Dinitrobenzene	99-65-0	mg/kg	0.073 - 0.15	U	NA	NA	1.03	N	NA
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.97		NA	NA	315	N	NA
2,4-Dinitrotoluene	121-14-2	mg/kg	0.073 - 0.15	U	NA	NA	24.4	N	NA
2,6-Dinitrotoluene	606-20-2	mg/kg	0.073 - 0.15	U	NA	NA	16.1	N	NA
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.22	U	NA	NA	126	N	NA
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.073 - 0.15	U	NA	NA	81	N	NA
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.073 - 0.15	U	NA	NA	97.3	N	NA
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.22	U	NA	NA	87.2	N	NA
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.073 - 0.15	U	NA	NA	17.8	N	NA
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	8.8		NA	NA	81.3	N	0.11
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	43	J	NA	NA	11.8	Y	3.6
Nitrobenzene	98-95-3	mg/kg	0.073 - 0.15	U	NA	NA	53.6	N	NA
Nitroglycerine	55-63-0	mg/kg	0.15 - 0.3	U	NA	NA	87.6	N	NA
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX	2691-41-0	mg/kg	3.1		NA	NA	682	N	0.0045
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.24 - 0.5	U	NA	NA	636	N	NA
POLYCHLORINATED BIPHENYLS (mg/kg)									
Aroclor 1016	12674-11-2	mg/kg	0.018 - 0.022	U	NA	NA	13.5	N	NA
Aroclor 1221	11104-28-2	mg/kg	0.018 - 0.022	U	NA	NA	NS	NA	NA
Aroclor 1232	11141-16-5	mg/kg	0.0092 - 0.11	U	NA	NA	NS	NA	NA
Aroclor 1242	53469-21-9	mg/kg	0.0092 - 0.11	U	NA	NA	NS	NA	NA
Aroclor 1248	12672-29-6	mg/kg	0.0092 - 0.11	U	NA	NA	NS	NA	NA
Aroclor 1254	11097-69-1	mg/kg	0.0092 - 0.11	U	NA	NA	5.55	N	NA
Aroclor 1260	11096-82-5	mg/kg	0.0092 - 0.11	U	NA	NA	125	N	NA
DIOXINS/FURANS Mammals (mg/kg) (3)									
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg	0.0000000015	J	0.0000051	0.0003	NS	NA	NA
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.000000011		0.000075	0.0003	NS	NA	NA
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg	0.0000000350	J	0.0000035	0.01	NS	NA	NA
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.00000013	J	0.000013	0.01	NS	NA	NA
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg	0.0000000025		0.00000025	0.01	NS	NA	NA
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg	0.00000001	J	0.0000001	0.1	NS	NA	NA
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg	0.000000017	J	0.00000017	0.1	NS	NA	NA
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg	0.000000012		0.00000012	0.1	NS	NA	NA
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg	0.000000025		0.00000025	0.1	NS	NA	NA
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg	0.0000000059		0.000000059	0.1	NS	NA	NA
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg	0.000000016		0.00000016	0.1	NS	NA	NA
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg	0.0000000039		0.00000013	0.03	NS	NA	NA
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg	0.00000025		0.00000025	1	NS	NA	NA
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg	0.000000043		0.00000043	0.1	NS	NA	NA
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg	0.000000063		0.00000021	0.3	NS	NA	NA
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg	0.00000006	J	0.0000006	0.1	NS	NA	NA
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000035 - 0.00000044	1	NS	NA	NA
TEQ Mammals**		mg/kg	0.00000069				0.0000051	N	0.13

TABLE 5-2
TIER 1 SCREEENING RESULTS FOR THE DEER MOUSE
FORT WINGATE DEPOT ACTIVITY
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Deer Mouse Tier 1 ESL (1)	Does Concentration Exceed Deer Mouse ESL (Y/N)	Deer Mouse Estimated Hazard Quotient
METALS (mg/kg)									
Aluminum	7429-90-5	mg/kg	38,000		NA	NA	footnote (4)	N	NA
Antimony	7440-36-0	mg/kg	0.62		NA	NA	0.536	Y	1.2
Arsenic	7440-38-2	mg/kg	8.6		NA	NA	9.45	N	0.91
Barium	7440-39-3	mg/kg	820		NA	NA	471	Y	1.7
Beryllium	7440-41-7	mg/kg	1.8		NA	NA	4.84	N	0.37
Cadmium	7440-43-9	mg/kg	3.6		NA	NA	7	N	0.51
Calcium	7440-70-2	mg/kg	60,000		NA	NA	NS	NA	NA
Chromium (Total) (2)	7440-47-3	mg/kg	62		NA	NA	21.8	Y	2.8
Cobalt	7440-48-4	mg/kg	8.2		NA	NA	66.6	N	0.12
Copper	7440-50-8	mg/kg	670		NA	NA	50.9	Y	13
Iron	7439-89-6	mg/kg	23,000		NA	NA	NS	NA	NA
Lead	7439-92-1	mg/kg	24		NA	NA	42.7	N	0.56
Magnesium	7439-95-4	mg/kg	17,000		NA	NA	NS	NA	NA
Manganese	7439-96-5	mg/kg	930		NA	NA	468	Y	2.0
Mercury (Elemental)	7439-97-6	mg/kg	1.9		NA	NA	12.8	N	0.15
Nickel	7440-02-0	mg/kg	21		NA	NA	15.5	Y	1.4
Potassium	7440-09-7	mg/kg	3,400		NA	NA	NS	NA	NA
Selenium	7782-49-2	mg/kg	2.3		NA	NA	1.3	Y	1.8
Silver	7440-22-4	mg/kg	0.48		NA	NA	54.7	N	0.0088
Sodium	7440-23-5	mg/kg	430		NA	NA	NS	NA	NA
Thallium	7440-28-0	mg/kg	0.2		NA	NA	0.0645	Y	3.1
Vanadium	7440-62-2	mg/kg	42		NA	NA	37.8	Y	1.1
Zinc	7440-66-6	mg/kg	73		NA	NA	685	N	0.11
OTHER PARAMETERS (mg/kg)									
Cyanide	57-12-5	mg/kg	0.21		NA	NA	624	N	0.00034
Nitrate	14797-55-8	mg/kg	58		NA	NA	NS	NA	NA
Perchlorate	14797-73-0	mg/kg	0.033	U	NA	NA	NS	NA	NA
							Cumulative Deer Mouse Hazard		**35**
							Exceeds Target Level		**Y**

Notes:

1) New Mexico Environment Department Ecological Soil Screening Levels. March 2017 Update.

2) Chromium screening value is for Total Chromium.

3) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization toxicity equivalency factors (TEF) from Van den berg, et al (2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED SSL for 2,3,7,8-tetrachlorodibenz-p-dioxin (TCDD). (NMED 2017, Revised).

4) pH-dependent. Not a concern at the Inner Fence Area. See Text.

TEQ maximum was calculated using the ProUCL dataset. See **Appendix D, Attachment 3.

CAS = Chemical Abstracts Service

ESL = Ecological Screening Level

J = Estimated

mg/kg = milligrams per kilogram

NA = Not applicable

NS = No Standard

TEF = Toxicity Equivalency Factor

TEQ = Toxic equivalency quotient

U = Nondetect

TABLE 5-3
TIER 1 SCREENING RESULTS FOR THE HORNED LARK
FORT WINGATE DEPOT ACTIVITY
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Horned Lark Tier 1 ESL (1)	Does Concentration Exceed Horned Lark ESL (Y/N)	Horned Lark Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)									
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
1,1,1-Trichloroethane	71-55-6	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
1,1,2-Trichloroethane	79-00-5	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
1,1-Dichloroethane	75-34-3	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
1,1-Dichloroethene	75-35-4	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
1,1-Dichloropropene	563-58-6	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0025 - 0.01	U	NA	NA	NS	NA	NA
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0025 - 0.01	U	NA	NA	NS	NA	NA
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
1,2-Dichlorobenzene	95-50-1	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
1,2-Dichloroethane	107-06-2	mg/kg	0.001 - 0.0042	U	NA	NA	21.8	N	NA
1,2-Dichloropropane	78-87-5	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
1,3-Dichlorobenzene	541-73-1	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
1,3-Dichloropropane	142-28-9	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
1,4-Dichlorobenzene	106-46-7	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
2,2-Dichloropropane	594-20-7	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
2-Butanone	78-93-3	mg/kg	0.14		NA	NA	NS	NA	NA
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
2-Hexanone	591-78-6	mg/kg	0.34		NA	NA	4.73	N	0.072
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Acetone	67-64-1	mg/kg	3.1		NA	NA	951	N	0.0033
Benzene	71-43-2	mg/kg	0.0077		NA	NA	NS	NA	NA
Bromobenzene	108-86-1	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Bromochloromethane	74-97-5	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Bromodichloromethane	75-27-4	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Bromomethane	74-83-9	mg/kg	0.026		NA	NA	NS	NA	NA
Carbon Disulfide	75-15-0	mg/kg	0.17		NA	NA	NS	NA	NA
Carbon Tetrachloride	56-23-5	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Chlorobenzene	108-90-7	mg/kg	0.001 - 0.0042	U	NA	NA	284	N	NA
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Chloroform	67-66-3	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Chloromethane	74-87-3	mg/kg	0.0081		NA	NA	NS	NA	NA
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Dibromochloromethane	124-48-1	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Dichlorodifluoromethane	75-71-8	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Ethylbenzene	100-41-4	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Hexachlorobutadiene	87-68-3	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.011		NA	NA	NS	NA	NA
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Methylene Chloride	75-09-2	mg/kg	0.0051 - 0.021	U	NA	NA	NS	NA	NA
n-Butylbenzene	104-51-8	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
n-Propylbenzene	103-65-1	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Naphthalene	91-20-3	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
o-Xylene	95-47-6	mg/kg	0.0013 - 0.0052	U	NA	NA	NS	NA	NA
p-Isopropyltoluene	99-87-6	mg/kg	0.02		NA	NA	NS	NA	NA
sec-Butylbenzene	135-98-8	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Styrene	100-42-5	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
tert-Butylbenzene	98-06-6	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Tetrachloroethene	127-18-4	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Toluene	108-88-3	mg/kg	0.032		NA	NA	NS	NA	NA
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Trichloroethene	79-01-6	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Trichlorofluoromethane	75-69-4	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Vinyl Chloride	75-01-4	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA

TABLE 5-3
TIER 1 SCREENING RESULTS FOR THE HORNED LARK
FORT WINGATE DEPOT ACTIVITY
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Horned Lark Tier 1 ESL (1)	Does Concentration Exceed Horned Lark ESL (Y/N)	Horned Lark Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)									
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
2,4-Dichlorophenol	120-83-2	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
2,4-Dimethylphenol	105-67-9	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
2,4-Dinitrophenol	51-28-5	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
2-Chlorophenol	95-57-8	mg/kg	0.17 - 0.36	U	NA	NA	5.34	N	NA
2-Methylnaphthalene	91-57-6	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
2-Nitroaniline	88-74-4	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
2-Nitrophenol	88-75-5	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
3-Nitroaniline	99-09-2	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
4-Chloroaniline	106-47-8	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
4-Nitroaniline	100-01-6	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
4-Nitrophenol	100-02-7	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Acenaphthene	83-32-9	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Acenaphthylene	208-96-8	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Anthracene	120-12-7	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Benzo(a)anthracene	56-55-3	mg/kg	0.17 - 0.36	U	NA	NA	0.506	N	NA
Benzo(a)pyrene	50-32-8	mg/kg	0.13 - 0.28	U	NA	NA	NS	NA	NA
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Benzoic Acid	65-85-0	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Benzyl Alcohol	100-51-6	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.21		NA	NA	5.2	N	0.040
Butylbenzylphthalate	85-68-7	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Carbazole	86-74-8	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Chrysene	218-01-9	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Di-n-butylphthalate	84-74-2	mg/kg	0.072		NA	NA	0.662	N	0.11
Di-n-octylphthalate	117-84-0	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13 - 0.28	U	NA	NA	NS	NA	NA
Dibenzofuran	132-64-9	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Diethylphthalate	84-66-2	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Dimethylphthalate	131-11-3	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Fluoranthene	206-44-0	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Fluorene	86-73-7	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Hexachlorobenzene	118-74-1	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Hexachloroethane	67-72-1	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Isophorone	78-59-1	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
N-Nitrosodimethylamine	62-75-9	mg/kg	0.02 - 0.043	U	NA	NA	NS	NA	NA
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Naphthalene	91-20-3	mg/kg	0.17 - 0.36	U	NA	NA	71	N	NA
Nitrobenzene	98-95-3	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Pentachlorophenol	87-86-5	mg/kg	0.17 - 0.36	U	NA	NA	31.8	N	NA
Phenanthrene	85-01-8	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Phenol	108-95-2	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Pyrene	129-00-0	mg/kg	0.17 - 0.36	U	NA	NA	97	N	NA

TABLE 5-3
TIER 1 SCREENING RESULTS FOR THE HORNED LARK
FORT WINGATE DEPOT ACTIVITY
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Horned Lark Tier 1 ESL (1)	Does Concentration Exceed Horned Lark ESL (Y/N)	Horned Lark Estimated Hazard Quotient
EXPLOSIVES (mg/kg)									
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.3		NA	NA	NS	NA	NA
1,3-Dinitrobenzene	99-65-0	mg/kg	0.073 - 0.15	U	NA	NA	2	N	NA
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.97		NA	NA	46.1	N	NA
2,4-Dinitrotoluene	121-14-2	mg/kg	0.073 - 0.15	U	NA	NA	NS	NA	NA
2,6-Dinitrotoluene	606-20-2	mg/kg	0.073 - 0.15	U	NA	NA	284	N	NA
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.22	U	NA	NA	NS	NA	NA
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.073 - 0.15	U	NA	NA	NS	NA	NA
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.073 - 0.15	U	NA	NA	NS	NA	NA
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.22	U	NA	NA	NS	NA	NA
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.073 - 0.15	U	NA	NA	NS	NA	NA
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	8.8		NA	NA	11.2	N	0.79
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	43	J	NA	NA	NS	NA	NA
Nitrobenzene	98-95-3	mg/kg	0.073 - 0.15	U	NA	NA	NS	NA	NA
Nitroglycerine	55-63-0	mg/kg	0.15 - 0.3	U	NA	NA	NS	NA	NA
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HM	2691-41-0	mg/kg	3.1		NA	NA	NS	NA	NA
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.24 - 0.5	U	NA	NA	NS	NA	NA
POLYCHLORINATED BIPHENYLS (mg/kg)									
Aroclor 1016	12674-11-2	mg/kg	0.018 - 0.022	U	NA	NA	NS	NA	NA
Aroclor 1221	11104-28-2	mg/kg	0.018 - 0.022	U	NA	NA	NS	NA	NA
Aroclor 1232	11141-16-5	mg/kg	0.0092 - 0.11	U	NA	NA	NS	NA	NA
Aroclor 1242	53469-21-9	mg/kg	0.0092 - 0.11	U	NA	NA	NS	NA	NA
Aroclor 1248	12672-29-6	mg/kg	0.0092 - 0.11	U	NA	NA	NS	NA	NA
Aroclor 1254	11097-69-1	mg/kg	0.0092 - 0.11	U	NA	NA	0.473	N	NA
Aroclor 1260	11096-82-5	mg/kg	0.0092 - 0.11	U	NA	NA	10.2	N	NA
DIOXINS/FURANS Birds (mg/kg) (3)									
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg	0.0000000005	J	0.0000051	0.0001	NS	NA	NA
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000075		0.000075	0.0001	NS	NA	NA
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg	0.000000035	J	0.0000035	0.01	NS	NA	NA
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.000000013	J	0.000013	0.001	NS	NA	NA
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg	0.0000000025		0.00000025	0.01	NS	NA	NA
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg	0.00000001	J	0.0000001	0.1	NS	NA	NA
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg	0.0000000085	J	0.00000017	0.05	NS	NA	NA
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg	0.000000012		0.00000012	0.1	NS	NA	NA
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg	0.0000000025		0.00000025	0.01	NS	NA	NA
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg	0.0000000059		0.000000059	0.1	NS	NA	NA
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg	0.000000016		0.00000016	0.1	NS	NA	NA
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg	0.000000013		0.00000013	0.1	NS	NA	NA
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg	0.00000025		0.00000025	1	NS	NA	NA
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg	0.000000043		0.00000043	0.1	NS	NA	NA
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg	0.00000021		0.00000021	1	NS	NA	NA
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg	0.0000006	J	0.0000006	1	NS	NA	NA
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000035 - 0.00000044	1	NS	NA	NA
TEQ Birds**		mg/kg	0.0000012				0.000016	N	0.077

TABLE 5-3
TIER 1 SCREENING RESULTS FOR THE HORNED LARK
FORT WINGATE DEPOT ACTIVITY
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Horned Lark Tier 1 ESL (1)	Does Concentration Exceed Horned Lark ESL (Y/N)	Horned Lark Estimated Hazard Quotient
METALS (mg/kg)									
Aluminum	7429-90-5	mg/kg	38,000		NA	NA	footnote (4)	N	NA
Antimony	7440-36-0	mg/kg	0.62		NA	NA	NS	NA	NA
Arsenic	7440-38-2	mg/kg	8.6		NA	NA	10.6	N	0.81
Barium	7440-39-3	mg/kg	820		NA	NA	348	Y	2.4
Beryllium	7440-41-7	mg/kg	1.8		NA	NA	NS	NA	NA
Cadmium	7440-43-9	mg/kg	3.6		NA	NA	6.95	N	0.52
Calcium	7440-70-2	mg/kg	60,000		NA	NA	NS	NA	NA
Chromium (Total) (2)	7440-47-3	mg/kg	62		NA	NA	12.6	Y	4.9
Cobalt	7440-48-4	mg/kg	8.2		NA	NA	36	N	0.23
Copper	7440-50-8	mg/kg	670		NA	NA	19.2	Y	35
Iron	7439-89-6	mg/kg	23,000		NA	NA	NS	NA	NA
Lead	7439-92-1	mg/kg	24		NA	NA	7.71	Y	3.1
Magnesium	7439-95-4	mg/kg	17,000		NA	NA	NS	NA	NA
Manganese	7439-96-5	mg/kg	930		NA	NA	847	Y	1.1
Mercury (Elemental)	7439-97-6	mg/kg	1.9		NA	NA	0.0899	Y	21
Nickel	7440-02-0	mg/kg	21		NA	NA	31.7	N	0.66
Potassium	7440-09-7	mg/kg	3,400		NA	NA	NS	NA	NA
Selenium	7782-49-2	mg/kg	2.3		NA	NA	1.37	Y	1.7
Silver	7440-22-4	mg/kg	0.48		NA	NA	10.4	N	0.046
Sodium	7440-23-5	mg/kg	430		NA	NA	NS	NA	NA
Thallium	7440-28-0	mg/kg	0.2		NA	NA	1.66	N	0.12
Vanadium	7440-62-2	mg/kg	42		NA	NA	1.63	Y	26
Zinc	7440-66-6	mg/kg	73		NA	NA	313	N	0.23
OTHER PARAMETERS (mg/kg)									
Cyanide	57-12-5	mg/kg	0.21		NA	NA	0.189	Y	1.1
Nitrate	14797-55-8	mg/kg	58		NA	NA	NS	NA	NA
Perchlorate	14797-73-0	mg/kg	0.033	U	NA	NA	NS	NA	NA
							Cumulative Horned Lark Hazard		**100**
							Exceeds Target Level		**Y**

Notes:

1) New Mexico Environment Department Ecological Soil Screening Levels. March 2017 Update, except TEQ birds from USEPA Region 4 (2018)

2) Chromium screening value is for Total Chromium.

3) Toxicity data for the dioxin and furan congeners were assessed using toxicity equivalency factors (TEF) from Van den berg, et al (1998). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the USEPA Region 4 ESL for birds USEPA (2018).

4) pH-dependent. Not a concern at the Inner Fence Area. See Text.

TEQ maximum was calculated using the ProUCL dataset. See **Appendix D, Attachment 3.

CAS = Chemical Abstracts Service

ESL = Ecological Screening Level

J = Estimated

mg/kg = milligrams per kilogram

NA = Not applicable

NS = No Standard

TEF = Toxicity Equivalency Factor

TEQ = Toxic equivalency quotient

U = Nondetect

TABLE 5-4
TIER 1 SCREENING RESULTS FOR THE RED-TAILED HAWK
FORT WINGATE DEPOT ACTIVITY
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Red-Tailed Hawk Tier 1 ESL(1)	Does Concentration Exceed Red-Tailed Hawk ESL (Y/N)	Red-Tailed Hawk Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)									
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
1,1,1-Trichloroethane	71-55-6	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
1,1,2-Trichloroethane	79-00-5	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
1,1-Dichloroethane	75-34-3	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
1,1-Dichloroethene	75-35-4	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
1,1-Dichloropropene	563-58-6	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0025 - 0.01	U	NA	NA	NS	NA	NA
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0025 - 0.01	U	NA	NA	NS	NA	NA
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
1,2-Dichlorobenzene	95-50-1	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
1,2-Dichloroethane	107-06-2	mg/kg	0.001 - 0.0042	U	NA	NA	167	N	NA
1,2-Dichloropropane	78-87-5	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
1,3-Dichlorobenzene	541-73-1	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
1,3-Dichloropropane	142-28-9	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
1,4-Dichlorobenzene	106-46-7	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
2,2-Dichloropropane	594-20-7	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
2-Butanone	78-93-3	mg/kg	0.14		NA	NA	NS	NA	NA
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
2-Hexanone	591-78-6	mg/kg	0.34		NA	NA	36.4	N	0.0093
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Acetone	67-64-1	mg/kg	3.1		NA	NA	7,320	N	0.00042
Benzene	71-43-2	mg/kg	0.0077		NA	NA	NS	NA	NA
Bromobenzene	108-86-1	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Bromochloromethane	74-97-5	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Bromodichloromethane	75-27-4	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Bromomethane	74-83-9	mg/kg	0.026		NA	NA	NS	NA	NA
Carbon Disulfide	75-15-0	mg/kg	0.17		NA	NA	NS	NA	NA
Carbon Tetrachloride	56-23-5	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Chlorobenzene	108-90-7	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Chloroform	67-66-3	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Chloromethane	74-87-3	mg/kg	0.0081		NA	NA	NS	NA	NA
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Dibromochloromethane	124-48-1	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Dichlorodifluoromethane	75-71-8	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Ethylbenzene	100-41-4	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Hexachlorobutadiene	87-68-3	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.011		NA	NA	NS	NA	NA
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Methylene Chloride	75-09-2	mg/kg	0.0051 - 0.021	U	NA	NA	NS	NA	NA
n-Butylbenzene	104-51-8	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
n-Propylbenzene	103-65-1	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Naphthalene	91-20-3	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
o-Xylene	95-47-6	mg/kg	0.0013 - 0.0052	U	NA	NA	NS	NA	NA
p-Isopropyltoluene	99-87-6	mg/kg	0.02		NA	NA	NS	NA	NA
sec-Butylbenzene	135-98-8	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Styrene	100-42-5	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
tert-Butylbenzene	98-06-6	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Tetrachloroethene	127-18-4	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Toluene	108-88-3	mg/kg	0.032		NA	NA	NS	NA	NA
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Trichloroethene	79-01-6	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Trichlorofluoromethane	75-69-4	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Vinyl Chloride	75-01-4	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA

TABLE 5-4
TIER 1 SCREENING RESULTS FOR THE RED-TAILED HAWK
FORT WINGATE DEPOT ACTIVITY
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Red-Tailed Hawk Tier 1 ESL(1)	Does Concentration Exceed Red-Tailed Hawk ESL (Y/N)	Red-Tailed Hawk Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)				U					
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
2,4-Dichlorophenol	120-83-2	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
2,4-Dimethylphenol	105-67-9	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
2,4-Dinitrophenol	51-28-5	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
2-Chlorophenol	95-57-8	mg/kg	0.17 - 0.36	U	NA	NA	41.1	N	NA
2-Methylnaphthalene	91-57-6	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
2-Nitroaniline	88-74-4	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
2-Nitrophenol	88-75-5	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
3-Nitroaniline	99-09-2	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
4-Chloroaniline	106-47-8	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
4-Nitroaniline	100-01-6	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
4-Nitrophenol	100-02-7	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Acenaphthene	83-32-9	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Acenaphthylene	208-96-8	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Anthracene	120-12-7	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Benzo(a)anthracene	56-55-3	mg/kg	0.17 - 0.36	U	NA	NA	3.89	N	NA
Benzo(a)pyrene	50-32-8	mg/kg	0.13 - 0.28	U	NA	NA	NS	NA	NA
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Benzoic Acid	65-85-0	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Benzyl Alcohol	100-51-6	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.21		NA	NA	40	N	0.0053
Butylbenzylphthalate	85-68-7	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Carbazole	86-74-8	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Chrysene	218-01-9	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Di-n-butylphthalate	84-74-2	mg/kg	0.072		NA	NA	5.1	N	0.014
Di-n-octylphthalate	117-84-0	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13 - 0.28	U	NA	NA	NS	NA	NA
Dibenzofuran	132-64-9	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Diethylphthalate	84-66-2	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Dimethylphthalate	131-11-3	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Fluoranthene	206-44-0	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Fluorene	86-73-7	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Hexachlorobenzene	118-74-1	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Hexachloroethane	67-72-1	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Isophorone	78-59-1	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
N-Nitrosodimethylamine	62-75-9	mg/kg	0.02 - 0.043	U	NA	NA	NS	NA	NA
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Naphthalene	91-20-3	mg/kg	0.17 - 0.36	U	NA	NA	546	N	NA
Nitrobenzene	98-95-3	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Pentachlorophenol	87-86-5	mg/kg	0.17 - 0.36	U	NA	NA	245	N	NA
Phenanthrene	85-01-8	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Phenol	108-95-2	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Pyrene	129-00-0	mg/kg	0.17 - 0.36	U	NA	NA	746	N	NA

TABLE 5-4
TIER 1 SCREENING RESULTS FOR THE RED-TAILED HAWK
FORT WINGATE DEPOT ACTIVITY
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Red-Tailed Hawk Tier 1 ESL(1)	Does Concentration Exceed Red-Tailed Hawk ESL (Y/N)	Red-Tailed Hawk Estimated Hazard Quotient
EXPLOSIVES (mg/kg)									
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.3		NA	NA	NS	NA	NA
1,3-Dinitrobenzene	99-65-0	mg/kg	0.073 - 0.15	U	NA	NA	15.4	N	NA
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.97		NA	NA	355	N	NA
2,4-Dinitrotoluene	121-14-2	mg/kg	0.073 - 0.15	U	NA	NA	NS	NA	NA
2,6-Dinitrotoluene	606-20-2	mg/kg	0.073 - 0.15	U	NA	NA	2,180	N	NA
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.22	U	NA	NA	NS	NA	NA
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.073 - 0.15	U	NA	NA	NS	NA	NA
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.073 - 0.15	U	NA	NA	NS	NA	NA
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.22	U	NA	NA	NS	NA	NA
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.073 - 0.15	U	NA	NA	NS	NA	NA
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	8.8		NA	NA	85.9	N	0.102
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	43	J	NA	NA	NS	NA	NA
Nitrobenzene	98-95-3	mg/kg	0.073 - 0.15	U	NA	NA	NS	NA	NA
Nitroglycerine	55-63-0	mg/kg	0.15 - 0.3	U	NA	NA	NS	NA	NA
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HM	2691-41-0	mg/kg	3.1		NA	NA	NS	NA	NA
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.24 - 0.5	U	NA	NA	NS	NA	NA
POLYCHLORINATED BIPHENYLS (mg/kg)									
Aroclor 1016	12674-11-2	mg/kg	0.018 - 0.022	U	NA	NA	NS	NA	NA
Aroclor 1221	11104-28-2	mg/kg	0.018 - 0.022	U	NA	NA	NS	NA	NA
Aroclor 1232	11141-16-5	mg/kg	0.0092 - 0.11	U	NA	NA	NS	NA	NA
Aroclor 1242	53469-21-9	mg/kg	0.0092 - 0.11	U	NA	NA	NS	NA	NA
Aroclor 1248	12672-29-6	mg/kg	0.0092 - 0.11	U	NA	NA	NS	NA	NA
Aroclor 1254	11097-69-1	mg/kg	0.0092 - 0.11	U	NA	NA	3.64	N	NA
Aroclor 1260	11096-82-5	mg/kg	0.0092 - 0.11	U	NA	NA	78.3	N	NA
DIOXINS/FURANS Birds (mg/kg) (3)									
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg	0.0000000005	J	0.0000051	0.0001	NS	NA	NA
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000075		0.000075	0.0001	NS	NA	NA
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg	0.000000035	J	0.0000035	0.01	NS	NA	NA
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.000000013	J	0.000013	0.001	NS	NA	NA
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg	0.0000000025		0.00000025	0.01	NS	NA	NA
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg	0.00000001	J	0.0000001	0.1	NS	NA	NA
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg	0.0000000085	J	0.00000017	0.05	NS	NA	NA
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg	0.000000012		0.00000012	0.1	NS	NA	NA
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg	0.0000000025		0.00000025	0.01	NS	NA	NA
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg	0.0000000059		0.000000059	0.1	NS	NA	NA
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg	0.000000016		0.00000016	0.1	NS	NA	NA
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg	0.000000013		0.00000013	0.1	NS	NA	NA
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg	0.00000025		0.00000025	1	NS	NA	NA
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg	0.000000043		0.00000043	0.1	NS	NA	NA
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg	0.00000021		0.00000021	1	NS	NA	NA
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg	0.0000006	J	0.0000006	1	NS	NA	NA
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000035 - 0.00000044	1	NS	NA	NA
TEQ Birds**		mg/kg	0.0000012				0.000016	N	0.077

TABLE 5-4
TIER 1 SCREENING RESULTS FOR THE RED-TAILED HAWK
FORT WINGATE DEPOT ACTIVITY
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Red-Tailed Hawk Tier 1 ESL(1)	Does Concentration Exceed Red-Tailed Hawk ESL (Y/N)	Red-Tailed Hawk Estimated Hazard Quotient
METALS (mg/kg)									
Aluminum	7429-90-5	mg/kg	38,000		NA	NA	footnote (4)	N	NA
Antimony	7440-36-0	mg/kg	0.62		NA	NA	NS	NA	NA
Arsenic	7440-38-2	mg/kg	8.6		NA	NA	81.5	N	0.11
Barium	7440-39-3	mg/kg	820		NA	NA	2,680	N	0.31
Beryllium	7440-41-7	mg/kg	1.8		NA	NA	NS	NA	NA
Cadmium	7440-43-9	mg/kg	3.6		NA	NA	53.5	N	0.067
Calcium	7440-70-2	mg/kg	60,000		NA	NA	NS	NA	NA
Chromium	7440-47-3	mg/kg	62		NA	NA	96.8	N	0.64
Cobalt	7440-48-4	mg/kg	8.2		NA	NA	277	N	0.030
Copper	7440-50-8	mg/kg	670		NA	NA	147	Y	4.6
Iron	7439-89-6	mg/kg	23,000		NA	NA	NS	NA	NA
Lead	7439-92-1	mg/kg	24		NA	NA	59.3	N	0.40
Magnesium	7439-95-4	mg/kg	17,000		NA	NA	NS	NA	NA
Manganese	7439-96-5	mg/kg	930		NA	NA	6,520	N	0.14
Mercury (Elemental)	7439-97-6	mg/kg	1.9		NA	NA	0.692	Y	2.7
Nickel	7440-02-0	mg/kg	21		NA	NA	244	N	0.086
Potassium	7440-09-7	mg/kg	3,400		NA	NA	NS	NA	NA
Selenium	7782-49-2	mg/kg	2.3		NA	NA	10.6	N	0.22
Silver	7440-22-4	mg/kg	0.48		NA	NA	73.5	N	0.0065
Sodium	7440-23-5	mg/kg	430		NA	NA	NS	NA	NA
Thallium	7440-28-0	mg/kg	0.2		NA	NA	12.7	N	0.02
Vanadium	7440-62-2	mg/kg	42		NA	NA	12.5	Y	3.4
Zinc	7440-66-6	mg/kg	73		NA	NA	2,410	N	0.030
OTHER PARAMETERS (mg/kg)									
Cyanide	57-12-5	mg/kg	0.21		NA	NA	1.46	N	0.14
Nitrate	14797-55-8	mg/kg	58		NA	NA	NS	NA	NA
Perchlorate	14797-73-0	mg/kg	0.033	U	NA	NA	NS	NA	NA
							Cumulative Red-Tailed Hawk Hazard		**13**
							Exceeds Target Level		**Y**

Notes:

1) New Mexico Environment Department Ecological Soil Screening Levels. March 2017 Update, except TEQ birds from USEPA Region 4 (2018)

2) Chromium screening value is for Total Chromium.

3) Toxicity data for the dioxin and furan congeners were assessed using toxicity equivalency factors (TEF) from Van den berg, et al (1998). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the USEPA Region 4 ESL for birds USEPA (2018).

4) pH-dependent. Not a concern at the Inner Fence Area. See Text.

TEQ maximum was calculated using the ProUCL dataset. See **Appendix D, Attachment 3.

CAS = Chemical Abstracts Service
ESL = Ecological Screening Level
J = Estimated
mg/kg = milligrams per kilogram
NA = Not applicable
NS = No Standard
TEF = Toxicity Equivalency Factor
TEQ = Toxic equivalency quotient
U = Nondetect

TABLE 5-5
TIER 1 SCREENING RESULTS FOR THE KIT FOX
FORT WINGATE DEPOT ACTIVITY
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Kit Fox Tier 1 ESL(1)	Does Concentration Exceed Kit Fox ESL (Y/N)	Kit Fox Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)									
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
1,1,1-Trichloroethane	71-55-6	mg/kg	0.001 - 0.0042	U	NA	NA	40,400	N	NA
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
1,1,2-Trichloroethane	79-00-5	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
1,1-Dichloroethane	75-34-3	mg/kg	0.001 - 0.0042	U	NA	NA	15,400	N	NA
1,1-Dichloroethene	75-35-4	mg/kg	0.001 - 0.0042	U	NA	NA	1,210	N	NA
1,1-Dichloropropene	563-58-6	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0025 - 0.01	U	NA	NA	NS	NA	NA
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.001 - 0.0042	U	NA	NA	59.8	N	NA
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0025 - 0.01	U	NA	NA	NS	NA	NA
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
1,2-Dichlorobenzene	95-50-1	mg/kg	0.001 - 0.0042	U	NA	NA	101	N	NA
1,2-Dichloroethane	107-06-2	mg/kg	0.001 - 0.0042	U	NA	NA	2,010	N	NA
1,2-Dichloropropane	78-87-5	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
1,3-Dichlorobenzene	541-73-1	mg/kg	0.001 - 0.0042	U	NA	NA	101	N	NA
1,3-Dichloropropane	142-28-9	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
1,4-Dichlorobenzene	106-46-7	mg/kg	0.001 - 0.0042	U	NA	NA	101	N	NA
2,2-Dichloropropane	594-20-7	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
2-Butanone	78-93-3	mg/kg	0.14		NA	NA	71,500	N	0.0000020
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
2-Hexanone	591-78-6	mg/kg	0.34		NA	NA	334	N	0.0010
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.001 - 0.0042	U	NA	NA	1,010	N	NA
Acetone	67-64-1	mg/kg	3.1		NA	NA	404	N	0.0077
Benzene	71-43-2	mg/kg	0.0077		NA	NA	1,070	N	0.0000072
Bromobenzene	108-86-1	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Bromochloromethane	74-97-5	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Bromodichloromethane	75-27-4	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Bromomethane	74-83-9	mg/kg	0.026		NA	NA	NS	NA	NA
Carbon Disulfide	75-15-0	mg/kg	0.17		NA	NA	10.1	N	0.017
Carbon Tetrachloride	56-23-5	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Chlorobenzene	108-90-7	mg/kg	0.001 - 0.0042	U	NA	NA	2,420	N	NA
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Chloroform	67-66-3	mg/kg	0.001 - 0.0042	U	NA	NA	606	N	NA
Chloromethane	74-87-3	mg/kg	0.0081		NA	NA	NS	NA	NA
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.001 - 0.0042	U	NA	NA	1,830	N	NA
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Dibromochloromethane	124-48-1	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Dichlorodifluoromethane	75-71-8	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Ethylbenzene	100-41-4	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Hexachlorobutadiene	87-68-3	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.011		NA	NA	84.8	N	0.0001
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Methylene Chloride	75-09-2	mg/kg	0.0051 - 0.021	U	NA	NA	236	N	NA
n-Butylbenzene	104-51-8	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
n-Propylbenzene	103-65-1	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Naphthalene	91-20-3	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
o-Xylene	95-47-6	mg/kg	0.0013 - 0.0052	U	NA	NA	NS	NA	NA
p-Isopropyltoluene	99-87-6	mg/kg	0.02		NA	NA	NS	NA	NA
sec-Butylbenzene	135-98-8	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Styrene	100-42-5	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
tert-Butylbenzene	98-06-6	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Tetrachloroethene	127-18-4	mg/kg	0.001 - 0.0042	U	NA	NA	80.8	N	NA
Toluene	108-88-3	mg/kg	0.032		NA	NA	1,050	N	0.000030
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.001 - 0.0042	U	NA	NA	1,830	N	NA
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Trichloroethene	79-01-6	mg/kg	0.001 - 0.0042	U	NA	NA	4,040	N	NA
Trichlorofluoromethane	75-69-4	mg/kg	0.001 - 0.0042	U	NA	NA	8,560	N	NA
Vinyl Chloride	75-01-4	mg/kg	0.001 - 0.0042	U	NA	NA	6.87	N	NA

TABLE 5-5
TIER 1 SCREENING RESULTS FOR THE KIT FOX
FORT WINGATE DEPOT ACTIVITY
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Kit Fox Tier 1 ESL(1)	Does Concentration Exceed Kit Fox ESL (Y/N)	Kit Fox Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)				U					
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
2,4-Dichlorophenol	120-83-2	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
2,4-Dimethylphenol	105-67-9	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
2,4-Dinitrophenol	51-28-5	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
2-Chlorophenol	95-57-8	mg/kg	0.17 - 0.36	U	NA	NA	20.2	N	NA
2-Methylnaphthalene	91-57-6	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17 - 0.36	U	NA	NA	8,890	N	NA
2-Nitroaniline	88-74-4	mg/kg	0.17 - 0.36	U	NA	NA	12.1	N	NA
2-Nitrophenol	88-75-5	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
3-Nitroaniline	99-09-2	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
4-Chloroaniline	106-47-8	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
4-Nitroaniline	100-01-6	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
4-Nitrophenol	100-02-7	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Acenaphthene	83-32-9	mg/kg	0.17 - 0.36	U	NA	NA	2,830	N	NA
Acenaphthylene	208-96-8	mg/kg	0.17 - 0.36	U	NA	NA	303	N	NA
Anthracene	120-12-7	mg/kg	0.17 - 0.36	U	NA	NA	4,040	N	NA
Benzo(a)anthracene	56-55-3	mg/kg	0.17 - 0.36	U	NA	NA	6.87	N	NA
Benzo(a)pyrene	50-32-8	mg/kg	0.13 - 0.28	U	NA	NA	225	N	NA
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17 - 0.36	U	NA	NA	162	N	NA
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17 - 0.36	U	NA	NA	291	N	NA
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17 - 0.36	U	NA	NA	291	N	NA
Benzoic Acid	65-85-0	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Benzyl Alcohol	100-51-6	mg/kg	0.17 - 0.36	U	NA	NA	5,780	N	NA
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.21		NA	NA	739	N	0.00028
Butylbenzylphthalate	85-68-7	mg/kg	0.17 - 0.36	U	NA	NA	6,420	N	NA
Carbazole	86-74-8	mg/kg	0.17 - 0.36	U	NA	NA	921	N	NA
Chrysene	218-01-9	mg/kg	0.17 - 0.36	U	NA	NA	6.87	N	NA
Di-n-butylphthalate	84-74-2	mg/kg	0.072		NA	NA	54,100	N	0.0000013
Di-n-octylphthalate	117-84-0	mg/kg	0.17 - 0.36	U	NA	NA	2,630	N	NA
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13 - 0.28	U	NA	NA	53.7	N	NA
Dibenzofuran	132-64-9	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Diethylphthalate	84-66-2	mg/kg	0.17 - 0.36	U	NA	NA	186,000	N	NA
Dimethylphthalate	131-11-3	mg/kg	0.17 - 0.36	U	NA	NA	2,750	N	NA
Fluoranthene	206-44-0	mg/kg	0.17 - 0.36	U	NA	NA	505	N	NA
Fluorene	86-73-7	mg/kg	0.17 - 0.36	U	NA	NA	5,050	N	NA
Hexachlorobenzene	118-74-1	mg/kg	0.17 - 0.36	U	NA	NA	287	N	NA
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Hexachloroethane	67-72-1	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17 - 0.36	U	NA	NA	291	N	NA
Isophorone	78-59-1	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
N-Nitrosodimethylamine	62-75-9	mg/kg	0.02 - 0.043	U	NA	NA	NS	NA	NA
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Naphthalene	91-20-3	mg/kg	0.17 - 0.36	U	NA	NA	578	N	NA
Nitrobenzene	98-95-3	mg/kg	0.17 - 0.36	U	NA	NA	283	N	NA
Pentachlorophenol	87-86-5	mg/kg	0.17 - 0.36	U	NA	NA	340	N	NA
Phenanthrene	85-01-8	mg/kg	0.17 - 0.36	U	NA	NA	208	N	NA
Phenol	108-95-2	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Pyrene	129-00-0	mg/kg	0.17 - 0.36	U	NA	NA	303	N	NA

TABLE 5-5
TIER 1 SCREENING RESULTS FOR THE KIT FOX
FORT WINGATE DEPOT ACTIVITY
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Kit Fox Tier 1 ESL(1)	Does Concentration Exceed Kit Fox ESL (Y/N)	Kit Fox Estimated Hazard Quotient
EXPLOSIVES (mg/kg)									
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.3		NA	NA	541	N	0.00055
1,3-Dinitrobenzene	99-65-0	mg/kg	0.073 - 0.15	U	NA	NA	4.57	N	NA
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.97		NA	NA	1,400	N	0.00069
2,4-Dinitrotoluene	121-14-2	mg/kg	0.073 - 0.15	U	NA	NA	108	N	NA
2,6-Dinitrotoluene	606-20-2	mg/kg	0.073 - 0.15	U	NA	NA	71.5	N	NA
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.22	U	NA	NA	562	N	0.00039
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.073 - 0.15	U	NA	NA	360	N	NA
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.073 - 0.15	U	NA	NA	432	N	NA
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.22	U	NA	NA	387	N	0.00057
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.073 - 0.15	U	NA	NA	792	N	NA
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	8.8		NA	NA	361	N	0.024
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	43	J	NA	NA	52.5	N	0.82
Nitrobenzene	98-95-3	mg/kg	0.073 - 0.15	U	NA	NA	283	N	NA
Nitroglycerine	55-63-0	mg/kg	0.15 - 0.3	U	NA	NA	3,890	N	NA
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HM	2691-41-0	mg/kg	3.1		NA	NA	3,030	N	0.0010
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.24 - 0.5	U	NA	NA	2,830	N	NA
POLYCHLORINATED BIPHENYLS (mg/kg)									
Aroclor 1016	12674-11-2	mg/kg	0.018 - 0.022	U	NA	NA	60.2	N	NA
Aroclor 1221	11104-28-2	mg/kg	0.018 - 0.022	U	NA	NA	NS	NA	NA
Aroclor 1232	11141-16-5	mg/kg	0.0092 - 0.11	U	NA	NA	NS	NA	NA
Aroclor 1242	53469-21-9	mg/kg	0.0092 - 0.11	U	NA	NA	NS	NA	NA
Aroclor 1248	12672-29-6	mg/kg	0.0092 - 0.11	U	NA	NA	NS	NA	NA
Aroclor 1254	11097-69-1	mg/kg	0.0092 - 0.11	U	NA	NA	24.7	N	NA
Aroclor 1260	11096-82-5	mg/kg	0.0092 - 0.11	U	NA	NA	1.25	N	NA
DIOXINS/FURANS Birds (mg/kg) (3)									
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg	0.0000000015	J	0.0000051	0.0001	NS	NA	NA
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.000000011		0.000075	0.0001	NS	NA	NA
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg	0.0000000350	J	0.0000035	0.01	NS	NA	NA
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.00000013	J	0.000013	0.001	NS	NA	NA
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg	0.0000000025		0.00000025	0.01	NS	NA	NA
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg	0.00000001	J	0.0000001	0.1	NS	NA	NA
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg	0.000000017	J	0.00000017	0.05	NS	NA	NA
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg	0.000000012		0.00000012	0.1	NS	NA	NA
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg	0.000000025		0.00000025	0.01	NS	NA	NA
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg	0.0000000059		0.000000059	0.1	NS	NA	NA
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg	0.000000016		0.00000016	0.1	NS	NA	NA
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg	0.0000000039		0.00000013	0.1	NS	NA	NA
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg	0.00000025		0.00000025	1	NS	NA	NA
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg	0.000000043		0.00000043	0.1	NS	NA	NA
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg	0.000000063		0.00000021	1	NS	NA	NA
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg	0.00000006	J	0.0000006	1	NS	NA	NA
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000035 - 0.00000044	1	NS	NA	NA
TEQ Mammals**		mg/kg	0.00000069				0.0000227	N	0.030

TABLE 5-5
TIER 1 SCREENING RESULTS FOR THE KIT FOX
FORT WINGATE DEPOT ACTIVITY
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Kit Fox Tier 1 ESL(1)	Does Concentration Exceed Kit Fox ESL (Y/N)	Kit Fox Estimated Hazard Quotient
METALS (mg/kg)									
Aluminum	7429-90-5	mg/kg	38,000		NA	NA	footnote (4)	N	NA
Antimony	7440-36-0	mg/kg	0.62		NA	NA	2.38	N	0.26
Arsenic	7440-38-2	mg/kg	8.6		NA	NA	42	N	0.20
Barium	7440-39-3	mg/kg	820		NA	NA	2,090	N	0.39
Beryllium	7440-41-7	mg/kg	1.8		NA	NA	21.5	N	0.084
Cadmium	7440-43-9	mg/kg	3.6		NA	NA	31.1	N	0.12
Calcium	7440-70-2	mg/kg	60,000		NA	NA	NS	NA	NA
Chromium (Total) (2)	7440-47-3	mg/kg	62		NA	NA	97	N	0.64
Cobalt	7440-48-4	mg/kg	8.2		NA	NA	296	N	0.028
Copper	7440-50-8	mg/kg	670		NA	NA	226	Y	3.0
Iron	7439-89-6	mg/kg	23,000		NA	NA	NS	NA	NA
Lead	7439-92-1	mg/kg	24		NA	NA	190	N	0.13
Magnesium	7439-95-4	mg/kg	17,000		NA	NA	NS	NA	NA
Manganese	7439-96-5	mg/kg	930		NA	NA	2,080	N	0.45
Mercury (Elemental)	7439-97-6	mg/kg	1.9		NA	NA	57	N	0.033
Nickel	7440-02-0	mg/kg	21		NA	NA	68.7	N	0.31
Potassium	7440-09-7	mg/kg	3,400		NA	NA	NS	NA	NA
Selenium	7782-49-2	mg/kg	2.3		NA	NA	5.78	N	0.40
Silver	7440-22-4	mg/kg	0.48		NA	NA	243	N	0.0020
Sodium	7440-23-5	mg/kg	430		NA	NA	NS	NA	NA
Thallium	7440-28-0	mg/kg	0.2		NA	NA	0.287	N	0.70
Vanadium	7440-62-2	mg/kg	42		NA	NA	168	N	0.25
Zinc	7440-66-6	mg/kg	73		NA	NA	3,050	N	0.024
OTHER PARAMETERS (mg/kg)									
Cyanide	57-12-5	mg/kg	0.21		NA	NA	2,780	N	0.000076
Nitrate	14797-55-8	mg/kg	58		NA	NA	NS	NA	NA
Perchlorate	14797-73-0	mg/kg	0.033	U	NA	NA	NS	NA	NA
							Cumulative Kit Fox Hazard		**7.9**
							Exceeds Target Level		**Y**

Notes:

1) New Mexico Environment Department Ecological Soil Screening Levels. March 2017 Update.

2) Chromium screening value is for Total Chromium.

3) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization toxicity equivalency factors (TEF) from Van den berg, et al (2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED SSL for 2,3,7,8-tetrachlorodibenz-p-dioxin (TCDD). (NMED 2017, Revised).

4) pH-dependent. Not a concern at the Inner Fence Area. See Text.

TEQ maximum was calculated using the ProUCL dataset. See **Appendix D, Attachment 3.

CAS = Chemical Abstracts Service

ESL = Ecological Screening Level

J = Estimated

mg/kg = milligrams per kilogram

NA = Not applicable

NS = No Standard

TEF = Toxicity Equivalency Factor

TEQ = Toxic equivalency quotient

U = Nondetect

TABLE 5-6
TIER 1 SCREENING RESULTS FOR THE PRONGHORN ANTELOPE
FORT WINGATE DEPOT ACTIVITY
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Pronghorn (1)	Does Concentration Exceed Pronghorn ESL (Y/N)	Pronghorn Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)									
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
1,1,1-Trichloroethane	71-55-6	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
1,1,2-Trichloroethane	79-00-5	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
1,1-Dichloroethane	75-34-3	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
1,1-Dichloroethene	75-35-4	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
1,1-Dichloropropene	563-58-6	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0025 - 0.01	U	NA	NA	NS	NA	NA
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0025 - 0.01	U	NA	NA	NS	NA	NA
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
1,2-Dichlorobenzene	95-50-1	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
1,2-Dichloroethane	107-06-2	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
1,2-Dichloropropane	78-87-5	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
1,3-Dichlorobenzene	541-73-1	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
1,3-Dichloropropane	142-28-9	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
1,4-Dichlorobenzene	106-46-7	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
2,2-Dichloropropane	594-20-7	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
2-Butanone	78-93-3	mg/kg	0.14		NA	NA	NS	NA	NA
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
2-Hexanone	591-78-6	mg/kg	0.34		NA	NA	NS	NA	NA
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Acetone	67-64-1	mg/kg	3.1		NA	NA	NS	NA	NA
Benzene	71-43-2	mg/kg	0.0077		NA	NA	NS	NA	NA
Bromobenzene	108-86-1	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Bromochloromethane	74-97-5	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Bromodichloromethane	75-27-4	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Bromomethane	74-83-9	mg/kg	0.026		NA	NA	NS	NA	NA
Carbon Disulfide	75-15-0	mg/kg	0.17		NA	NA	NS	NA	NA
Carbon Tetrachloride	56-23-5	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Chlorobenzene	108-90-7	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Chloroform	67-66-3	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Chloromethane	74-87-3	mg/kg	0.0081		NA	NA	NS	NA	NA
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Dibromochloromethane	124-48-1	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Dichlorodifluoromethane	75-71-8	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Ethylbenzene	100-41-4	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Hexachlorobutadiene	87-68-3	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.011		NA	NA	NS	NA	NA
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Methylene Chloride	75-09-2	mg/kg	0.0051 - 0.021	U	NA	NA	NS	NA	NA
n-Butylbenzene	104-51-8	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
n-Propylbenzene	103-65-1	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Naphthalene	91-20-3	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
o-Xylene	95-47-6	mg/kg	0.0013 - 0.0052	U	NA	NA	NS	NA	NA
p-Isopropyltoluene	99-87-6	mg/kg	0.02		NA	NA	NS	NA	NA
sec-Butylbenzene	135-98-8	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Styrene	100-42-5	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
tert-Butylbenzene	98-06-6	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Tetrachloroethene	127-18-4	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Toluene	108-88-3	mg/kg	0.032		NA	NA	NS	NA	NA
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Trichloroethene	79-01-6	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Trichlorofluoromethane	75-69-4	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA
Vinyl Chloride	75-01-4	mg/kg	0.001 - 0.0042	U	NA	NA	NS	NA	NA

TABLE 5-6
TIER 1 SCREENING RESULTS FOR THE PRONGHORN ANTELOPE
FORT WINGATE DEPOT ACTIVITY
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Pronghorn (1)	Does Concentration Exceed Pronghorn ESL (Y/N)	Pronghorn Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)				U					
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
2,4-Dichlorophenol	120-83-2	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
2,4-Dimethylphenol	105-67-9	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
2,4-Dinitrophenol	51-28-5	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
2-Chlorophenol	95-57-8	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
2-Methylnaphthalene	91-57-6	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
2-Nitroaniline	88-74-4	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
2-Nitrophenol	88-75-5	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
3-Nitroaniline	99-09-2	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
4-Chloroaniline	106-47-8	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
4-Nitroaniline	100-01-6	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
4-Nitrophenol	100-02-7	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Acenaphthene	83-32-9	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Acenaphthylene	208-96-8	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Anthracene	120-12-7	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Benzo(a)anthracene	56-55-3	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Benzo(a)pyrene	50-32-8	mg/kg	0.13 - 0.28	U	NA	NA	NS	NA	NA
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Benzoic Acid	65-85-0	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Benzyl Alcohol	100-51-6	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.21		NA	NA	NS	NA	NA
Butylbenzylphthalate	85-68-7	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Carbazole	86-74-8	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Chrysene	218-01-9	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Di-n-butylphthalate	84-74-2	mg/kg	0.072		NA	NA	NS	NA	NA
Di-n-octylphthalate	117-84-0	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13 - 0.28	U	NA	NA	NS	NA	NA
Dibenzofuran	132-64-9	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Diethylphthalate	84-66-2	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Dimethylphthalate	131-11-3	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Fluoranthene	206-44-0	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Fluorene	86-73-7	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Hexachlorobenzene	118-74-1	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Hexachloroethane	67-72-1	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Isophorone	78-59-1	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
N-Nitrosodimethylamine	62-75-9	mg/kg	0.02 - 0.043	U	NA	NA	NS	NA	NA
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Naphthalene	91-20-3	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Nitrobenzene	98-95-3	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Pentachlorophenol	87-86-5	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Phenanthrene	85-01-8	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Phenol	108-95-2	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA
Pyrene	129-00-0	mg/kg	0.17 - 0.36	U	NA	NA	NS	NA	NA

TABLE 5-6
TIER 1 SCREENING RESULTS FOR THE PRONGHORN ANTELOPE
FORT WINGATE DEPOT ACTIVITY
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Pronghorn (1)	Does Concentration Exceed Pronghorn ESL (Y/N)	Pronghorn Estimated Hazard Quotient
EXPLOSIVES (mg/kg)									
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.3		NA	NA	NS	NA	NA
1,3-Dinitrobenzene	99-65-0	mg/kg	0.073 - 0.15	U	NA	NA	NS	NA	NA
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.97		NA	NA	NS	NA	NA
2,4-Dinitrotoluene	121-14-2	mg/kg	0.073 - 0.15	U	NA	NA	NS	NA	NA
2,6-Dinitrotoluene	606-20-2	mg/kg	0.073 - 0.15	U	NA	NA	NS	NA	NA
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.22	U	NA	NA	NS	NA	NA
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.073 - 0.15	U	NA	NA	NS	NA	NA
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.073 - 0.15	U	NA	NA	NS	NA	NA
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.22	U	NA	NA	NS	NA	NA
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.073 - 0.15	U	NA	NA	NS	NA	NA
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	8.8		NA	NA	NS	NA	NA
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	43	J	NA	NA	NS	NA	NA
Nitrobenzene	98-95-3	mg/kg	0.073 - 0.15	U	NA	NA	NS	NA	NA
Nitroglycerine	55-63-0	mg/kg	0.15 - 0.3	U	NA	NA	NS	NA	NA
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HM	2691-41-0	mg/kg	3.1		NA	NA	NS	NA	NA
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.24 - 0.5	U	NA	NA	NS	NA	NA
POLYCHLORINATED BIPHENYLS (mg/kg)									
Aroclor 1016	12674-11-2	mg/kg	0.018 - 0.022	U	NA	NA	NS	NA	NA
Aroclor 1221	11104-28-2	mg/kg	0.018 - 0.022	U	NA	NA	NS	NA	NA
Aroclor 1232	11141-16-5	mg/kg	0.0092 - 0.11	U	NA	NA	NS	NA	NA
Aroclor 1242	53469-21-9	mg/kg	0.0092 - 0.11	U	NA	NA	NS	NA	NA
Aroclor 1248	12672-29-6	mg/kg	0.0092 - 0.11	U	NA	NA	NS	NA	NA
Aroclor 1254	11097-69-1	mg/kg	0.0092 - 0.11	U	NA	NA	NS	NA	NA
Aroclor 1260	11096-82-5	mg/kg	0.0092 - 0.11	U	NA	NA	NS	NA	NA
DIOXINS/FURANS Birds (mg/kg) (3)									
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg	1.53E-09	J	0.0000051	0.0001	NS	NA	NA
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.000000011		0.000075	0.0001	NS	NA	NA
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg	0.000000035	J	0.0000035	0.01	NS	NA	NA
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.00000013	J	0.000013	0.001	NS	NA	NA
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg	2.5E-09		0.00000025	0.01	NS	NA	NA
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg	0.00000001	J	0.0000001	0.1	NS	NA	NA
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg	0.000000017	J	0.00000017	0.05	NS	NA	NA
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg	0.000000012		0.00000012	0.1	NS	NA	NA
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg	0.000000025		0.00000025	0.01	NS	NA	NA
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg	5.9E-09		0.000000059	0.1	NS	NA	NA
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg	0.000000016		0.00000016	0.1	NS	NA	NA
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg	3.9E-09		0.00000013	0.1	NS	NA	NA
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg	0.00000025		0.00000025	1	NS	NA	NA
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg	0.000000043		0.00000043	0.1	NS	NA	NA
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg	0.000000063		0.00000021	1	NS	NA	NA
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg	0.00000006	J	0.0000006	1	NS	NA	NA
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000035 - 0.00000044	1	NS	NA	NA
TEQ Mammals**		mg/kg	0.00000069				NS	NA	NA

TABLE 5-6
TIER 1 SCREENING RESULTS FOR THE PRONGHORN ANTELOPE
FORT WINGATE DEPOT ACTIVITY
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Pronghorn (1)	Does Concentration Exceed Pronghorn ESL (Y/N)	Pronghorn Estimated Hazard Quotient
METALS (mg/kg)									
Aluminum	7429-90-5	mg/kg	38,000		NA	NA	footnote (4)	N	NA
Antimony	7440-36-0	mg/kg	0.62		NA	NA	NS	NA	NA
Arsenic	7440-38-2	mg/kg	8.6		NA	NA	36.1	N	0.24
Barium	7440-39-3	mg/kg	820		NA	NA	NS	NA	NA
Beryllium	7440-41-7	mg/kg	1.8		NA	NA	NS	NA	NA
Cadmium	7440-43-9	mg/kg	3.6		NA	NA	NS	NA	NA
Calcium	7440-70-2	mg/kg	60,000		NA	NA	NS	NA	NA
Chromium (Total) (2)	7440-47-3	mg/kg	62		NA	NA	NS	NA	NA
Cobalt	7440-48-4	mg/kg	8.2		NA	NA	57.7	N	0.14
Copper	7440-50-8	mg/kg	670		NA	NA	NS	NA	NA
Iron	7439-89-6	mg/kg	23,000		NA	NA	NS	NA	NA
Lead	7439-92-1	mg/kg	24		NA	NA	173	N	0.14
Magnesium	7439-95-4	mg/kg	17,000		NA	NA	NS	NA	NA
Manganese	7439-96-5	mg/kg	930		NA	NA	5,770	N	0.16
Mercury (Elemental)	7439-97-6	mg/kg	1.9		NA	NA	NS	NA	NA
Nickel	7440-02-0	mg/kg	21		NA	NA	289	N	0.07
Potassium	7440-09-7	mg/kg	3,400		NA	NA	NS	NA	NA
Selenium	7782-49-2	mg/kg	2.3		NA	NA	NS	NA	NA
Silver	7440-22-4	mg/kg	0.48		NA	NA	2.89	N	0.17
Sodium	7440-23-5	mg/kg	430		NA	NA	NS	NA	NA
Thallium	7440-28-0	mg/kg	0.2		NA	NA	NS	NA	NA
Vanadium	7440-62-2	mg/kg	42		NA	NA	289	N	0.15
Zinc	7440-66-6	mg/kg	73		NA	NA	2,890	N	0.025
OTHER PARAMETERS (mg/kg)									
Cyanide	57-12-5	mg/kg	0.21		NA	NA	NS	NA	NA
Nitrate	14797-55-8	mg/kg	58		NA	NA	NS	NA	NA
Perchlorate	14797-73-0	mg/kg	0.033	U	NA	NA	NS	NA	NA
							Cumulative Pronghorn Hazard		**1.1**
							Exceeds Target Level		**Y**

Notes:

1) New Mexico Environment Department Ecological Soil Screening Levels. March 2017 Update.

2) Chromium screening value is for Total Chromium.

3) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization toxicity equivalency factors (TEF) from Van den berg, et al (2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED SSL for 2,3,7,8-tetrachlorodibenz-p-dioxin (TCDD). (NMED 2017, Revised).

4) pH-dependent. Not a concern at the Inner Fence Area. See Text.

TEQ maximum was calculated using the ProUCL dataset. See **Appendix D, Attachment 3.

CAS = Chemical Abstracts Service

ESL = Ecological Screening Level

J = Estimated

mg/kg = milligrams per kilogram

NA = Not applicable

NS = No Standard

TEF = Toxicity Equivalency Factor

TEQ = Toxic equivalency quotient

U = Nondetect

TABLE 5-7
TIER 2 EXPOSURE FACTORS FOR BIRD AND MAMMAL RECEPTORS OF INTEREST
FORT WINGATE DEPOT ACTIVITY
MCKINLEY COUNTY, NEW MEXICO

Receptor of Interest	Guild	Body Weight (kg)	Foraging Territory (acres)	Food Ingestion Rate Plants (kg dw/day)	Food Ingestion Rate Invertebrates (kg dw/day)	Food Ingestion Rate Prey (kg dw/day)	Soil Ingestion Rate (kg dw/day)
Deer Mouse	Omnivore	0.02	0.30	0.000660	0.000220	0	0.000018
Horned Lark	Omnivore	0.033	4.00	0.00572	0.00198	0	0.00077
Red-Tailed Hawk	Carnivore	1.1	1770	0	0	0.0220	0.0004
Kit Fox	Carnivore	2	1713	0	0	0.0286	0.0008
Pronghorn	Herbivore	50	3422	0.308	0	0	0.006

All values presented are from NMED (2017). Food ingestion rates presented in NMED (2017) are in kg food wet weight/day. These have been converted to dry weight using a wet-weight to dry-weight conversion factor of 0.22 per NMED (2017)

TABLE 5-8
BIOACCUMULATION FACTORS
FORT WINGATE DEPOT ACTIVITY
MCKINLEY COUNTY, NEW MEXICO

Chemical of Potential Ecological Concern (COPEC)	Vascular Plants	Source Code	Soil Invertebrates	Source Code	Small Mammals	Source Code
Antimony	Cp = exp[0.938ln(Cs)-3.223]	1	Cinv = 1Cs	1	Cm = 0.001*50*Cd	1
Arsenic	Cp = 0.03752Cs	1	Cinv = exp[0.706ln(Cs)-1.421]	1	ln(Cm) = 0.8188ln(Cs)+-4.8471	1
Barium	Cp = 0.156Cs	1	Cinv = 0.091Cs	1	Cm = 0.00015*50*Cd	1
Beryllium	Cp = exp[0.7345ln(Cs)-0.5361]	1	Cinv = 0.045Cs	1	Cm = 0.001*50*Cd	1
Cadmium	Cp = exp[0.546ln(Cs)-0.475]	1	Cinv = exp[0.795ln(Cs)+2.114]	1	ln(Cm) = 0.4723ln(Cs)+-1.2571	1
Chromium, total	Cp = 0.041Cs	1	Cinv = 0.306Cs	1	ln(Cm) = 0.7338ln(Cs)+-1.4599	1
Cobalt	Cp = 0.0075Cs	1	Cinv = 0.122Cs	1	ln(Cm) = 1.307ln(Cs)+-4.4669	1
Copper	Cp = exp[0.394ln(Cs)+0.668]	1	Cinv = 0.515Cs	1	ln(Cm) = 0.1444ln(Cs)+2.042	1
Lead	Cp = exp[0.561ln(Cs)-1.328]	1	Cinv = exp[0.807ln(Cs)-0.218]	1	ln(Cm) = 0.4422ln(Cs)+0.0761	1
Manganese	Cp = 0.079Cs	1	Cinv = exp[0.682ln(Cs)-0.809]	1	Cm = 0.0205Cs	1
Mercury (Elemental)	Cp = exp[0.544ln(Cs)-0.996]	2	Cinv = exp[0.3369ln(Cs)+0.0781]	3	Cm = 0.0543Cs	4
Nickel	Cp = exp[0.748ln(Cs)-2.223]	1	Cinv = 0.778Cs	5	ln(Cm) = 0.4658ln(Cs)+-0.2462	1
Selenium	Cp = exp[1.104ln(Cs)-0.677]	1	Cinv = exp[0.733ln(Cs)-0.075]	1	ln(Cm) = 0.3764ln(Cs)+-0.4158	1
Thallium	Cp = 0.004Cs	5	Cinv = 0.0541Cs	5	Cm = 0.00322Cs	5
Vanadium	Cp = 0.00485Cs	1	Ci = 0.042Cs	1	Cm = 0.0123Cs	1

All Concentrations in dry weight

COPECs listed include those identified for bird and mammal receptors of interest.

Cs - Concentration in soil (mg/kg)

Cp - Concentration in plant tissue (mg/kg dw)

Cinv - Concentration in soil invertebrate tissue (mg/kg dw)

Cm - Concentration in small mammal tissue (mg/kg dw)

Cd - Concentration in diet (mg/kg dw) where diet is assumed to be 100% invertebrates

1 - USEPA. 2007. Guidance for Developing Ecological Soil Screening Levels (Eco-SSLs), Attachment 4-1, Exposure Factors and Bioaccumulation Models for Derivation of Wildlife Eco-SSLs. OSWER Directive 9285.7-55. Issued November 2003, revised April 2007.

2 - NMED. 2017 (Revised). Risk Assessment Guidance for Site Investigations and Remediation. Volume II Soil Screening Guidance for Ecological Risk Assessments. New Mexico Environment Department.

2 - Bechtel Jacobs Company LLC. 1998. Empirical Models for the Uptake of Inorganic Chemicals from Soil by Plants. Bechtel Jacobs Company LLC, Oak Ridge, Tennessee. BJC/OR-133.

3 - Sample, B.E., G.W. Suter II, J.J. Beauchamp and R.A. Efroymson. 1999. Literature-derived bioaccumulation models for earthworms: development and validation. Environ. Toxicol. Chem. 18:2110-2120.

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TABLE 5-9
TIER 2 EXPOSURE POINT CONCENTRATIONS
FORT WINGATE DEPOT ACTIVITY
MCKINLEY COUNTY, NEW MEXICO

Analyte	Number of Sample Locations	Maximum Detection	Mean	UCL Method	UCL	EPC
Inorganics						
Antimony	169	0.62	0.111	Student's t 95% UCL	0.113	0.113
Arsenic	169	8.6	1.32	Student's t 95% UCL	1.30	1.30
Barium	169	820	255	Student's t 95% UCL	253	253
Beryllium	169	1.8	0.677	Student's t 95% UCL	0.677	0.677
Cadmium	169	3.6	0.421	Student's t 95% UCL	0.422	0.422
Chromium, Total	169	100	12.3	Student's t 95% UCL	12.2	12.2
Cobalt	169	56	4.85	Student's t 95% UCL	4.84	4.84
Copper	169	670	71.2	Student's t 95% UCL	69.4	69.4
Lead	169	24	11.3	Student's t 95% UCL	11.3	11.3
Manganese	169	930	397	Student's t 95% UCL	394	394
Mercury (Elemental)	169	1.9	0.0376	Student's t 95% UCL	0.0394	0.0394
Nickel	169	21	9.9	Student's t 95% UCL	9.85	9.85
Selenium	169	17	1.19	Student's t 95% UCL	1.19	1.19
Thallium	169	0.2	0.0660	Student's t 95% UCL	0.070	0.070
Vanadium	169	42	16.0	Student's t 95% UCL	16.1	16.1
Zinc	169	60	29.2	Student's t 95% UCL	29.4	29.4

Calculated using the Interstate Technology & Regulatory Council ISM Calculator

Notes:

1 - Number of samples, each containing 3 replicates each (one location with 5 replicates).

Units: mg/kg

UCL - Upper Confidence Limit

EPC - Exposure Point Concentration

TABLE 5-10
CALCULATION OF TIER 2 AVERAGE DAILY DOSES
FORT WINGATE DEPOT ACTIVITY
MCKINLEY COUNTY, NEW MEXICO

COPEC	EPC (mg/kg)	Plant Uptake	Concentration in Plant Tissue (mg/kg dw)	Soil Invertebrate Uptake	Concentration in Invertebrate Tissue (mg/kg dw)	Small Mammal BAF	Concentration in Small Mammal Tissue (mg/kg dw)
Inorganics							
Antimony	0.113	Cp = exp[0.938ln(Cs)-3.223]	0.00515	Cinv = 1Cs	0.113	Cm = 0.001*50*Cd	0.00565
Arsenic	1.31	Cp = 0.03752Cs	0.0492	Cinv = exp[0.706ln(Cs)-1.421]	0.292	ln(Cm) = 0.8188ln(Cs)+-4.8471	0.00979
Barium	253	Cp = 0.156Cs	39.5	Cinv = 0.091Cs	23.0	Cm = 0.00015*50*Cd	0.173
Beryllium	0.677	Cp = exp[0.7345ln(Cs)-0.5361]	0.439	Cinv = 0.045Cs	0.0305	Cm = 0.001*50*Cd	0.00152
Cadmium	0.422	Cp = exp[0.546ln(Cs)-0.475]	0.388	Cinv = exp[0.795ln(Cs)+2.114]	4.17	ln(Cm) = 0.4723ln(Cs)+-1.2571	0.189
Chromium, Total	12.2	Cp = 0.041Cs	0.500	Cinv = 0.306Cs	3.73	ln(Cm) = 0.7338ln(Cs)+-1.4599	1.46
Cobalt	4.84	Cp = 0.0075Cs	0.0363	Cinv = 0.122Cs	0.590	ln(Cm) = 1.307ln(Cs)+-4.4669	0.0902
Copper	69.4	Cp = exp[0.394ln(Cs)+0.668]	10.4	Cinv = 0.515Cs	35.7	ln(Cm) = 0.1444ln(Cs)+2.042	14.2
Lead	11.3	Cp = exp[0.561ln(Cs)-1.328]	1.03	Cinv = exp[0.807ln(Cs)-0.218]	5.69	ln(Cm) = 0.4422ln(Cs)+0.0761	3.15
Manganese	394	Cp = 0.079Cs	31.1	Cinv = exp[0.682ln(Cs)-0.809]	26.2	Cm = 0.0205Cs	80.8
Mercury (Elemental)	0.0394	Cp = exp[0.544ln(Cs)-0.996]	0.0636	Cinv = exp[0.3369ln(Cs)+0.0781]	0.364	Cm = 0.0543Cs	0.00214
Nickel	9.9	Cp = exp[0.748ln(Cs)-2.223]	0.599	Cinv = 0.778Cs	7.66	ln(Cm) = 0.4658ln(Cs)+-0.2462	2.27
Selenium	1.19	Cp = exp[1.104ln(Cs)-0.677]	0.616	Cinv = exp[0.733ln(Cs)-0.075]	1.05	ln(Cm) = 0.3764ln(Cs)+-0.4158	0.704
Thallium	0.0700	Cp = 0.004Cs	0.000280	Cinv = 0.0541Cs	0.00379	Cm = 0.00322Cs	0.000225
Vanadium	16.1	Cp = 0.00485Cs	0.0781	Ci = 0.042Cs	0.676	Cm = 0.0123Cs	0.198
Zinc	29.4	Cp = exp[0.554ln(Cs)+1.575]	31.4	Cinv = exp[0.328ln(Cs)+4.449]	259	ln(Cm) = 0.0706ln(Cs)+4.3632	100

Area Size (acres) - 180.0

COPEC - Chemical of Potential Ecological Concern

EPC - Exposure Point Concentration

BAF - Bioaccumulation Factor

ADD - Average Daily Dose (milligrams per kilogram body weight per day)

AUF - Area Use Factor

Cp - Concentration of COPEC in plants

Cinv - Concentration of COPEC in soil invertebrates

* - As TCDD equivalents for mammals

** - As TCDD equivalents for birds

TABLE 5-10
CALCULATION OF TIER 2 AVERAGE DAILY DOSES
FORT WINGATE DEPOT ACTIVITY
MCKINLEY COUNTY, NEW MEXICO

COPEC	EPC (mg/kg)	ADD (mg/kgBW-d)				
		Deer Mouse	Horned Lark	Red-Tailed Hawk	Kit Fox	Pronghorn Antelope
		AUF = 1	AUF = 1	AUF = 0.102	AUF = 0.105	AUF = 0.0526
Inorganics						
Antimony	0.113	1.51E-03	1.03E-02	1.57E-05	1.32E-05	2.38E-06
Arsenic	1.31	6.02E-03	5.66E-02	6.84E-05	6.98E-05	2.42E-05
Barium	253	1.78E+00	1.41E+01	9.71E-03	1.09E-02	1.44E-02
Beryllium	0.677	1.54E-02	9.38E-02	2.81E-05	3.07E-05	1.47E-04
Cadmium	0.422	5.91E-02	3.27E-01	4.01E-04	3.02E-04	1.28E-04
Chromium, Total	12.2	6.86E-02	5.95E-01	3.41E-03	2.70E-03	2.39E-04
Cobalt	4.84	1.20E-02	1.55E-01	3.62E-04	3.39E-04	4.23E-05
Copper	69.4	7.98E-01	5.56E+00	3.15E-02	2.43E-02	3.80E-03
Lead	11.3	1.07E-01	7.84E-01	6.83E-03	5.21E-03	4.06E-04
Manganese	394	1.67E+00	1.62E+01	1.79E-01	1.38E-01	1.26E-02
Mercury (Elemental)	0.0394	6.13E-03	3.38E-02	5.81E-06	4.87E-06	2.09E-05
Nickel	9.9	1.13E-01	7.94E-01	4.98E-03	3.82E-03	2.56E-04
Selenium	1.19	3.30E-02	1.98E-01	1.48E-03	1.11E-03	2.07E-04
Thallium	0.0700	1.14E-04	1.91E-03	3.05E-06	3.28E-06	5.33E-07
Vanadium	16.1	2.45E-02	4.30E-01	9.98E-04	9.74E-04	1.27E-04
Zinc	29.4	3.92E+00	2.17E+01	2.04E-01	1.51E-01	1.04E-02

Area Size (acres) - 180.0
COPEC - Chemical of Potential Ecologi
EPC - Exposure Point Concentration
BAF - Bioaccumulation Factor
ADD - Average Daily Dose (milligrams
AUF - Area Use Factor
Cp - Concentration of COPEC in plants
Cinv - Concentration of COPEC in soil
* - As TCDD equivalents for mammals
** - As TCDD equivalents for birds

TABLE 5-11
CALCULATION OF TIER 2 SCREENING LEVEL HAZARD QUOTIENTS AND HAZARD INDICES
FORT WINGATE DEPOT ACTIVITY
MCKINLEY COUNTY, NEW MEXICO

COPEC	EPC (mg/kg)	PLANTS		DEER MOUSE			HORNED LARK			RED-TAILED HAWK			KIT FOX			PRONGHORN ANTELOPE		
		LOAEL TRV (mg/kg)	SLHQ (Unitless)	ADD (mg/kg BW-day)	LOAEL TRV (mg/kg BW-day)	SLHQ (Unitless)	ADD (mg/kg BW-day)	LOAEL TRV (mg/kg BW-day)	SLHQ (Unitless)	ADD (mg/kg BW-day)	LOAEL TRV (mg/kg BW-day)	SLHQ (Unitless)	ADD (mg/kg BW-day)	LOAEL TRV (mg/kg BW-day)	SLHQ (Unitless)	ADD (mg/kg BW-day)	LOAEL TRV (mg/kg BW-day)	SLHQ (Unitless)
Inorganics																		
Antimony	0.113	Not a COPEC		1.51E-03	0.59	0.0026	1.03E-02	NA	NA	1.57E-05	NA	NA	1.32E-05	0.59	0.000022	2.38E-06	NA	NA
Arsenic	1.30	91	0.014	6.02E-03	1.66	0.0036	5.66E-02	22.4	0.00253	6.84E-05	22.4	0.0000031	6.98E-05	1.66	0.000042	2.42E-05	0.156	0.00016
Barium	253	261	0.97	1.78E+00	518	0.0034	1.41E+01	131	0.11	9.71E-03	131	0.000074	1.09E-02	518	0.000021	1.44E-02	NA	NA
Beryllium	0.677	25	0.027	1.54E-02	5.32	0.0029	9.38E-02	NA	NA	2.81E-05	NA	NA	3.07E-05	5.32	0.0000058	1.47E-04	NA	NA
Cadmium	0.422	160	0.0026	5.91E-02	7.7	0.0077	3.27E-01	14.7	0.022	4.01E-04	14.7	0.000027	3.02E-04	7.7	0.000039	1.28E-04	NA	NA
Chromium, Total	12.2	Not a COPEC		6.86E-02	24	0.00286	5.95E-01	26.6	0.022	3.41E-03	26.6	0.00013	2.70E-03	24	0.00011	2.39E-04	NA	NA
Cobalt	4.84	134	0.036	1.20E-02	73.3	0.00016	1.55E-01	76.1	0.0020	3.62E-04	76.1	0.0000048	3.39E-04	73.3	0.0000046	4.23E-05	0.25	0.00017
Copper	69.4	497	0.14	7.98E-01	9.34	0.085	5.56E+00	12.1	0.46	3.15E-02	12.1	0.0026	2.43E-02	9.34	0.0026	3.80E-03	NA	NA
Lead	11.3	576	0.020	1.07E-01	8.9	0.012	7.84E-01	3.26	0.24	6.83E-03	3.26	0.0021	5.21E-03	8.9	0.00059	4.06E-04	0.75	0.00054
Manganese	394	1100	0.36	1.67E+00	515	0.0032	1.62E+01	1790	0.0090	1.79E-01	1790	0.00010	1.38E-01	515	0.00027	1.26E-02	25	0.00050
Mercury (Elemental)	0.039	Not a COPEC		6.13E-03	14.1	0.00044	3.38E-02	0.19	0.18	5.81E-06	0.19	0.000031	4.87E-06	14.1	0.00000035	2.09E-05	NA	NA
Nickel	9.9	276	0.036	1.13E-01	3.4	0.033	7.94E-01	67.1	0.012	4.98E-03	67.1	0.000074	3.82E-03	3.4	0.0011	2.56E-04	1.25	0.00021
Selenium	1.2	3.4	0.35	3.30E-02	0.215	0.15	1.98E-01	0.579	0.34	1.48E-03	0.579	0.0026	1.11E-03	0.215	0.0052	2.07E-04	NA	NA
Thallium	0.070	0.5	0.14	1.14E-04	0.071	0.0016	1.91E-03	3.5	0.0005	3.05E-06	3.5	0.00000087	3.28E-06	0.071	0.000046	5.33E-07	NA	NA
Vanadium	16.1	80	0.20	2.45E-02	8.31	0.0029	4.30E-01	0.688	0.62	9.98E-04	0.688	0.0015	9.74E-04	8.31	0.00012	1.27E-04	1.25	0.00010
Zinc	29.4	812	0.036	3.92E+00	754	0.0052	2.17E+01	661	0.033	2.04E-01	661	0.00031	1.51E-01	754	0.00020	1.04E-02	12.5	0.00083
		TOTAL HI =	**2.3**		**TOTAL HI =**	**0.32**		**TOTAL HI =**	**2.0**		**TOTAL HI =**	**0.0091**		**TOTAL HI =**	**0.010**		**TOTAL HI =**	**0.0017**

Notes:
ADD - Average Daily Dose (milligrams per kilogram body weight per day)
COPEC - Chemical of Potential Ecological Concern
EPC - Exposure Point Concentration
HI - Hazard Index (sum of SLHQs)
LOAEL = Lowest Observed Adverse Effect Level
NA - Not Avalailable
SLHQ - Screening-Level Hazard Quotient
TRV - Toxicity Reference Value - All values from NMED (2017)

TABLE 5-12
CALCULATION OF TIER 2 AVERAGE DAILY DOSES - FWDA BACKGROUND
FORT WINGATE DEPOT ACTIVITY
MCKINLEY COUNTY, NEW MEXICO

COPEC	EPC (mg/kg)	Plant Uptake	Concentration in Plant Tissue (mg/kg dw)	Soil Invertebrate Uptake	Concentration in Invertebrate Tissue (mg/kg dw)	Small Mammal BAF
Inorganics						
Antimony	0.590	Cp = exp[0.938ln(Cs)-3.223]	0.0243	Cinv = 1Cs	0.590	Cm = 0.001*50*Cd
Arsenic	1.31	Cp = 0.03752Cs	0.0492	Cinv = exp[0.706ln(Cs)-1.421]	1.31	ln(Cm) = 0.8188ln(Cs)+-4.8471
Barium	197	Cp = 0.156Cs	30.7	Cinv = 0.091Cs	17.9	Cm = 0.00015*50*Cd
Beryllium	0.725	Cp = exp[0.7345ln(Cs)-0.5361]	0.462	Cinv = 0.045Cs	0.0326	Cm = 0.001*50*Cd
Cadmium	0.09	Cp = exp[0.546ln(Cs)-0.475]	0.167	Cinv = exp[0.795ln(Cs)+2.114]	1.22	ln(Cm) = 0.4723ln(Cs)+-1.2571
Chromium, Total	7.65	Cp = 0.041Cs	0.314	Cinv = 0.306Cs	2.34	ln(Cm) = 0.7338ln(Cs)+-1.4599
Cobalt	3.69	Cp = 0.0075Cs	0.0277	Cinv = 0.122Cs	0.450	ln(Cm) = 1.307ln(Cs)+-4.4669
Copper	5.71	Cp = exp[0.394ln(Cs)+0.668]	3.87	Cinv = 0.515Cs	2.94	ln(Cm) = 0.1444ln(Cs)+2.042
Lead	6.96	Cp = exp[0.561ln(Cs)-1.328]	0.787	Cinv = exp[0.807ln(Cs)-0.218]	3.85	ln(Cm) = 0.4422ln(Cs)+0.0761
Manganese	440	Cp = 0.079Cs	34.8	Cinv = exp[0.682ln(Cs)-0.809]	28.3	Cm = 0.0205Cs
Mercury (Elemental)	0.0140	Cp = exp[0.544ln(Cs)-0.996]	0.0362	Cinv = exp[0.3369ln(Cs)+0.0781]	0.257	Cm = 0.0543Cs
Nickel	8.54	Cp = exp[0.748ln(Cs)-2.223]	0.539	Cinv = 0.778Cs	6.64	ln(Cm) = 0.4658ln(Cs)+-0.2462
Selenium	0.252	Cp = exp[1.104ln(Cs)-0.677]	0.111	Cinv = exp[0.733ln(Cs)-0.075]	0.338	ln(Cm) = 0.3764ln(Cs)+-0.4158
Thallium	0.0750	Cp = 0.004Cs	0.000300	Cinv = 0.0541Cs	0.00406	Cm = 0.00322Cs
Vanadium	15.0	Cp = 0.00485Cs	0.0728	Ci = 0.042Cs	0.630	Cm = 0.0123Cs
Zinc	17.7	Cp = exp[0.554ln(Cs)+1.575]	23.7	Cinv = exp[0.328ln(Cs)+4.449]	220	ln(Cm) = 0.0706ln(Cs)+4.3632

COPEC - Chemical of Potential Ecological Concern

EPC - Exposure Point Concentration

BAF - Bioaccumulation Factor

ADD - Average Daily Dose (milligrams per kilogram body weight per day)

AUF - Area Use Factor

Cp - Concentration of COPEC in plants

Cinv - Concentration of COPEC in soil invertebrates

TABLE 5-12
CALCULATION OF TIER 2 AVERAGE DAILY DOSES - FWDA BACKGROUND
FORT WINGATE DEPOT ACTIVITY
MCKINLEY COUNTY, NEW MEXICO

COPEC	EPC (mg/kg)	Concentration in Small Mammal Tissue (mg/kg dw)	ADD (mg/kgBW-d)				
			Deer Mouse	Horned Lark	Red-Tailed Hawk	Kit Fox	Pronghorn Antelope
			AUF = 1	AUF = 1	AUF = 0.102	AUF = 0.105	AUF = 0.0526
Inorganics							
Antimony	0.590	0.0295	7.82E-03	5.34E-02	8.18E-05	6.91E-05	1.16E-05
Arsenic	1.31	0.00979	1.72E-02	1.18E-01	6.84E-05	6.98E-05	2.42E-05
Barium	197	0.134	1.39E+00	1.10E+01	7.56E-03	8.48E-03	1.12E-02
Beryllium	0.725	0.00163	1.63E-02	9.89E-02	3.01E-05	3.29E-05	1.54E-04
Cadmium	0.09	0.0912	1.90E-02	1.04E-01	1.89E-04	1.41E-04	5.47E-05
Chromium, Total	7.65	1.03	4.30E-02	3.73E-01	2.39E-03	1.87E-03	1.50E-04
Cobalt	3.69	0.0633	9.19E-03	1.18E-01	2.65E-04	2.50E-04	3.23E-05
Copper	5.71	9.9	1.65E-01	9.81E-01	2.04E-02	1.51E-02	1.29E-03
Lead	6.96	2.54	7.46E-02	5.30E-01	5.43E-03	4.12E-03	2.99E-04
Manganese	440	90.2	1.85E+00	1.80E+01	2.00E-01	1.54E-01	1.40E-02
Mercury (Elemental)	0.0140	0.000760	4.03E-03	2.20E-02	2.06E-06	1.73E-06	1.18E-05
Nickel	8.54	2.12	9.85E-02	6.91E-01	4.63E-03	3.55E-03	2.28E-04
Selenium	0.252	0.393	7.60E-03	4.54E-02	8.08E-04	6.01E-04	3.75E-05
Thallium	0.0750	0.000242	1.22E-04	2.05E-03	3.26E-06	3.52E-06	5.71E-07
Vanadium	15.0	0.185	2.28E-02	4.00E-01	9.30E-04	9.08E-04	1.18E-04
Zinc	17.7	96.2	3.21E+00	1.77E+01	1.96E-01	1.45E-01	7.80E-03

COPEC - Chemical of Potential Ecological (
EPC - Exposure Point Concentration
BAF - Bioaccumulation Factor
ADD - Average Daily Dose (milligrams per
AUF - Area Use Factor
Cp - Concentration of COPEC in plants
Cinv - Concentration of COPEC in soil inve

TABLE 5-13
CALCULATION OF TIER 2 SCREENING LEVEL HAZARD QUOTIENTS AND HAZARD INDICES - FWDA BACKGROUND
FORT WINGATE DEPOT ACTIVITY
MCKINLEY COUNTY, NEW MEXICO

COPEC	EPC (mg/kg)	Plants		Deer Mouse			Horned Lark			Red-Tailed Hawk		
		LOAEL TRV (mg/kg)	SLHQ (Unitless)	ADD (mg/kg BW-day)	LOAEL TRV (mg/kg BW-day)	SLHQ (Unitless)	ADD (mg/kg BW-day)	LOAEL TRV (mg/kg BW-day)	SLHQ (Unitless)	ADD (mg/kg BW-day)	LOAEL TRV (mg/kg BW-day)	SLHQ (Unitless)
Inorganics												
Antimony	0.59	Not a COPEC		7.82E-03	0.59	0.013	5.34E-02	NA	NA	8.18E-05	NA	NA
Arsenic	1.31	91	0.014	1.72E-02	1.66	0.010	1.18E-01	22.4	0.0053	6.84E-05	22.4	0.0000031
Barium	197	261	0.75	1.39E+00	518	0.0027	1.10E+01	131	0.084	7.56E-03	131	0.000058
Beryllium	0.725	25	0.029	1.63E-02	5.32	0.0031	9.89E-02	NA	NA	3.01E-05	NA	NA
Cadmium	0.09	160	0.00056	1.90E-02	7.7	0.0025	1.04E-01	14.7	0.0071	1.89E-04	14.7	0.000013
Chromium, Total	7.65	Not a COPEC		4.30E-02	24	0.0018	3.73E-01	26.6	0.014	2.39E-03	26.6	0.000090
Cobalt	3.69	134	0.028	9.19E-03	73.3	0.00013	1.18E-01	76.1	0.0015	2.65E-04	76.1	0.0000035
Copper	5.71	497	0.011	1.65E-01	9.34	0.018	9.81E-01	12.1	0.081	2.04E-02	12.1	0.0017
Lead	6.96	576	0.012	7.46E-02	8.9	0.0084	5.30E-01	3.26	0.16	5.43E-03	3.26	0.0017
Manganese	440	1100	0.40	1.85E+00	515	0.0036	1.80E+01	1790	0.01	2.00E-01	1790	0.00011
Mercury (Elemental)	0.0140	Not a COPEC		4.03E-03	14.1	0.00029	2.20E-02	0.19	0.12	2.06E-06	0.19	0.000011
Nickel	8.54	276	0.031	9.85E-02	3.4	0.029	6.91E-01	67.1	0.010	4.63E-03	67.1	0.000069
Selenium	0.252	3.4	0.074	7.60E-03	0.215	0.035	4.54E-02	0.579	0.078	8.08E-04	0.579	0.0014
Thallium	0.075	0.5	0.15	1.22E-04	0.071	0.002	2.05E-03	3.5	0.001	3.26E-06	3.5	0.00000093
Vanadium	15.0	80	0.19	2.28E-02	8.31	0.0027	4.00E-01	0.688	0.58	9.30E-04	0.688	0.0014
Zinc	17.7	812	0.022	3.21E+00	754	0.0043	1.77E+01	661	0.027	1.96E-01	661	0.00030
		TOTAL HI =	**1.7**		**TOTAL HI =**	**0.14**		**TOTAL HI =**	**1.2**		**TOTAL HI =**	**0.0068**

Notes:
ADD - Average Daily Dose (milligrams per kilogram body weight per day)
COPEC - Chemical of Potential Ecological Concern
EPC - Exposure Point Concentration
HI - Hazard Index (sum of SLHQs)
LOAEL = Lowest Observed Adverse Effect Level
NA - Not Avalailable
SLHQ - Screening-Level Hazard Quotient
TRV - Toxicity Reference Value - All values from NMED (2017)

TABLE 5-13
CALCULATION OF TIER 2 SCREENING LEVEL HAZARD QUOTIENTS AND HAZARD INDICES - FWDA BACKGROUND
FORT WINGATE DEPOT ACTIVITY
MCKINLEY COUNTY, NEW MEXICO

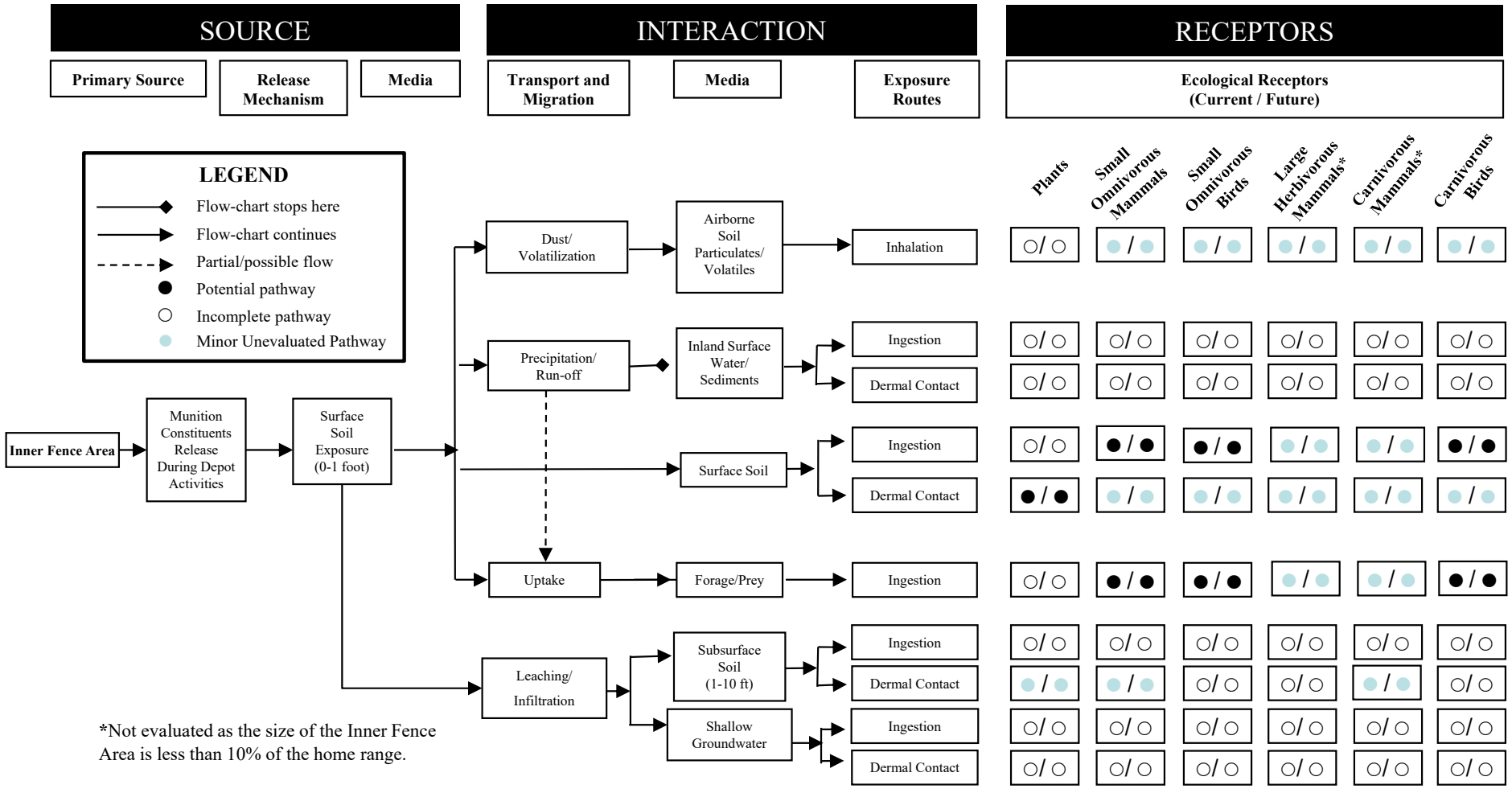
Kit Fox			Pronghorn Antelope		
ADD (mg/kg BW-day)	**LOAEL TRV (mg/kg BW-day)**	**SLHQ (Unitless)**	**ADD (mg/kg BW-day)**	**LOAEL TRV (mg/kg BW-day)**	**SLHQ (Unitless)**
6.91E-05	0.59	NA	1.16E-05	NA	NA
6.98E-05	1.66	0.000042	2.42E-05	0.156	0.00016
8.48E-03	518	0.000016	1.12E-02	NA	NA
3.29E-05	5.32	NA	1.54E-04	NA	NA
1.41E-04	7.7	0.000018	5.47E-05	NA	NA
1.87E-03	24	0.000078	1.50E-04	NA	NA
2.50E-04	73.3	0.0000034	3.23E-05	0.25	0.00013
1.51E-02	9.34	0.0016	1.29E-03	NA	NA
4.12E-03	8.9	0.00046	2.99E-04	0.75	0.00040
1.54E-01	515	0.00030	1.40E-02	25	0.00056
1.73E-06	14.1	0.00000012	1.18E-05	NA	NA
3.55E-03	3.4	0.0010	2.28E-04	1.25	0.00018
6.01E-04	0.215	0.0028	3.75E-05	NA	NA
3.52E-06	0.071	0.000050	5.71E-07	NA	NA
9.08E-04	8.31	0.00011	1.18E-04	1.25	0.00009
1.45E-01	754	0.00019	7.80E-03	12.5	0.00062
	TOTAL HI =	**0.0067**		**TOTAL HI =**	**0.0021**

TABLE 5-14
SUMMARY OF TIER 1 AND TIER 2 SCREENING LEVEL HAZARD QUOTIENTS AND HAZARD INDICES
FORT WINGATE DEPOT ACTIVITY
MCKINLEY COUNTY, NEW MEXICO

COPEC	Plants			Deer Mouse			Horned Lark			Red-Tailed Hawk			Kit Fox			Pronghorn Antelope		
	Tier 1 IF SLHQ	Tier 2 IF SLHQ	Tier 2 Background SLHQ	Tier 1 IF SLHQ	Tier 2 IF SLHQ	Tier 2 Background SLHQ	Tier 1 IF SLHQ	Tier 2 IF SLHQ	Tier 2 Background SLHQ	Tier 1 IF SLHQ	Tier 2 IF SLHQ	Tier 2 Background SLHQ	Tier 1 IF SLHQ	Tier 2 IF SLHQ	Tier 2 Background SLHQ	Tier 1 IF SLHQ	Tier 2 IF SLHQ	Tier 2 Background SLHQ
Antimony	0.054	Not retained in Tier 2		1.2	0.0026	0.013	NA	NA	NA	NA	NA	NA	0.26	0.000022	0.000022	NA	NA	NA
Arsenic	0.48	0.014	0.014	0.91	0.0036	0.010	0.81	0.0025	0.0053	0.11	0.0000031	0.0000031	0.20	0.000042	0.000042	0.24	0.00016	0.00016
Barium	6.9	0.97	0.75	1.7	0.0034	0.0027	2.4	0.11	0.084	0.31	0.000074	0.000058	0.39	0.000021	0.000021	NA	NA	NA
Beryllium	0.72	0.027	0.029	0.37	0.0029	0.0031	NA	NA	NA	NA	NA	NA	0.084	0.0000058	0.0000058	NA	NA	NA
Cadmium	0.11	0.0026	0.00056	51	0.0077	0.0025	0.5	0.022	0.01	0.067	0.000027	0.000013	0.12	0.000039	0.000039	NA	NA	NA
Chromium, Total	NA	Not retained in Tier 2		2.8	0.0029	0.0018	4.9	0.022	0.014	0.64	0.00013	0.000090	0.64	0.00011	0.00011	NA	NA	NA
Cobalt	0.63	0.036	0.028	0.12	0.00016	0.00013	0.23	0.0020	0.0015	0.03	0.0000048	0.0000035	0.028	0.0000046	0.0000046	0.14	0.00017	0.00017
Copper	9.6	0.14	0.011	13	0.085	0.018	35	0.46	0.081	4.6	0.0026	0.0017	3.0	0.0026	0.0026	NA	NA	NA
Lead	0.2	0.020	0.012	0.56	0.012	0.0084	3.1	0.24	0.16	0.40	0.0021	0.0017	0.13	0.00059	0.00059	0.14	0.00054	0.00054
Manganese	4.2	0.36	0.40	2	0.0032	0.0036	1.1	0.0090	0.010	0.14	0.00010	0.00011	0.45	0.00027	0.00027	0.16	0.00050	0.00050
Mercury (Elemental)	0.054	Not retained in Tier 2		0.15	0.00044	0.00029	21	0.18	0.12	2.7	0.000031	0.000011	0.033	0.00000035	0.00000035	NA	NA	NA
Nickel	55	0.036	0.031	1.4	0.033	0.029	0.66	0.012	0.010	0.086	0.000074	0.000069	0.31	0.0011	0.0011	0.07	0.00021	0.00021
Selenium	4.4	0.35	0.074	1.8	0.15	0.035	1.7	0.34	0.078	0.22	0.0026	0.0014	0.40	0.0052	0.0052	NA	NA	NA
Thallium	4.0	0.14	0.15	3.1	0.0016	0.0017	0.12	0.0005	0.00058	0.0065	0.00000087	0.00000093	0.70	0.000046	0.000046	NA	NA	NA
Vanadium	0.95	0.20	0.20	1.1	0.0029	0.0027	26	0.62	0.58	3.4	0.0015	0.0014	0.25	0.00012	0.00012	0.15	0.00010	0.00010
Zinc	0.46	0.036	0.022	0.107	0.0052	0.0043	0.23	0.033	0.027	0.030	0.00031	0.00030	0.024	0.00020	0.00020	0.025	0.00083	0.00083
Hazard Index	35	2.3	1.2	35	0.32	0.14	100	2.0	1.2	13	0.0091	0.0068	7.9	0.010	0.010	1.1	0.0017	0.0017

Notes:
All SLHQs and HIs are unitless
Only those COPECs carried forward to Tier 2 are presented.
Tier 1 values from Tables 5-1 through 5-4.
Tier 2 IF values from Table 5-11
Tier 2 Background values from Table 5-13.
NA - Not available
SLHQ - Screening Level Hazard Quotient

FIGURE 5-1
INNER FENCE AREA ECOLOGICAL CONCEPTUAL SITE MODEL
FORT WINGATE DEPOT ACTIVITY, McKINLEY COUNTY, NEW MEXICO



*Not evaluated as the size of the Inner Fence Area is less than 10% of the home range.

Representative receptors:
Small omnivorous mammals – Deer mouse
Small omnivorous birds – Horned lark
Large herbivorous mammals – Pronghorn
Carnivorous mammals – Kit fox
Carnivorous birds – Red-tailed hawk

The subsurface RA of the IF was initiated on August 28, 2017, and ceased in December 2020 due to concerns for personnel safety. The anomaly densities that were being encountered were too high to safely identify and manually resolve as single point anomalies. It was concluded that the anomaly densities would continue to increase as the work moved closer to the HWMU and the remainder of the IF subsurface RA would require alternative methods to complete. Subsurface removal operations were completed in 721 grids within the IF.

- Over 1.4 million anomalies were manually investigated
- Over 338,800 pounds of MD was recovered
- 16,578 MEC items were identified and destroyed

The majority of MEC items recovered were PD and base detonating BD fuzes, 37 millimeter (mm) and 40 mm projectiles. These four items account for nearly 85 percent of the MEC recovered from the IF. As discussed in **Section 3.1**, MEC was only removed from the completed IF grids to a maximum depth of 22 inches, however, MEC has historically been recovered from within Parcel 3 to depths up to 12 feet bgs. As a result, the presence of residual MEC cannot be discounted (but is considered unlikely) from depths between approximately 22 inches and 12 feet bgs, within the completed IF grids. In addition, the presence of subsurface MEC (i.e., up to 12 feet bgs) is also considered possible within the IF grids that were excluded from the RA due to safety concerns. It is also possible that this residual subsurface MEC hazard could extend beyond the southern and western boundaries of the IF. As a result, additional remedial actions and/or appropriate land use controls may be warranted for these areas and depths.

Incremental soil characterization samples were collected from within low-density area and buffer area grids within the IF and were analyzed for explosives and metals. Additional discrete samples were also collected from within the buffer area grids and were analyzed for VOCs, SVOCs, NDMA, metals, PCBs, nitrate, cyanide, dioxins/furans, and perchlorate.

A human health risk screen was completed (**Section 4**) for the Buffer Area (immediately bounding the HWMU/high-density MEC area) and the Low-Density Area (adjacent to the Buffer Area). Each area was comprised of multiple 100-foot by 100-foot grids which were individually sampled for MC. For human exposures, the grids represent a more likely exposure area than the larger Buffer Area and Low-Density Area because they are closer to the size of a residential lot. Therefore, excess cancer risks and hazards were estimated for each sampled grid in the Buffer Area and Low-Density Area. Buffer Area grids were sampled for VOCs, SVOCs, NDMA, PCBs, nitrate, cyanide, dioxins/furans, and perchlorate via discrete sampling methods and TAL metals and explosives via ISM. Low-density area grids were sampled for TAL metals and explosives via ISM.

As discussed in **Sections 4.1.2**, **4.2.1**, and **4.2.2**, the IF Area sample results documented for metals in this Report were collected using an incremental sampling approach. Based on this, the qualitative comparison of resulting incremental metals concentrations to FWDA background levels previously established for FWDA based on discrete sample data for metals (**Table 4-3**) is considered preliminary and additional evaluation is warranted. In addition, numerous screening

levels were undefined/unavailable for appropriately evaluating the potential migration of soil contaminants to groundwater at the site, so additional evaluation of this potential pathway is also warranted for the IF Area. Based on this, additional evaluation of these concerns will be included in a forthcoming Parcel 3 RFI Work Plan that will include additional sampling and risk evaluation of potentially impacted media within the inner fence area. In addition, evaluation of potential impacts to groundwater will be addressed in the forthcoming Parcel 3 Groundwater RFI Supplemental Sampling Report.

The results of the human health risk assessment that will be further evaluated as warranted during a subsequent RFI are summarized as follows:

- Sixty-two low density grids had hazard indices greater than 1.0 for the residential scenario and 15 low density grids had hazard indices greater than 1.0 for the construction worker scenario. The primary contributors for all these grids were metals (aluminum, arsenic, aluminum, barium, chromium, cobalt, iron, manganese, and/or thallium). The target organ assessments for these grids showed that no target organ/system had a hazard index greater than 1.0 for organics. Therefore, these grids were considered to pose no unacceptable adverse health effects to residents or construction workers for organics. However, additional evaluation of metals concentrations in site media will be included in the forthcoming RFI as discussed above.
- Seventy-seven low density grids had target organ assessments where the additive effects on the nervous system by aluminum and manganese resulted in hazard greater than 1.0 for the construction worker scenario. Therefore, these grids may pose unacceptable adverse health effects for construction workers. However, the low density grid manganese concentrations range was within the FWDA background range and the USGS reference ranges. Therefore, manganese concentrations in these low density grids were potentially naturally-occurring, but additional evaluation of these results is planned at the IF Area during a forthcoming RFI as discussed above.
- Low-density area Grid AL39 had a cancer risk of 1.2E-05 for residents which exceeded the NMED target cancer risk of 1.0E-05. The primary contributor was arsenic. The maximum detected arsenic concentration was within the FWDA background range and the USGS metal reference study ranges. Therefore, arsenic in Grid AL39 is not considered likely to pose any unacceptable cancer risks for residents. However, additional evaluation of these results is planned at the IF Area during a forthcoming RFI as discussed above.
- Seventeen buffer area grids had hazard indices greater than 1.0 for the residential scenario and 16 grids had hazard indices greater than 1.0 for the construction worker scenario. The primary contributors for all these grids were metals (aluminum, arsenic, aluminum, barium, chromium, cobalt, iron, manganese, and/or thallium). Although the target organ assessments for these grids showed that no target organ/system had a hazard index greater than 1.0, additional evaluation of metals results is planned at the IF during a forthcoming RFI as discussed above.
- Thirty-five buffer area grids had target organ assessments where the additive effects on the nervous system by aluminum and manganese resulted in hazard greater than 1.0 for the

construction worker scenario. Twenty buffer area grids had hazard indices greater than 1.0 due to manganese. Although the buffer area grid manganese concentrations were within the FWDA background range and the USGS metal reference ranges (i.e., may be naturally occurring), additional evaluation of metals results is planned at the IF during a forthcoming RFI as discussed above.

- All lead concentrations from the low-density and buffer area grids were below the NMED residential SSLs; therefore, no further evaluation of lead concentrations was necessary.

All other low-density area and buffer area grids were below the NMED target cancer risk of 1.0E-05 and had HIs less than the NMED target HI of 1.0. Based on these results, surface soils within the low-density and the buffer grids of the IF Area are not likely to pose any unacceptable cancer risks or adverse health effects for residents, site workers, or construction workers.

An ecological risk assessment was also completed (**Section 5**) and determined that the IF contains terrestrial ecological habitat and potentially complete pathways for ecological receptors. Metals were identified as posing the greatest ecological risk potential within the IF following a Tier 1 evaluation. As a result, a Tier 2 SLERA was also completed and concluded that there are no unacceptable ecological risks to the viabilities and functions of the terrestrial plant community, omnivorous bird populations, omnivorous mammal populations or carnivorous bird populations within the IF Area.

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Appendix A.1 Daily Site Reports

Information on enclosed DVD

Appendix A.2 Daily Quality Control Summary Reports

Information on enclosed DVD

Appendix A.3 6048 Forms

Information on enclosed DVD

Appendix A.4 Dig Sheets

Information on enclosed DVD

Appendix B.1 Low Density Area Soil Sampling Results

TABLE B-AA32
ANALYTICAL RESULTS FOR GRID AA32
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AA32			AA32			AA32		
Sample Name	P3IF-SS-IS-SO-AA032			P3IF-SS-IS-SO-AA532			P3IF-SS-IS-SO-AA632		
Date Collected	June 8, 2023			June 8, 2023			June 8, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
1,3-Dinitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,4,6-Trinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,4-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,6-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
3-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
4-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Nitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Nitroglycerin	0.15	0.15	U	0.15	0.15	U	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	0.25	0.25	U	0.25	0.25	U	0.25	0.25	U
Metals (mg/kg)									
Aluminum	18,000	4		23,000	4		22,000	4	
Antimony	0.15	0.15	U	0.15	0.15	U	0.15	0.15	U
Arsenic	1.1	0.3		1.2	0.3		1.2	0.3	
Barium	150	0.2		160	0.2		150	0.2	
Beryllium	0.52	0.3	J	0.64	0.3	J	0.59	0.3	J
Cadmium	0.3	0.08		0.15	0.08		0.21	0.08	
Calcium (Ca)	3,200	15		3,200	15		4,100	15	
Chromium[2]	13	0.2		15	0.2		14	0.2	
Cobalt	5.4	0.08		6.3	0.08		6.2	0.08	
Copper	62	0.2	J	31	0.2	J	42	0.2	
Iron (Fe)	12,000	8		13,000	8		13,000	8	
Lead	9.8	0.05		8.7	0.05		9.5	0.05	
Magnesium (Mg)	7,500	5		9,400	5		9,100	5	
Manganese (Mn)	250	0.08		270	0.08		250	0.08	
Mercury	0.017	0.043	J	0.017	0.045	J	0.016	0.043	J
Nickel	10	0.2		11	0.2		11	0.2	
Potassium (K)	950	8		1,200	8		1,100	8	
Selenium	0.95	0.1		1.2	0.1		1	0.1	
Silver	0.07	0.05	J	0.038	0.05	J	0.046	0.05	J
Sodium (Na)	65	8		74	8		66	8	
Thallium	0.038	0.05	J	0.051	0.05	J	0.041	0.05	J
Vanadium	19	0.1		22	0.1		21	0.1	
Zinc	30	1.5		31	1.5		31	1.5	

Notes:

< = less than LOD

LOD = Level of Detection

mg/kg = milligrams per kilogram

Qual = qualifier

J = estimated

U = not detected

TABLE B-AB27
ANALYTICAL RESULTS FOR GRID AB27
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AB27			AB27			AB27		
Sample Name	P3IF-SS-IS-SO-AB027			P3IF-SS-IS-SO-AB527			P3IF-SS-IS-SO-AB627		
Date Collected	June 8, 2023			June 8, 2023			June 8, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
1,3-Dinitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,4,6-Trinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,4-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,6-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
3-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
4-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Nitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Nitroglycerin	0.15	0.15	U	0.15	0.15	U	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	0.25	0.25	U	0.25	0.25	U	0.25	0.25	U
Metals (mg/kg)									
Aluminum	20,000	4		23,000	4		22,000	4	
Antimony	0.15	0.15	U	0.15	0.15	U	0.15	0.15	U
Arsenic	1.7	0.3		1.8	0.3		1.7	0.3	
Barium	400	0.2		370	0.2		380	0.2	
Beryllium	0.81	0.3	J	0.8	0.3	J	0.82	0.3	J
Cadmium	0.49	0.08		0.29	0.08		0.34	0.08	
Calcium (Ca)	16,000	15		13,000	15		22,000	15	
Chromium[2]	15	0.2		15	0.2		14	0.2	
Cobalt	5.2	0.08		5.7	0.08		5.4	0.08	
Copper	79	0.2	J	43	0.2	J	50	0.2	
Iron (Fe)	13,000	8		14,000	8		13,000	8	
Lead	13	0.05		11	0.05		11	0.05	
Magnesium (Mg)	7,500	5		8,400	5		8,100	5	
Manganese (Mn)	340	0.08		330	0.08		390	0.08	
Mercury	0.032	0.043	J	0.023	0.044	J	0.039	0.044	J
Nickel	11	0.2		12	0.2		11	0.2	
Potassium (K)	1100	8		1,300	8		1,300	8	
Selenium	1.4	0.1		1.4	0.1		1.3	0.1	
Silver	0.1	0.05		0.072	0.05	J	0.084	0.05	J
Sodium (Na)	72	8		75	8		71	8	
Thallium	0.047	0.05	J	0.054	0.05	J	0.051	0.05	J
Vanadium	19	0.1		21	0.1		21	0.1	
Zinc	33	1.5		30	1.5		29	1.5	

Notes:

< = less than LOD

LOD = Level of Detection

mg/kg = milligrams per kilogram

Qual = qualifier

J = estimated

U = not detected

UJ = estimated not detected

TABLE B-AB38
ANALYTICAL RESULTS FOR GRID AB28
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AB38			AB38			AB38		
Sample Name	P3IF-SS-IS-SO-AB038			P3IF-SS-IS-SO-AB538			P3IF-SS-IS-SO-AB638		
Date Collected	June 16, 2023			June 16, 2023			June 16, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
1,3-Dinitrobenzene	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
2,4,6-Trinitrotoluene	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
2,4-Dinitrotoluene	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
2,6-Dinitrotoluene	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
2-Amino-4,6-dinitrotoluene	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
2-Nitrotoluene	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
3-Nitrotoluene	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
4-Amino-2,6-Dinitrotoluene	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
4-Nitrotoluene	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
Nitrobenzene	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
Nitroglycerin	0.3	0.3	UJ	0.3	0.3	UJ	0.3	0.3	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
Pentaerythritol tetranitrate (PETN)	0.5	0.5	UJ	0.5	0.5	UJ	0.5	0.5	UJ
Metals (mg/kg)									
Aluminum	18,000	4		17,000	4		16,000	4	
Antimony	0.30	0.15		0.12	0.15	J	0.084	0.15	J
Arsenic	1.0	0.30		1.1	0.3		1.1	0.3	
Barium	320	0.20		340	0.2		320	0.2	
Beryllium	0.86	0.30	J	0.94	0.3	J	0.91	0.3	J
Cadmium	0.22	0.080		0.17	0.08		0.22	0.08	
Calcium (Ca)	12,000	15		13,000	15		12,000	15	
Chromium[2]	10	0.20		9.2	0.2		9.9	0.2	
Cobalt	5.3	0.080		5.5	0.08		5.2	0.08	
Copper	47	0.2	J	25	0.2	J	54	0.2	
Iron (Fe)	9,700	8		10,000	8		9,500	8	
Lead	11	0.05		9.5	0.05		10	0.05	
Magnesium (Mg)	6,500	5		6,200	5		6,100	5	
Manganese (Mn)	390	0.08		440	0.08		400	0.08	
Mercury	0.019	0.041	J	0.019	0.043	J	0.017	0.042	J
Nickel	12	0.2		12	0.2		12	0.2	
Potassium (K)	1,600	8		1,400	8		1,400	8	
Selenium	1.1	0.1		1.2	0.1		1.1	0.1	
Silver	0.08	0.05	J	0.051	0.05	J	0.065	0.05	J
Sodium (Na)	40	8		39	8		38	8	
Thallium	0.11	0.05		0.096	0.05	J	0.095	0.05	J
Vanadium	12	0.1		11	0.1		11	0.1	
Zinc	28	1.5		26	1.5		27	1.5	

Notes:
< = less than LOD
LOD = Level of Detection
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated not detected

TABLE B-AC34
ANALYTICAL RESULTS FOR GRID AC34
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AC34			AC34			AC34		
Sample Name	P3IF-SS-IS-SO-AC034			P3IF-SS-IS-SO-AC534			P3IF-SS-IS-SO-AC634		
Date Collected	June 8, 2023			June 8, 2023			June 8, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
1,3-Dinitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,4,6-Trinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,4-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,6-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
3-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
4-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Nitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Nitroglycerin	0.15	0.15	U	0.15	0.15	U	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	0.25	0.25	U	0.25	0.25	U	0.25	0.25	U
Metals (mg/kg)									
Aluminum	15,000	4		12,000	4		13,000	4	
Antimony	0.15	0.15	U	0.15	0.15	U	0.15	0.15	U
Arsenic	1.4	0.3		1.3	0.3		1.2	0.3	
Barium	140	0.2		150	0.2		140	0.2	
Beryllium	0.55	0.3	J	0.51	0.3	J	0.53	0.3	J
Cadmium	0.16	0.08		0.14	0.08		0.14	0.08	
Calcium (Ca)	2,100	15		2,500	15		2,200	15	
Chromium[2]	11	0.2		9.4	0.2		10	0.2	
Cobalt	5.2	0.08		5	0.08		4.9	0.08	
Copper	31	0.2		19	0.2		25	0.2	
Iron (Fe)	10,000	8		9,800	8		9,900	8	
Lead	8.3	0.05		8.4	0.05		8	0.05	
Magnesium (Mg)	5,100	5		4,000	5		4,400	5	
Manganese (Mn)	380	0.08		390	0.08		370	0.08	
Mercury	0.017	0.044	J	0.017	0.043	J	0.015	0.043	J
Nickel	8.4	0.2		7.6	0.2		7.8	0.2	
Potassium (K)	1,200	8		1,100	8		1,200	8	
Selenium	1	0.1		1.1	0.1		0.94	0.1	
Silver	0.034	0.05	J	0.044	0.05	J	0.043	0.05	J
Sodium (Na)	57	8		54	8		54	8	
Thallium	0.062	0.05	J	0.19	0.05		0.054	0.05	J
Vanadium	22	0.1		17	0.1		18	0.1	
Zinc	25	1.5		23	1.5		23	1.5	

Notes:
< = less than LOD
LOD = Level of Detection
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated not detected

TABLE B-AD28
ANALYTICAL RESULTS FOR GRID AD28
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AD28			AD28			AD28		
Sample Name	P3IF-SS-IS-SO-AD028			P3IF-SS-IS-SO-AD528			P3IF-SS-IS-SO-AD628		
Date Collected	June 6, 2023			June 6, 2023			June 6, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
1,3-Dinitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,4,6-Trinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,4-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,6-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
3-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
4-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Nitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Nitroglycerin	0.15	0.15	U	0.15	0.15	U	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	0.25	0.25	U	0.25	0.25	U	0.25	0.25	U
Metals (mg/kg)									
Aluminum	17,000	4		16,000	4		18,000	4	
Antimony	0.15	0.15	UJ	0.16	0.15	J	0.15	0.15	UJ
Arsenic	1.1	0.3		1.1	0.3		1.1	0.3	
Barium	300	0.2	J	360	0.2		340	0.2	J
Beryllium	0.5	0.3	J	0.36	0.3	J	0.54	0.3	J
Cadmium	0.31	0.08	J	1.1	0.08	J	0.2	0.08	
Calcium (Ca)	3,500	15	J	4,000	15	J	3,700	15	J
Chromium[2]	12	0.2		11	0.2		11	0.2	
Cobalt	5.2	0.08		5.1	0.08		5.3	0.08	
Copper	69	0.2	J	48	0.2	J	35	0.2	
Iron (Fe)	9,600	8		9,400	8		9,400	8	
Lead	9.7	0.05		9.5	0.05		8.4	0.05	J
Magnesium (Mg)	6,600	5	J	6,100	5	J	6,800	5	J
Manganese (Mn)	290	0.08		270	0.08		280	0.08	
Mercury	0.028	0.042	J	0.049	0.042	J	0.026	0.042	J
Nickel	9.7	0.2		9.2	0.2		9.2	0.2	
Potassium (K)	1,300	8	J	1,200	8	J	1,300	8	J
Selenium	1.1	0.1	J	0.96	0.1	J	1.1	0.1	J
Silver	0.074	0.05	J	0.05	0.05	J	0.049	0.05	J
Sodium (Na)	68	8		71	8		65	8	
Thallium	0.047	0.05	J	0.05	0.05	U	0.049	0.05	J
Vanadium	18	0.1		16	0.1	J	18	0.1	
Zinc	32	1.5		30	1.5		28	1.5	

Notes:
< = less than LOD
LOD = Level of Detection
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated not detected

TABLE B-AD34
ANALYTICAL RESULTS FOR GRID AD34
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AD34			AD34			AD34		
Sample Name	P3IF-SS-IS-SO-AD034			P3IF-SS-IS-SO-AD534			P3IF-SS-IS-SO-AD634		
Date Collected	June 9, 2023			June 9, 2023			June 9, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
1,3-Dinitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,4,6-Trinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,4-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,6-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
3-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
4-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Nitroglycerin	0.15	0.15	U	0.15	0.15	U	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	0.25	0.25	U	0.25	0.25	U	0.25	0.25	U
Metals (mg/kg)									
Aluminum	15,000	4		16,000	4		13,000	4	
Antimony	0.087	0.15	J	0.15	0.15	UJ	0.11	0.15	J
Arsenic	1	0.3	J	1.1	0.3		0.97	0.3	J
Barium	250	0.2		300	0.2		250	0.2	
Beryllium	0.54	0.3	J	0.73	0.3	J	0.56	0.3	J
Cadmium	0.25	0.08		0.14	0.08		0.23	0.08	
Calcium (Ca)	2,700	15	J	3,400	15	J	2,600	15	J
Chromium[2]	10	0.2	J	10	0.2		8.9	0.2	
Cobalt	4.5	0.08	J	4.8	0.08		4.2	0.08	J
Copper	41	0.2	J	20	0.2	J	40	0.2	J
Iron (Fe)	9,500	8		10,000	8		8,500	8	
Lead	9.9	0.05	J	9.5	0.05		9.4	0.05	J
Magnesium (Mg)	5,200	5	J	5,400	5	J	4,500	5	J
Manganese (Mn)	260	0.08		270	0.08		250	0.08	
Mercury	0.028	0.043	J	0.034	0.043	J	0.026	0.043	J
Nickel	8.3	0.2	J	8.6	0.2		7.6	0.2	
Potassium (K)	970	8		1,100	8	J	870	8	J
Selenium	0.94	0.1	J	1	0.1	J	0.95	0.1	J
Silver	0.048	0.05	J	0.029	0.05	J	0.047	0.05	J
Sodium (Na)	48	8		48	8		44	8	
Thallium	0.054	0.05	J	0.049	0.05	J	0.044	0.05	J
Vanadium	14	0.1	J	15	0.1		12	0.1	
Zinc	24	1.5	J	22	1.5		22	1.5	J

Notes:
< = less than LOD
LOD = Level of Detection
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated not detected

TABLE B-AE27
ANALYTICAL RESULTS FOR GRID AE27
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AE27			AE27			AE27		
Sample Name	P3IF-SS-IS-SO-AE027			P3IF-SS-IS-SO-AE527			P3IF-SS-IS-SO-AE627		
Date Collected	June 6, 2023			June 6, 2023			June 6, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
1,3-Dinitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,4,6-Trinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,4-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,6-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
3-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
4-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Nitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Nitroglycerin	0.15	0.15	U	0.15	0.15	U	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	0.25	0.25	U	0.25	0.25	U	0.25	0.25	U
Metals (mg/kg)									
Aluminum	13,000	4		17,000	4		13,000	4	
Antimony	0.15	0.15	U	0.15	0.15	U	0.15	0.15	U
Arsenic	1.2	0.3		1.3	0.3		1.1	0.3	
Barium	260	0.2		280	0.2		250	0.2	
Beryllium	0.42	0.3	J	0.48	0.3	J	0.45	0.3	J
Cadmium	0.42	0.08		0.33	0.08		0.37	0.08	
Calcium (Ca)	3,100	15		3,100	15		2,800	15	
Chromium[2]	9.4	0.2		11	0.2		10	0.2	
Cobalt	4.3	0.08		5	0.08		4.6	0.08	
Copper	60	0.2		57	0.2		69	0.2	
Iron (Fe)	8,000	8		9,500	8		8,900	8	
Lead	10	0.05		11	0.05		11	0.05	
Magnesium (Mg)	4,900	5		6,300	5		5,200	5	
Manganese (Mn)	240	0.08		250	0.08		270	0.08	
Mercury	0.059	0.04	J	0.038	0.041	J	0.032	0.041	J
Nickel	7.8	0.2		9	0.2		8.4	0.2	
Potassium (K)	920	8		1,100	8		970	8	
Selenium	0.94	0.1		1.1	0.1		0.89	0.1	
Silver	0.091	0.05	J	0.091	0.05	J	0.11	0.05	
Sodium (Na)	60	8		66	8		59	8	
Thallium	0.041	0.05	J	0.045	0.05	J	0.05	0.05	J
Vanadium	19	0.1		22	0.1		18	0.1	
Zinc	29	1.5		32	1.5		31	1.5	

Notes:
< = less than LOD
LOD = Level of Detection
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated not detected

TABLE B-AE38
ANALYTICAL RESULTS FOR GRID AE38
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AE38			AE38			AE38		
Sample Name	P3IF-SS-IS-SO-AE038			P3IF-SS-IS-SO-AE538			P3IF-SS-IS-SO-AE638		
Date Collected	June 16, 2023			June 16, 2023			June 16, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
1,3-Dinitrobenzene	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
2,4,6-Trinitrotoluene	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
2,4-Dinitrotoluene	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
2,6-Dinitrotoluene	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
2-Amino-4,6-dinitrotoluene	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
2-Nitrotoluene	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
3-Nitrotoluene	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
4-Amino-2,6-Dinitrotoluene	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
4-Nitrotoluene	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
Nitrobenzene	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
Nitroglycerin	0.3	0.3	UJ	0.3	0.3	UJ	0.3	0.3	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
Pentaerythritol tetranitrate (PETN)	0.5	0.5	UJ	0.5	0.5	UJ	0.5	0.5	UJ
Metals (mg/kg)									
Aluminum	21,000	4		22,000	4		19,000	4	
Antimony	0.15	0.15	U	0.15	0.15	U	0.15	0.15	U
Arsenic	1	0.3		1.1	0.3		1.1	0.3	
Barium	300	0.2		370	0.2		330	0.2	
Beryllium	0.97	0.3	J	1.1	0.3		0.93	0.3	J
Cadmium	0.16	0.08		0.18	0.08		0.16	0.08	
Calcium (Ca)	13,000	15		14,000	15		17,000	15	
Chromium[2]	11	0.2		11	0.2		9.9	0.2	
Cobalt	5.6	0.08		5.8	0.08		5.3	0.08	
Copper	18	0.2		23	0.2		22	0.2	
Iron (Fe)	11,000	8		12,000	8		10,000	8	
Lead	8.4	0.05		10	0.05		8.3	0.05	
Magnesium (Mg)	7,300	5		7,600	5		6,600	5	
Manganese (Mn)	430	0.08		460	0.08		470	0.08	
Mercury	0.016	0.041	J	0.016	0.042	J	0.017	0.042	J
Nickel	11	0.2		12	0.2		11	0.2	
Potassium (K)	2,000	8		1,900	8		1,700	8	
Selenium	1.2	0.1		1.3	0.1		1.3	0.1	
Silver	0.037	0.05	J	0.059	0.05	J	0.042	0.05	J
Sodium (Na)	35	8		39	8		37	8	
Thallium	0.073	0.05	J	0.08	0.05	J	0.07	0.05	J
Vanadium	14	0.1		15	0.1		12	0.1	
Zinc	29	1.5		30	1.5		27	1.5	

Notes:
< = less than LOD
LOD = Level of Detection
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated not detected

TABLE B-AF29
ANALYTICAL RESULTS FOR GRID AF29
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AF29			AF29			AF29		
Sample Name	P3IF-SS-IS-SO-AF029			P3IF-SS-IS-SO-AF529			P3IF-SS-IS-SO-AF629		
Date Collected	June 6, 2023			June 6, 2023			June 6, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
1,3-Dinitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,4,6-Trinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,4-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,6-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
3-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
4-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Nitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Nitroglycerin	0.15	0.15	U	0.15	0.15	U	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	0.25	0.25	U	0.25	0.25	U	0.25	0.25	U
Metals (mg/kg)									
Aluminum	19,000	4		17,000	4		18,000	4	
Antimony	0.15	0.15	U	0.15	0.15	U	0.15	0.15	U
Arsenic	1.3	0.3		1.2	0.3		1.4	0.3	
Barium	220	0.2		220	0.2		200	0.2	
Beryllium	0.47	0.3	J	0.44	0.3	J	0.42	0.3	J
Cadmium	0.29	0.08		0.21	0.08		0.29	0.08	
Calcium (Ca)	3,000	15		3,000	15		2,900	15	
Chromium[2]	12	0.2		10	0.2		12	0.2	
Cobalt	4.9	0.08		4.6	0.08		4.8	0.08	
Copper	60	0.2		37	0.2		54	0.2	
Iron (Fe)	9,800	8		9,100	8		9,200	8	
Lead	11	0.05		8.9	0.05		9.9	0.05	
Magnesium (Mg)	7,900	5		7,000	5		7,600	5	
Manganese (Mn)	250	0.08		220	0.08		240	0.08	
Mercury	0.023	0.041	J	0.024	0.041	J	0.027	0.041	J
Nickel	8.9	0.2		8	0.2		8.6	0.2	
Potassium (K)	970	8		900	8		970	8	
Selenium	0.96	0.1		1	0.1		0.91	0.1	
Silver	0.09	0.05	J	0.058	0.05	J	0.066	0.05	J
Sodium (Na)	70	8		65	8		82	8	
Thallium	0.075	0.05	J	0.047	0.05	J	0.043	0.05	J
Vanadium	18	0.1		16	0.1		19	0.1	
Zinc	32	1.5		27	1.5		32	1.5	

Notes:
< = less than LOD
LOD = Level of Detection
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated not detected

TABLE B-AF30
ANALYTICAL RESULTS FOR GRID AF30
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AF30			AF30			AF30		
Sample Name	P3IF-SS-IS-SO-AF030			P3IF-SS-IS-SO-AF530			P3IF-SS-IS-SO-AF630		
Date Collected	22 Mar 2024			22 Mar 2024			22 Mar 2024		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.074	0.074	U	0.074	0.074	U	0.073	0.073	U
1,3-Dinitrobenzene	0.074	0.074	U	0.074	0.074	U	0.073	0.073	U
2,4,6-Trinitrotoluene	0.074	0.074	U	0.074	0.074	U	0.073	0.073	U
2,4-Dinitrotoluene	0.074	0.074	U	0.074	0.074	U	0.073	0.073	U
2,6-Dinitrotoluene	0.074	0.074	U	0.074	0.074	U	0.073	0.073	U
2-Amino-4,6-dinitrotoluene	0.074	0.074	U	0.22	0.074	J	0.073	0.073	U
2-Nitrotoluene	0.074	0.074	U	0.074	0.074	U	0.073	0.073	U
3-Nitrotoluene	0.074	0.074	U	0.074	0.074	U	0.073	0.073	U
4-Amino-2,6-Dinitrotoluene	0.1	0.074	J	0.22	0.074	J	0.11	0.073	J
4-Nitrotoluene	0.074	0.074	U	0.074	0.074	U	0.073	0.073	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.074	0.074	U	0.074	0.074	U	0.073	0.073	U
Methyl-2,4,6-trinitrophenylnitramine	0.074	0.074	UJ	0.074	0.074	UJ	0.073	0.073	UJ
Nitrobenzene	0.074	0.074	U	0.074	0.074	U	0.073	0.073	U
Nitroglycerin	0.15	0.15	U	0.15	0.15	U	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.074	0.074	U	0.074	0.074	U	0.073	0.073	U
Pentaerythritol tetranitrate (PETN)	0.25	0.25	U	0.25	0.25	U	0.24	0.24	U
Metals (mg/kg)									
Aluminum	19,000	5		21,000	5		18,000	5	
Antimony	0.62	0.18		0.31	0.18		0.24	0.19	J
Arsenic	1.6	0.36		1.8	0.37		1.7	0.38	
Barium	270	0.24		280	0.24		330	0.26	
Beryllium	0.43	0.36	J	0.51	0.37	J	0.43	0.38	J
Cadmium	0.43	0.096		0.42	0.098		0.58	0.1	
Calcium (Ca)	5,900	18		4,600	18		11,000	19	
Chromium[2]	12	0.24		16	0.24		12	0.26	
Cobalt	4.9	0.096		5.3	0.098		5.2	0.1	
Copper	43	0.24		84	0.24		69	0.26	
Iron (Fe)	12,000	10		13,000	10		12,000	10	
Lead	13	0.06		18	0.061		16	0.064	
Magnesium (Mg)	7,800	6		8,100	6		7,400	6	
Manganese (Mn)	280	0.096		300	0.098		310	0.1	
Mercury	0.044	0.045	J	0.037	0.05	J	0.052	0.047	J
Nickel	8.5	0.24		10	0.24		8.7	0.26	
Potassium (K)	1600	10		1800	10		1600	10	
Selenium	1.2	0.12		1.3	0.12		1	0.13	
Silver	0.054	0.06	J	0.12	0.061		0.1	0.064	J
Sodium (Na)	9.6	9.6	U	79	9.8		80	10	
Thallium	0.15	0.06		0.083	0.061	J	0.067	0.064	J
Vanadium	17	0.12		19	0.12		17	0.13	
Zinc	38	1.8		44	1.8		46	1.9	

Notes:
< = less than LOD
LOD = Level of Detection
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated not detected

TABLE B-AF32
ANALYTICAL RESULTS FOR GRID AF32
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AF32			AF32			AF32		
Sample Name	P3IF-SS-IS-SO-AF032			P3IF-SS-IS-SO-AF532			P3IF-SS-IS-SO-AF632		
Date Collected	June 9, 2023			June 9, 2023			June 9, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
1,3-Dinitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,4,6-Trinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,4-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,6-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
3-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
4-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Nitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Nitroglycerin	0.15	0.15	U	0.15	0.15	U	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	0.25	0.25	U	0.25	0.25	U	0.25	0.25	U
Metals (mg/kg)									
Aluminum	19,000	4		17,000	4		16,000	4	
Antimony	0.15	0.15	U	0.15	0.15	U	0.12	0.15	J
Arsenic	1.2	0.3		1.1	0.3		1.2	0.3	
Barium	140	0.2		140	0.2		150	0.2	
Beryllium	0.52	0.3	J	0.6	0.3	J	0.54	0.3	J
Cadmium	0.42	0.08	J	0.19	0.08	J	0.66	0.08	
Calcium (Ca)	2,900	15		3,300	15		3,100	15	
Chromium[2]	13	0.2		11	0.2		10	0.2	
Cobalt	5.1	0.08		4.7	0.08		4.5	0.08	
Copper	67	0.2	J	31	0.2	J	48	0.2	
Iron (Fe)	11,000	8		10,000	8		9,200	8	
Lead	13	0.05		9.3	0.05		11	0.05	
Magnesium (Mg)	8,100	5		7,200	5		6,300	5	
Manganese (Mn)	300	0.08		270	0.08		280	0.08	
Mercury	0.027	0.044	J	0.023	0.044	J	0.035	0.042	J
Nickel	9.4	0.2		8.3	0.2		8.1	0.2	
Potassium (K)	940	8		860	8		870	8	
Selenium	1	0.1		0.91	0.1		1.1	0.1	
Silver	0.096	0.05	J	0.052	0.05	J	0.06	0.05	J
Sodium (Na)	64	8		59	8		56	8	
Thallium	0.039	0.05	J	0.062	0.05	J	0.04	0.05	J
Vanadium	18	0.1		16	0.1		15	0.1	
Zinc	36	1.5		26	1.5		27	1.5	

Notes:
< = less than LOD
LOD = Level of Detection
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated not detected

TABLE B-AF34
ANALYTICAL RESULTS FOR GRID AF34
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AF34			AF34			AF34		
Sample Name	P3IF-SS-IS-SO-AF034			P3IF-SS-IS-SO-AF534			P3IF-SS-IS-SO-AF634		
Date Collected	June 9, 2023			June 9, 2023			June 9, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
1,3-Dinitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,4,6-Trinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,4-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,6-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
3-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
4-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Nitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Nitroglycerin	0.15	0.15	U	0.15	0.15	U	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	0.25	0.25	U	0.25	0.25	U	0.25	0.25	U
Metals (mg/kg)									
Aluminum	22,000	4		19,000	4		19,000	4	
Antimony	0.15	0.15	U	0.15	0.15	U	0.15	0.15	U
Arsenic	1.3	0.3		1.3	0.3		1.4	0.3	
Barium	160	0.2		140	0.2		130	0.2	
Beryllium	0.66	0.3	J	0.55	0.3	J	0.5	0.3	J
Cadmium	0.28	0.08		0.19	0.08		0.28	0.08	
Calcium (Ca)	2,700	15		2,900	15		2,600	15	
Chromium[2]	14	0.2		13	0.2		13	0.2	
Cobalt	5.5	0.08		5.4	0.08		5.2	0.08	
Copper	52	0.2	J	31	0.2	J	49	0.2	
Iron (Fe)	12,000	8		11,000	8		11,000	8	
Lead	11	0.05		9.6	0.05		11	0.05	
Magnesium (Mg)	8,700	5		7,800	5		7,600	5	
Manganese (Mn)	240	0.08		250	0.08		250	0.08	
Mercury	0.02	0.043	J	0.022	0.044	J	0.019	0.043	J
Nickel	10	0.2		9.3	0.2		9.5	0.2	
Potassium (K)	1,100	8		1,100	8		1,000	8	
Selenium	1	0.1		0.96	0.1		1.1	0.1	
Silver	0.082	0.05	J	0.05	0.05	J	0.061	0.05	J
Sodium (Na)	63	8		65	8		64	8	
Thallium	0.048	0.05	J	0.052	0.05	J	0.042	0.05	J
Vanadium	19	0.1		19	0.1		19	0.1	
Zinc	31	1.5		28	1.5		31	1.5	

Notes:
< = less than LOD
LOD = Level of Detection
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated not detected

TABLE B-AH28
ANALYTICAL RESULTS FOR GRID AH28
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AH28			AH28			AH28		
Sample Name	P3IF-SS-IS-SO-AH028			P3IF-SS-IS-SO-AH528			P3IF-SS-IS-SO-AH628		
Date Collected	June 21, 2023			June 21, 2023			June 21, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,4,6-Trinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,4-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
3-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
4-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitroglycerin	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.25	0.25	UJ	0.25	0.25	UJ	0.25	0.25	UJ
Metals (mg/kg)									
Aluminum	11,000	4		12,000	4		8,600	4	
Antimony	0.18	0.15	J	0.29	0.15		0.11	0.15	J
Arsenic	1.1	0.3		1.2	0.3		1	0.3	
Barium	120	0.2		130	0.2		110	0.2	
Beryllium	0.35	0.3	J	0.36	0.3	J	0.32	0.3	J
Cadmium	0.33	0.08	J	0.74	0.08	J	0.49	0.08	
Calcium (Ca)	2,700	15		3,600	15		2,800	15	
Chromium[2]	9	0.2		12	0.2		8.3	0.2	
Cobalt	3.8	0.08		4	0.08		3.2	0.08	
Copper	64	0.2	J	110	0.2	J	80	0.2	
Iron (Fe)	7,800	8		8,000	8		6,500	8	
Lead	10	0.05		16	0.05		11	0.05	
Magnesium (Mg)	4,800	5		5,300	5		3,700	5	
Manganese (Mn)	190	0.08		220	0.08		190	0.08	
Mercury	0.023	0.041	J	0.023	0.04	J	0.022	0.041	J
Nickel	7	0.2		8.3	0.2		6.4	0.2	
Potassium (K)	750	8		830	8		660	8	
Selenium	0.62	0.1		0.53	0.1		0.65	0.1	
Silver	0.072	0.05	J	0.13	0.05		0.1	0.05	
Sodium (Na)	65	8		69	8		59	8	
Thallium	0.041	0.05	J	0.043	0.05	J	0.028	0.05	J
Vanadium	15	0.1		16	0.1		14	0.1	
Zinc	27	1.5		40	1.5		28	1.5	

Notes:
< = less than LOD
LOD = Level of Detection
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated not detected

TABLE B-AH39
ANALYTICAL RESULTS FOR GRID AH29
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AH39			AH39			AH39		
Sample Name	P3IF-SS-IS-SO-AH039			P3IF-SS-IS-SO-AH539			P3IF-SS-IS-SO-AH639		
Date Collected	June 19, 2023			June 19, 2023			June 19, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
1,3-Dinitrobenzene	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
2,4,6-Trinitrotoluene	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
2,4-Dinitrotoluene	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
2,6-Dinitrotoluene	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
2-Amino-4,6-dinitrotoluene	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
2-Nitrotoluene	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
3-Nitrotoluene	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
4-Amino-2,6-Dinitrotoluene	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
4-Nitrotoluene	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
Nitrobenzene	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
Nitroglycerin	0.3	0.3	UJ	0.3	0.3	UJ	0.3	0.3	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
Pentaerythritol tetranitrate (PETN)	0.5	0.5	UJ	0.5	0.5	UJ	0.5	0.5	UJ
Metals (mg/kg)									
Aluminum	20,000	4		21,000	4		19,000	4	
Antimony	0.22	0.15		0.15	0.15	U	0.15	0.15	U
Arsenic	0.81	0.3		0.82	0.3		0.74	0.3	
Barium	400	0.2		390	0.2		460	0.2	
Beryllium	1.4	0.3		1.1	0.3		1.2	0.3	
Cadmium	0.2	0.08		0.13	0.08		0.085	0.08	J
Calcium (Ca)	11,000	15		11,000	15		13,000	15	
Chromium[2]	11	0.2		11	0.2		9.4	0.2	
Cobalt	5.6	0.08		5.6	0.08		5.4	0.08	
Copper	26	0.2	J	21	0.2		14	0.2	J
Iron (Fe)	11,000	8		11,000	8		9,900	8	
Lead	10	0.05		8.8	0.05		9.2	0.05	
Magnesium (Mg)	6,600	5		6,800	5		6,500	5	
Manganese (Mn)	360	0.08		340	0.08		340	0.08	
Mercury	0.042	0.042	U	0.041	0.041	U	0.042	0.042	U
Nickel	13	0.2		13	0.2		12	0.2	
Potassium (K)	2,100	8		2,200	8		1,800	8	
Selenium	1.5	0.1		1.4	0.1		1.5	0.1	
Silver	0.049	0.05	J	0.035	0.05	J	0.047	0.05	J
Sodium (Na)	34	8		34	8		31	8	
Thallium	0.092	0.05	J	0.076	0.05	J	0.082	0.05	J
Vanadium	11	0.1		11	0.1		10	0.1	
Zinc	27	1.5		26	1.5		24	1.5	

Notes:
< = less than LOD
LOD = Level of Detection
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated not detected

TABLE B-AI26
ANALYTICAL RESULTS FOR GRID AI26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AI26			AI26			AI26		
Sample Name	P3IF-SS-IS-SO-AI026			P3IF-SS-IS-SO-AI526			P3IF-SS-IS-SO-AI626		
Date Collected	June 23, 2023			June 23, 2023			June 23, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,4,6-Trinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,4-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
3-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
4-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitroglycerin	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.25	0.25	UJ	0.25	0.25	UJ	0.25	0.25	UJ
Metals (mg/kg)									
Aluminum	16,000	4.00		17,000	4.00		16,000	4.00	
Antimony	0.25	0.15		0.17	0.15	J	0.14	0.15	J
Arsenic	1.30	0.30		1.20	0.30		1.10	0.30	
Barium	140	0.20		140	0.20		120	0.20	
Beryllium	0.36	0.30	J	0.33	0.30	J	0.33	0.30	J
Cadmium	0.55	0.08	J	0.75	0.08		1.10	0.08	J
Calcium (Ca)	2,800	15.00		3,000	15.00		3,000	15.00	
Chromium[2]	13.00	0.20		13.00	0.20		14.00	0.20	
Cobalt	5.10	0.08		5.10	0.08		4.90	0.08	
Copper	100.00	0.20		98.00	0.20		92.00	0.20	
Iron (Fe)	11,000	8.00		11,000	8.00		11,000	8.00	
Lead	17.00	0.05		17.00	0.05		15.00	0.05	
Magnesium (Mg)	7,000	5.00		7,400	5.00		7,200	5.00	
Manganese (Mn)	270.00	0.08		260.00	0.08		250.00	0.08	
Mercury	0.03	0.04	J	0.03	0.04	J	0.04	0.04	J
Nickel	10.00	0.20		10.00	0.20		9.80	0.20	
Potassium (K)	990.00	8.00		1,100	8.00		1,000	8.00	
Selenium	0.81	0.10		0.67	0.10		0.87	0.10	
Silver	0.11	0.05		0.10	0.05		0.12	0.05	
Sodium (Na)	71.00	8.00		70.00	8.00		67.00	8.00	
Thallium	0.07	0.05	J	0.07	0.05	J	0.05	0.05	J
Vanadium	20.00	0.10		18.00	0.10		19.00	0.10	
Zinc	43.00	1.50		43.00	1.50		40.00	1.50	

Notes:

< = less than LOD

LOD = Level of Detection

mg/kg = milligrams per kilogram

Qual = qualifier

J = estimated

U = not detected

UJ = estimated not detected

TABLE B-AI29
ANALYTICAL RESULTS FOR GRID AI29
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AI29			AI29			AI29		
Sample Name	P3IF-SS-IS-SO-AI029			P3IF-SS-IS-SO-AI529			P3IF-SS-IS-SO-AI629		
Date Collected	June 22, 2023			June 22, 2023			June 22, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,4,6-Trinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,4-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
3-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
4-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitroglycerin	0.150	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.250	0.25	UJ	0.25	0.25	UJ	0.25	0.25	UJ
Metals (mg/kg)									
Aluminum	23,000	4	J	21,000	4	J	18,000	4	
Antimony	0.15	0.15	UJ	0.15	0.15	UJ	0.082	0.15	J
Arsenic	1.0	0.30		1.1	0.30		1.0	0.30	J
Barium	270	0.20		290	0.20		270	0.20	
Beryllium	0.66	0.30	J	1	0.30	J	1	0.30	J
Cadmium	0.24	0.08		0.29	0.08		0.33	0.08	
Calcium (Ca)	5,200	15	J	5,800	15	J	5,600	15	J
Chromium[2]	15	0.2		14	0.20		13	0.20	
Cobalt	6	0.1		6	0.08		5.5	0.08	
Copper	35	0.2	J	33	0.20	J	54	0.20	J
Iron (Fe)	14,000	8	J	14,000	8		12,000	8	
Lead	12	0.05		12	0.05		13	0.05	
Magnesium (Mg)	8,300	5	J	7,800	5	J	6,900	5	J
Manganese (Mn)	380	0.08	J	420	0.08		400	0.08	
Mercury	0.02	0.04	J	0.02	0.04	J	0.07	0.04	J
Nickel	12	0.20		12	0.20		11	0.20	
Potassium (K)	1,800	8	J	1,600	8	J	1,500	8	J
Selenium	1.1	0.10	J	1.40	0.10	J	1.3	0.10	J
Silver	0.06	0.05	J	0.06	0.05	J	0.078	0.05	J
Sodium (Na)	54	8		50	8		47	8	
Thallium	0.07	0.05	J	0.07	0.05	J	0.063	0.05	J
Vanadium	23	0.10	J	21	0.10		18	0.10	
Zinc	31	2		29	2		32	2	

Notes:
< = less than LOD
LOD = Level of Detection
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated not detected

TABLE B-AI31
ANALYTICAL RESULTS FOR GRID AI31
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AI31			AI31			AI31		
Sample Name	P3IF-SS-IS-SO-AI031			P3IF-SS-IS-SO-AI531			P3IF-SS-IS-SO-AI631		
Date Collected	June 22, 2023			June 22, 2023			June 22, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,4,6-Trinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,4-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
3-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
4-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitroglycerin	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.25	0.25	UJ	0.25	0.25	UJ	0.25	0.25	UJ
Metals (mg/kg)									
Aluminum	23,000	4		23,000	4		26,000	4	
Antimony	0.078	0.15	J	0.15	0.15	U	0.13	0.15	J
Arsenic	1.2	0.3		1	0.3		1.1	0.3	
Barium	310	0.2		300	0.2		330	0.2	
Beryllium	0.74	0.3	J	0.83	0.3	J	0.89	0.3	J
Cadmium	0.34	0.08		0.23	0.08		0.15	0.08	
Calcium (Ca)	17,000	15		14,000	15		23,000	15	
Chromium[2]	16	0.2		15	0.2		16	0.2	
Cobalt	6	0.08		6.1	0.08		5.9	0.08	
Copper	52	0.2	J	36	0.2		24	0.2	J
Iron (Fe)	17,000	8		17,000	8		19,000	8	
Lead	17	0.05		14	0.05		14	0.05	
Magnesium (Mg)	8,000	5		8,000	5		7,800	5	
Manganese (Mn)	350	0.08		340	0.08		290	0.08	
Mercury	0.026	0.041	J	0.025	0.041	J	0.022	0.042	J
Nickel	13	0.2		14	0.2		14	0.2	
Potassium (K)	1,700	8		1,500	8		2,100	8	
Selenium	1.5	0.1		1.3	0.1		1.5	0.1	
Silver	0.092	0.05	J	0.078	0.05	J	0.04	0.05	J
Sodium (Na)	69	8		57	8		67	8	
Thallium	0.098	0.05	J	0.073	0.05	J	0.1	0.05	
Vanadium	20	0.1		21	0.1		23	0.1	
Zinc	37	1.5		32	1.5		28	1.5	

Notes:

< = less than LOD

LOD = Level of Detection

mg/kg = milligrams per kilogram

Qual = qualifier

J = estimated

U = not detected

UJ = estimated not detected

TABLE B-AJ26
ANALYTICAL RESULTS FOR GRID AJ26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AJ26			AJ26			AJ26		
Sample Name	P3IF-SS-IS-SO-AJ026			P3IF-SS-IS-SO-AJ526			P3IF-SS-IS-SO-AJ626		
Date Collected	June 23, 2023			June 23, 2023			June 23, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
1,3-Dinitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,4,6-Trinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,4-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,6-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
3-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
4-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Nitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Nitroglycerin	0.15	0.15	U	0.15	0.15	U	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	0.25	0.25	U	0.25	0.25	U	0.25	0.25	U
Metals (mg/kg)									
Aluminum	22,000	4		19,000	4		17,000	4	
Antimony	0.15	0.15	U	0.15	0.15	U	0.15	0.15	UJ
Arsenic	1.2	0.3		1.3	0.3		1.2	0.3	J
Barium	360	0.2		360	0.2		350	0.2	
Beryllium	1.1	0.3		1.1	0.3		0.95	0.3	J
Cadmium	0.35	0.08	J	0.71	0.08	J	0.39	0.08	
Calcium (Ca)	12,000	15		16,000	15		15,000	15	
Chromium[2]	14	0.2		13	0.2		11	0.2	
Cobalt	5.7	0.08		5.4	0.08		5	0.08	
Copper	47	0.2		65	0.2		49	0.2	
Iron (Fe)	11,000	8		9,700	8		8,700	8	
Lead	12	0.05		13	0.05		11	0.05	
Magnesium (Mg)	7,800	5		7,100	5		6,400	5	
Manganese (Mn)	350	0.08		360	0.08		320	0.08	
Mercury	0.016	0.041	J	0.023	0.042	J	0.022	0.041	J
Nickel	14	0.2		14	0.2		13	0.2	
Potassium (K)	2,100	8		1,600	8		1,500	8	
Selenium	1.3	0.1		1.5	0.1		1.3	0.1	
Silver	0.059	0.05	J	0.084	0.05	J	0.069	0.05	J
Sodium (Na)	60	8		59	8		54	8	
Thallium	0.17	0.05		0.089	0.05	J	0.066	0.05	J
Vanadium	11	0.1		8.5	0.1		7.2	0.1	
Zinc	31	1.5		32	1.5		29	1.5	

Notes:

< = less than LOD

LOD = Level of Detection

mg/kg = milligrams per kilogram

Qual = qualifier

J = estimated

U = not detected

UJ = estimated not detected

TABLE B-AJ27
ANALYTICAL RESULTS FOR GRID AJ27
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AJ27			AJ27			AJ27		
Sample Name	P3IF-SS-IS-SO-AJ027			P3IF-SS-IS-SO-AJ527			P3IF-SS-IS-SO-AJ627		
Date Collected	June 23, 2023			June 23, 2023			June 23, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,4,6-Trinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,4-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
3-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
4-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitroglycerin	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.25	0.25	UJ	0.25	0.25	UJ	0.25	0.25	UJ
Metals (mg/kg)									
Aluminum	23,000	4		21,000	4		21,000	4	
Antimony	0.087	0.15	J	0.15	0.15	U	0.15	0.15	U
Arsenic	1.4	0.3		1.8	0.3		1.8	0.3	
Barium	260	0.2		210	0.2		220	0.2	
Beryllium	0.66	0.3	J	0.51	0.3	J	0.55	0.3	J
Cadmium	0.21	0.08		0.22	0.08		0.18	0.08	
Calcium (Ca)	6,300	15		3,900	15		4,000	15	
Chromium[2]	15	0.2		15	0.2		14	0.2	
Cobalt	5.8	0.08		5.7	0.08		5.6	0.08	
Copper	30	0.2		37	0.2		30	0.2	
Iron (Fe)	14,000	8		13,000	8		13,000	8	
Lead	12	0.05		11	0.05		11	0.05	
Magnesium (Mg)	8,200	5		7,800	5		7,500	5	
Manganese (Mn)	320	0.08		300	0.08		290	0.08	
Mercury	0.025	0.041	J	0.02	0.04	J	0.025	0.041	J
Nickel	12	0.2		11	0.2		10	0.2	
Potassium (K)	2,000	8		1,600	8		1,700	8	
Selenium	1.4	0.1		1.3	0.1		1.3	0.1	
Silver	0.058	0.05	J	0.064	0.05	J	0.053	0.05	J
Sodium (Na)	56	8		55	8		54	8	
Thallium	0.1	0.05		0.08	0.05	J	0.085	0.05	J
Vanadium	23	0.1		29	0.1		25	0.1	
Zinc	29	1.5		31	1.5		29	1.5	

Notes:

< = less than LOD

LOD = Level of Detection

mg/kg = milligrams per kilogram

Qual = qualifier

J = estimated

U = not detected

UJ = estimated not detected

TABLE B-AJ31
ANALYTICAL RESULTS FOR GRID AJ31
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AJ31			AJ31			AJ31		
Sample Name	P3IF-SS-IS-SO-AJ031			P3IF-SS-IS-SO-AJ531			P3IF-SS-IS-SO-AJ631		
Date Collected	June 22, 2023			June 22, 2023			June 22, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,4,6-Trinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,4-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
3-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
4-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitroglycerin	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.25	0.25	UJ	0.25	0.25	UJ	0.25	0.25	UJ
Metals (mg/kg)									
Aluminum	25,000	4		27,000	4		29,000	4	
Antimony	0.15	0.15	U	0.11	0.15	J	0.085	0.15	J
Arsenic	1.1	0.3		1.2	0.3		1.3	0.3	
Barium	340	0.2		300	0.2		320	0.2	
Beryllium	0.74	0.3	J	0.72	0.3	J	0.78	0.3	J
Cadmium	0.21	0.08		0.27	0.08		0.26	0.08	
Calcium (Ca)	7,600	15		5,300	15		6,900	15	
Chromium[2]	14	0.2		16	0.2		17	0.2	
Cobalt	6.5	0.08		6.5	0.08		6.9	0.08	
Copper	30	0.2		47	0.2		41	0.2	
Iron (Fe)	16,000	8		16,000	8		17,000	8	
Lead	12	0.05		13	0.05		13	0.05	
Magnesium (Mg)	8,700	5		9,600	5		9,800	5	
Manganese (Mn)	480	0.08		490	0.08		480	0.08	
Mercury	0.03	0.041	J	0.035	0.04	J	0.029	0.041	J
Nickel	13	0.2		13	0.2		14	0.2	
Potassium (K)	1,700	8		2,000	8		2,300	8	
Selenium	1.3	0.1		1.6	0.1		1.4	0.1	
Silver	0.066	0.05	J	0.082	0.05	J	0.1	0.05	
Sodium (Na)	58	8		62	8		61	8	
Thallium	0.079	0.05	J	0.083	0.05	J	0.091	0.05	J
Vanadium	23	0.1		28	0.1		27	0.1	
Zinc	31	1.5		34	1.5		35	1.5	

Notes:
< = less than LOD
LOD = Level of Detection
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated not detected

TABLE B-AJ33
ANALYTICAL RESULTS FOR GRID AJ33
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AJ33			AJ33			AJ33		
Sample Name	P3IF-SS-IS-SO-AJ033			P3IF-SS-IS-SO-AJ533			P3IF-SS-IS-SO-AJ633		
Date Collected	June 22, 2023			June 22, 2023			June 22, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,4,6-Trinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,4-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
3-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
4-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitroglycerin	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.25	0.25	UJ	0.25	0.25	UJ	0.25	0.25	UJ
Metals (mg/kg)									
Aluminum	21,000	4		19,000	4		20,000	4	
Antimony	0.15	0.15	J	0.076	0.15	J	0.096	0.15	J
Arsenic	1.4	0.3		1.5	0.3		1.5	0.3	
Barium	220	0.2		220	0.2		190	0.2	
Beryllium	0.55	0.3	J	0.53	0.3	J	0.49	0.3	J
Cadmium	0.28	0.08		0.33	0.08		0.33	0.08	
Calcium (Ca)	4,400	15		4,700	15		3,800	15	
Chromium[2]	13	0.2		13	0.2		13	0.2	
Cobalt	5.3	0.08		5	0.08		4.9	0.08	
Copper	43	0.2		49	0.2		54	0.2	
Iron (Fe)	13,000	8		12,000	8		11,000	8	
Lead	13	0.05		13	0.05		14	0.05	
Magnesium (Mg)	8,400	5		7,400	5		8,100	5	
Manganese (Mn)	380	0.08		400	0.08		330	0.08	
Mercury	0.059	0.041	J	0.056	0.041	J	0.034	0.04	J
Nickel	10	0.2		9.6	0.2		9.4	0.2	
Potassium (K)	1,300	8		1,300	8		1,200	8	
Selenium	1.2	0.1		1.2	0.1		1	0.1	
Silver	0.095	0.05	J	0.097	0.05	J	0.096	0.05	J
Sodium (Na)	59	8		54	8		60	8	
Thallium	0.17	0.05		0.09	0.05	J	0.066	0.05	J
Vanadium	20	0.1		21	0.1		21	0.1	
Zinc	32	1.5		33	1.5		36	1.5	

Notes:
< = less than LOD
LOD = Level of Detection
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated not detected

TABLE B-AK28
ANALYTICAL RESULTS FOR GRID AK28
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AK28			AK28			AK28		
Sample Name	P3IF-SS-IS-SO-AK028			P3IF-SS-IS-SO-AK528			P3IF-SS-IS-SO-AK628		
Date Collected	June 23, 2023			June 23, 2023			June 23, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,4,6-Trinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,4-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
3-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
4-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitroglycerin	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.25	0.25	UJ	0.25	0.25	UJ	0.25	0.25	UJ
Metals (mg/kg)									
Aluminum	19,000	4		20,000	4		20,000	4	
Antimony	0.078	0.15	J	0.08	0.15	J	0.077	0.15	J
Arsenic	1.4	0.3		1.4	0.3		1.4	0.3	
Barium	210	0.2		210	0.2		210	0.2	
Beryllium	0.51	0.3	J	0.52	0.3	J	0.52	0.3	J
Cadmium	0.33	0.08		0.33	0.08		0.33	0.08	
Calcium (Ca)	3,200	15		2,900	15		3,000	15	
Chromium[2]	14	0.2		15	0.2		15	0.2	
Cobalt	5.5	0.08		5.6	0.08		5.5	0.08	
Copper	62	0.2		55	0.2		62	0.2	
Iron (Fe)	12,000	8		12,000	8		12,000	8	
Lead	12	0.05		12	0.05		12	0.05	
Magnesium (Mg)	7,100	5		7,400	5		7,300	5	
Manganese (Mn)	320	0.08		310	0.08		310	0.08	
Mercury	0.022	0.04	J	0.022	0.04	J	0.022	0.04	J
Nickel	10	0.2		11	0.2		10	0.2	
Potassium (K)	1,500	8		1,500	8		1,500	8	
Selenium	1.3	0.1		1.1	0.1		1.1	0.1	
Silver	0.075	0.05	J	0.063	0.05	J	0.083	0.05	J
Sodium (Na)	56	8		58	8		56	8	
Thallium	0.068	0.05	J	0.066	0.05	J	0.068	0.05	J
Vanadium	24	0.1		26	0.1		25	0.1	
Zinc	30	1.5		30	1.5		30	1.5	

Notes:
< = less than LOD
LOD = Level of Detection
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated not detected

TABLE B-AK36
ANALYTICAL RESULTS FOR GRID AK36
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AK36			AK36			AK36		
Sample Name	P3IF-SS-IS-SO-AK036			P3IF-SS-IS-SO-AK536			P3IF-SS-IS-SO-AK636		
Date Collected	June 22, 2023			June 22, 2023			June 22, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,4,6-Trinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,4-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
3-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
4-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitroglycerin	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.25	0.25	UJ	0.25	0.25	UJ	0.25	0.25	UJ
Metals (mg/kg)									
Aluminum	24,000	4		25,000	4		23,000	4	
Antimony	0.13	0.15	J	0.097	0.15	J	0.097	0.15	J
Arsenic	1.3	0.3		1.3	0.3		1.3	0.3	
Barium	260	0.2		260	0.2		270	0.2	
Beryllium	0.71	0.3	J	0.67	0.3	J	0.74	0.3	J
Cadmium	0.33	0.08		0.32	0.08		0.33	0.08	
Calcium (Ca)	6,800	15		5,500	15		5,800	15	
Chromium[2]	14	0.2		15	0.2		14	0.2	
Cobalt	5.7	0.08		5.8	0.08		5.8	0.08	
Copper	52	0.2		48	0.2		50	0.2	
Iron (Fe)	14,000	8		14,000	8		14,000	8	
Lead	14	0.05		14	0.05		14	0.05	
Magnesium (Mg)	9,100	5		9,300	5		8,700	5	
Manganese (Mn)	420	0.08		420	0.08		470	0.08	
Mercury	0.031	0.041	J	0.03	0.04	J	0.033	0.04	J
Nickel	11	0.2		12	0.2		12	0.2	
Potassium (K)	1,500	8		1,500	8		1,300	8	
Selenium	1.3	0.1		1.2	0.1		1.6	0.1	
Silver	0.099	0.05	J	0.087	0.05	J	0.09	0.05	J
Sodium (Na)	60	8		58	8		57	8	
Thallium	0.17	0.05		0.088	0.05	J	0.074	0.05	J
Vanadium	21	0.1		23	0.1		22	0.1	
Zinc	34	1.5		33	1.5		33	1.5	

Notes:
< = less than LOD
LOD = Level of Detection
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated not detected

TABLE B-AL27
ANALYTICAL RESULTS FOR GRID AL27
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AL27			AL27			AL27		
Sample Name	P3IF-SS-IS-SO-AL027			P3IF-SS-IS-SO-AL527			P3IF-SS-IS-SO-AL627		
Date Collected	June 22, 2023			June 22, 2023			June 22, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,4,6-Trinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,4-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
3-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
4-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitroglycerin	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.25	0.25	UJ	0.25	0.25	UJ	0.25	0.25	UJ
Metals (mg/kg)									
Aluminum	23,000	4		20,000	4		21,000	4	
Antimony	0.15	0.15	U	0.15	0.15	U	0.15	0.15	U
Arsenic	0.96	0.3		1	0.3		0.95	0.3	
Barium	360	0.2		360	0.2		360	0.2	
Beryllium	0.69	0.3	J	0.75	0.3	J	0.71	0.3	J
Cadmium	0.23	0.08		0.22	0.08		0.28	0.08	
Calcium (Ca)	11,000	15		13,000	15		13,000	15	
Chromium[2]	14	0.2		13	0.2		13	0.2	
Cobalt	6.1	0.08		5.5	0.08		5.8	0.08	
Copper	32	0.2		31	0.2		35	0.2	
Iron (Fe)	14,000	8		14,000	8		14,000	8	
Lead	13	0.05		13	0.05		14	0.05	
Magnesium (Mg)	9,200	5		8,200	5		8,400	5	
Manganese (Mn)	210	0.08		220	0.08		230	0.08	
Mercury	0.027	0.041	J	0.027	0.041	J	0.032	0.041	J
Nickel	13	0.2		12	0.2		13	0.2	
Potassium (K)	1,500	8		1,300	8		1,400	8	
Selenium	1.5	0.1		1.3	0.1		1.4	0.1	
Silver	0.068	0.05	J	0.056	0.05	J	0.069	0.05	J
Sodium (Na)	49	8		48	8		46	8	
Thallium	0.071	0.05	J	0.064	0.05	J	0.063	0.05	J
Vanadium	32	0.1		24	0.1		31	0.1	
Zinc	33	1.5		31	1.5		33	1.5	

Notes:
< = less than LOD
LOD = Level of Detection
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated not detected

TABLE B-AL34
ANALYTICAL RESULTS FOR GRID AL34
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AL34			AL34			AL34		
Sample Name	P3IF-SS-IS-SO-AL034			P3IF-SS-IS-SO-AL534			P3IF-SS-IS-SO-AL634		
Date Collected	June 22, 2023			June 22, 2023			June 22, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
1,3-Dinitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,4,6-Trinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,4-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,6-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
3-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	0.075	0.075	U	0.21	0.075		0.15	0.075	
4-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Nitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Nitroglycerin	0.15	0.15	U	0.15	0.15	U	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	0.25	0.25	U	0.25	0.25	U	0.25	0.25	U
Metals (mg/kg)									
Aluminum	17,000	4		15,000	4		17,000	4	
Antimony	0.14	0.15	J	0.093	0.15	J	0.1	0.15	J
Arsenic	2.1	0.3		2.1	0.3		2.4	0.3	
Barium	210	0.2		200	0.2		210	0.2	
Beryllium	0.55	0.3	J	0.55	0.3	J	0.63	0.3	J
Cadmium	0.23	0.08		0.21	0.08		0.19	0.08	
Calcium (Ca)	3,600	15		5,000	15		5,700	15	
Chromium[2]	13	0.2		13	0.2		13	0.2	
Cobalt	4.8	0.08		4.7	0.08		4.9	0.08	
Copper	36	0.2		32	0.2		27	0.2	
Iron (Fe)	13,000	8		12,000	8		13,000	8	
Lead	12	0.05		11	0.05		11	0.05	
Magnesium (Mg)	5,100	5		4,600	5		5,000	5	
Manganese (Mn)	280	0.08		270	0.08		270	0.08	
Mercury	0.026	0.041	J	0.037	0.04	J	0.095	0.04	J
Nickel	9.6	0.2		9	0.2		9.5	0.2	
Potassium (K)	2,000	8		2,000	8		2,200	8	
Selenium	1.2	0.1		0.96	0.1		1.2	0.1	
Silver	0.088	0.05	J	0.076	0.05	J	0.067	0.05	J
Sodium (Na)	50	8		46	8		50	8	
Thallium	0.1	0.05		0.095	0.05	J	0.11	0.05	
Vanadium	24	0.1		23	0.1		26	0.1	
Zinc	30	1.5		30	1.5		29	1.5	

Notes:
< = less than LOD
LOD = Level of Detection
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated not detected

TABLE B-AL39
ANALYTICAL RESULTS FOR GRID AL39
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AL39			AL39			AL39		
Sample Name	P3IF-SS-IS-SO-AL039			P3IF-SS-IS-SO-AL539			P3IF-SS-IS-SO-AL639		
Date Collected	June 19, 2023			June 19, 2023			June 19, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,4,6-Trinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,4-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
3-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
4-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitroglycerin	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.25	0.25	UJ	0.25	0.25	UJ	0.25	0.25	UJ
Metals (mg/kg)									
Aluminum	15,000	4		15,000	4		14,000	4	
Antimony	0.15	0.15	U	0.15	0.15	U	0.15	0.15	U
Arsenic	8.6	0.3		6.6	0.3		6.8	0.3	
Barium	250	0.2		240	0.2		240	0.2	
Beryllium	0.64	0.3	J	0.69	0.3	J	0.69	0.3	J
Cadmium	0.25	0.08		0.17	0.08		0.2	0.08	
Calcium (Ca)	14,000	15		15,000	15		17,000	15	
Chromium[2]	12	0.2		11	0.2		11	0.2	
Cobalt	5.5	0.08		5.5	0.08		5.6	0.08	
Copper	32	0.2		17	0.2		20	0.2	
Iron (Fe)	11,000	8		11,000	8		11,000	8	
Lead	11	0.05		8.8	0.05		9.8	0.05	
Magnesium (Mg)	4,600	5		4,700	5		4,800	5	
Manganese (Mn)	500	0.08		500	0.08		550	0.08	
Mercury	0.025	0.041	J	0.024	0.047	J	0.032	0.041	J
Nickel	9.2	0.2		9	0.2		9.1	0.2	
Potassium (K)	1,700	8		1,800	8		1,800	8	
Selenium	1.1	0.1		1.1	0.1		1	0.1	
Silver	0.059	0.05	J	0.038	0.05	J	0.048	0.05	J
Sodium (Na)	53	8		53	8		50	8	
Thallium	0.19	0.05		0.14	0.05		0.15	0.05	
Vanadium	18	0.1		18	0.1		16	0.1	
Zinc	27	1.5		24	1.5		27	1.5	

Notes:
< = less than LOD
LOD = Level of Detection
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated not detected

TABLE B-AM29
ANALYTICAL RESULTS FOR GRID AM29
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AM29			AM29			AM29		
Sample Name	P3IF-SS-IS-SO-AM029			P3IF-SS-IS-SO-AM529			P3IF-SS-IS-SO-AM629		
Date Collected	June 8, 2023			June 8, 2023			June 8, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
1,3-Dinitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,4,6-Trinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,4-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,6-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
3-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
4-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Nitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Nitroglycerin	0.15	0.15	U	0.15	0.15	U	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	0.25	0.25	U	0.25	0.25	U	0.25	0.25	U
Metals (mg/kg)									
Aluminum	22,000	4		21,000	4		24,000	4	
Antimony	0.088	0.15	J	0.095	0.15	J	0.15	0.15	U
Arsenic	1.2	0.3		1.1	0.3		1.2	0.3	
Barium	280	0.2		270	0.2		280	0.2	
Beryllium	0.96	0.3	J	0.95	0.3	J	1.1	0.3	
Cadmium	0.15	0.08		0.14	0.08		0.13	0.08	
Calcium (Ca)	6,200	15		6,300	15		6,300	15	
Chromium[2]	13	0.2		12	0.2		13	0.2	
Cobalt	5.6	0.08		5.4	0.08		5.8	0.08	
Copper	18	0.2		17	0.2		12	0.2	
Iron (Fe)	13,000	8		12,000	8		13,000	8	
Lead	11	0.05		10	0.05		10	0.05	
Magnesium (Mg)	7,800	5		7,400	5		8,200	5	
Manganese (Mn)	350	0.08		350	0.08		360	0.08	
Mercury	0.016	0.044	J	0.015	0.044	J	0.015	0.044	J
Nickel	14	0.2		14	0.2		14	0.2	
Potassium (K)	2,000	8		1,900	8		2,100	8	
Selenium	1.7	0.1		1.7	0.1		1.9	0.1	
Silver	0.035	0.05	J	0.029	0.05	J	0.021	0.05	J
Sodium (Na)	20	8		17	8		20	8	
Thallium	0.078	0.05	J	0.076	0.05	J	0.083	0.05	J
Vanadium	18	0.1		16	0.1		18	0.1	
Zinc	36	1.5		35	1.5		37	1.5	

Notes:
< = less than LOD
LOD = Level of Detection
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated not detected

TABLE B-AM33
ANALYTICAL RESULTS FOR GRID AM33
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AM33			AM33			AM33		
Sample Name	P3IF-SS-IS-SO-AM033			P3IF-SS-IS-SO-AM533			P3IF-SS-IS-SO-AM633		
Date Collected	June 22, 2023			June 22, 2023			June 22, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,4,6-Trinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,4-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
3-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
4-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitroglycerin	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.25	0.25	UJ	0.25	0.25	UJ	0.25	0.25	UJ
Metals (mg/kg)									
Aluminum	23,000	4		24,000	4		23,000	4	
Antimony	0.1	0.15	J	0.097	0.15	J	0.13	0.15	J
Arsenic	2.3	0.3		2.5	0.3		2.4	0.3	
Barium	430	0.2		460	0.2		390	0.2	
Beryllium	0.65	0.3	J	0.67	0.3	J	0.64	0.3	J
Cadmium	0.36	0.08		0.33	0.08		0.41	0.08	
Calcium (Ca)	14,000	15		17,000	15		13,000	15	
Chromium[2]	16	0.2		17	0.2		17	0.2	
Cobalt	6.3	0.08		6.3	0.08		6.3	0.08	
Copper	65	0.2		60	0.2		66	0.2	
Iron (Fe)	14,000	8		14,000	8		14,000	8	
Lead	13	0.05		14	0.05		14	0.05	
Magnesium (Mg)	7,000	5		7,300	5		7,100	5	
Manganese (Mn)	300	0.08		300	0.08		310	0.08	
Mercury	0.029	0.04	J	0.034	0.042	J	0.028	0.041	J
Nickel	13	0.2		13	0.2		13	0.2	
Potassium (K)	2,100	8		2,100	8		2,000	8	
Selenium	0.99	0.1		1.4	0.1		1.2	0.1	
Silver	0.11	0.05		0.12	0.05		0.14	0.05	
Sodium (Na)	54	8		57	8		55	8	
Thallium	0.1	0.05		0.11	0.05		0.1	0.05	
Vanadium	27	0.1		27	0.1		27	0.1	
Zinc	36	1.5		37	1.5		38	1.5	

Notes:
< = less than LOD
LOD = Level of Detection
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated not detected

TABLE B-AN27
ANALYTICAL RESULTS FOR GRID AN27
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AN27			AN27			AN27		
Sample Name	P3IF-SS-IS-SO-AN027			P3IF-SS-IS-SO-AN527			P3IF-SS-IS-SO-AN627		
Date Collected	June 7, 2023			June 7, 2023			June 7, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
1,3-Dinitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,4,6-Trinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,4-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,6-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
3-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
4-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Nitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Nitroglycerin	0.15	0.15	U	0.15	0.15	U	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	0.25	0.25	U	0.25	0.25	U	0.25	0.25	U
Metals (mg/kg)									
Aluminum	29,000	4		29,000	4		30,000	4	
Antimony	0.16	0.15	J	0.15	0.15	U	0.11	0.15	J
Arsenic	1.1	0.3		1.2	0.3		1.1	0.3	
Barium	440	0.2		360	0.2		420	0.2	
Beryllium	1.3	0.3		1.3	0.3		1.4	0.3	
Cadmium	0.2	0.08		0.14	0.08		0.16	0.08	
Calcium (Ca)	19,000	15		19,000	15		20,000	15	
Chromium[2]	16	0.2		16	0.2		16	0.2	
Cobalt	6.2	0.08		6.1	0.08		6.2	0.08	
Copper	23	0.2		15	0.2		19	0.2	
Iron (Fe)	16,000	8		17,000	8		16,000	8	
Lead	13	0.05		13	0.05		13	0.05	
Magnesium (Mg)	9,800	5		10,000	5		10,000	5	
Manganese (Mn)	340	0.08		270	0.08		270	0.08	
Mercury	0.032	0.043	J	0.025	0.044	J	0.04	0.044	J
Nickel	16	0.2		17	0.2		17	0.2	
Potassium (K)	2,400	8		2,400	8		2,500	8	
Selenium	1.6	0.1		1.8	0.1		1.5	0.1	
Silver	0.066	0.05	J	0.04	0.05	J	0.06	0.05	J
Sodium (Na)	36	8		34	8		44	8	
Thallium	0.11	0.05		0.092	0.05	J	0.1	0.05	
Vanadium	20	0.1		22	0.1		22	0.1	
Zinc	41	1.5		39	1.5		39	1.5	

Notes:
< = less than LOD
LOD = Level of Detection
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated not detected

TABLE B-AN28
ANALYTICAL RESULTS FOR GRID AN28
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AN28			AN28			AN28		
Sample Name	P3IF-SS-IS-SO-AN028			P3IF-SS-IS-SO-AN528			P3IF-SS-IS-SO-AN628		
Date Collected	June 8, 2023			June 8, 2023			June 8, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
1,3-Dinitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,4,6-Trinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,4-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,6-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
3-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
4-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Nitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Nitroglycerin	0.15	0.15	U	0.15	0.15	U	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	0.25	0.25	U	0.25	0.25	U	0.25	0.25	U
Metals (mg/kg)									
Aluminum	21,000	4		20,000	4		17,000	4	
Antimony	0.15	0.15	U	0.15	0.15	U	0.15	0.15	U
Arsenic	0.93	0.3		1	0.3		0.91	0.3	
Barium	370	0.2		410	0.2		370	0.2	
Beryllium	0.94	0.3	J	1.1	0.3		0.92	0.3	J
Cadmium	0.21	0.08		0.21	0.08		0.19	0.08	
Calcium (Ca)	24,000	15		29,000	15		32,000	15	
Chromium[2]	11	0.2		11	0.2		9.3	0.2	
Cobalt	5.2	0.08		5.7	0.08		4.8	0.08	
Copper	24	0.2		25	0.2		22	0.2	
Iron (Fe)	11,000	8		11,000	8		9,700	8	
Lead	11	0.05		12	0.05		10	0.05	
Magnesium (Mg)	7,500	5		7,300	5		6,400	5	
Manganese (Mn)	430	0.08		450	0.08		510	0.08	
Mercury	0.029	0.044	J	0.031	0.046	J	0.026	0.044	J
Nickel	13	0.2		14	0.2		12	0.2	
Potassium (K)	1,600	8		1,400	8		1,300	8	
Selenium	1.5	0.1		1.4	0.1		1.4	0.1	
Silver	0.056	0.05	J	0.065	0.05	J	0.052	0.05	J
Sodium (Na)	16	8		13	8		11	8	
Thallium	0.07	0.05	J	0.073	0.05	J	0.062	0.05	J
Vanadium	12	0.1		13	0.1		9.9	0.1	
Zinc	36	1.5		38	1.5		32	1.5	

Notes:
< = less than LOD
LOD = Level of Detection
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated not detected

TABLE B-AN38
ANALYTICAL RESULTS FOR GRID AN38
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AN38			AN38			AN38		
Sample Name	P3IF-SS-IS-SO-AN038			P3IF-SS-IS-SO-AN538			P3IF-SS-IS-SO-AN638		
Date Collected	June 23, 2023			June 23, 2023			June 23, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,4,6-Trinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,4-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
3-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
4-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitroglycerin	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.25	0.25	UJ	0.25	0.25	UJ	0.25	0.25	UJ
Metals (mg/kg)									
Aluminum	21,000	4		20,000	4		21,000	4	
Antimony	0.15	0.15	U	0.15	0.15	U	0.15	0.15	UJ
Arsenic	1.8	0.3		1.6	0.3		1.9	0.3	J
Barium	280	0.2		260	0.2		270	0.2	
Beryllium	0.64	0.3	J	0.63	0.3	J	0.63	0.3	J
Cadmium	0.15	0.08		0.13	0.08		0.14	0.08	J
Calcium (Ca)	4,400	15		4,200	15		4,400	15	J
Chromium[2]	15	0.2		15	0.2		15	0.2	J
Cobalt	5.7	0.08		5.6	0.08		5.8	0.08	J
Copper	27	0.2		17	0.2		17	0.2	J
Iron (Fe)	14,000	8		13,000	8		14,000	8	
Lead	11	0.05		10	0.05		10	0.05	J
Magnesium (Mg)	6,100	5		6,000	5		6,200	5	J
Manganese (Mn)	400	0.08		380	0.08		390	0.08	
Mercury	0.023	0.041	J	0.018	0.041	J	0.017	0.04	J
Nickel	11	0.2		11	0.2		11	0.2	J
Potassium (K)	2,400	8		2,300	8		2,400	8	
Selenium	1.1	0.1		1.1	0.1		1.2	0.1	J
Silver	0.053	0.05	J	0.051	0.05	J	0.041	0.05	J
Sodium (Na)	51	8		51	8		52	8	J
Thallium	0.12	0.05		0.11	0.05		0.12	0.05	J
Vanadium	27	0.1		26	0.1		29	0.1	J
Zinc	28	1.5		26	1.5		28	1.5	J

Notes:
< = less than LOD
LOD = Level of Detection
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated not detected

TABLE B-AO26
ANALYTICAL RESULTS FOR GRID AO26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AO26			AO26			AO26		
Sample Name	P3IF-SS-IS-SO-AO026			P3IF-SS-IS-SO-AO526			P3IF-SS-IS-SO-AO626		
Date Collected	June 7, 2023			June 7, 2023			June 7, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
1,3-Dinitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,4,6-Trinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,4-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,6-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
3-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
4-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Nitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Nitroglycerin	0.15	0.15	U	0.15	0.15	U	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	0.25	0.25	U	0.25	0.25	U	0.25	0.25	U
Metals (mg/kg)									
Aluminum	20,000	4		19,000	4		19,000	4	
Antimony	0.091	0.15	J	0.087	0.15	J	0.11	0.15	J
Arsenic	1.3	0.3		1.1	0.3		1	0.3	
Barium	150	0.2		130	0.2		130	0.2	
Beryllium	0.53	0.3	J	0.47	0.3	J	0.48	0.3	J
Cadmium	0.25	0.08	J	0.25	0.08		3.6	0.08	J
Calcium (Ca)	2,600	15		2,400	15		2,300	15	
Chromium[2]	14	0.2		13	0.2		12	0.2	
Cobalt	5	0.08		4.6	0.08		4.6	0.08	
Copper	33	0.2		34	0.2		25	0.2	
Iron (Fe)	11,000	8		10,000	8		10,000	8	
Lead	11	0.05		11	0.05		9.6	0.05	
Magnesium (Mg)	8,300	5		7,800	5		7,800	5	
Manganese (Mn)	300	0.08		280	0.08		270	0.08	
Mercury	0.026	0.043	J	0.024	0.043	J	0.025	0.043	J
Nickel	10	0.2		9.4	0.2		9	0.2	
Potassium (K)	980	8		870	8		830	8	
Selenium	1	0.1		1.1	0.1		0.95	0.1	
Silver	0.056	0.05	J	0.052	0.05	J	0.046	0.05	J
Sodium (Na)	55	8	J	36	8		33	8	J
Thallium	0.054	0.05	J	0.047	0.05	J	0.046	0.05	J
Vanadium	19	0.1		18	0.1		17	0.1	
Zinc	40	1.5		38	1.5		36	1.5	

Notes:
< = less than LOD
LOD = Level of Detection
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated not detected

TABLE B-AP28
ANALYTICAL RESULTS FOR GRID AP28
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP28			AP28			AP28		
Sample Name	P3IF-SS-IS-SO-AP028			P3IF-SS-IS-SO-AP528			P3IF-SS-IS-SO-AP628		
Date Collected	June 7, 2023			June 7, 2023			June 7, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
1,3-Dinitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,4,6-Trinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,4-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,6-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
3-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
4-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Nitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Nitroglycerin	0.15	0.15	U	0.15	0.15	U	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	0.25	0.25	U	0.25	0.25	U	0.25	0.25	U
Metals (mg/kg)									
Aluminum	28,000	4		29,000	4		26,000	4	
Antimony	0.082	0.15	J	0.15	0.15	U	0.095	0.15	J
Arsenic	1.6	0.3		1.5	0.3		1.7	0.3	
Barium	530	0.2		530	0.2		480	0.2	
Beryllium	1.1	0.3		1.2	0.3		0.99	0.3	J
Cadmium	0.3	0.08		0.23	0.08		0.33	0.08	
Calcium (Ca)	12,000	15		13,000	15		13,000	15	
Chromium[2]	17	0.2		17	0.2		16	0.2	
Cobalt	6.1	0.08		6.3	0.08		6	0.08	
Copper	29	0.2		23	0.2		32	0.2	
Iron (Fe)	15,000	8		16,000	8		15,000	8	
Lead	13	0.05		13	0.05		13	0.05	
Magnesium (Mg)	9,800	5		10,000	5		9,500	5	
Manganese (Mn)	740	0.08		700	0.08		770	0.08	
Mercury	0.033	0.045	J	0.028	0.043	J	0.038	0.044	J
Nickel	15	0.2		15	0.2		14	0.2	
Potassium (K)	1,900	8		1,900	8		1,700	8	
Selenium	1.5	0.1		1.6	0.1		1.5	0.1	
Silver	0.076	0.05	J	0.056	0.05	J	0.091	0.05	J
Sodium (Na)	23	8		26	8		24	8	
Thallium	0.085	0.05	J	0.093	0.05	J	0.19	0.05	
Vanadium	22	0.1		22	0.1		21	0.1	
Zinc	45	1.5		43	1.5		44	1.5	

Notes:
< = less than LOD
LOD = Level of Detection
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated not detected

TABLE B-AQ15
ANALYTICAL RESULTS FOR GRID AQ15
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AQ15			AQ15			AQ15		
Sample Name	P3IF-SS-IS-SO-AQ015			P3IF-SS-IS-SO-AQ515			P3IF-SS-IS-SO-AQ615		
Date Collected	June 8, 2023			June 8, 2023			June 8, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
1,3-Dinitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,4,6-Trinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,4-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,6-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
3-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
4-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Nitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Nitroglycerin	0.15	0.15	U	0.15	0.15	U	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	0.25	0.25	U	0.25	0.25	U	0.25	0.25	U
Metals (mg/kg)									
Aluminum	18,000	4		19,000	4		13,000	4	
Antimony	0.19	0.15	J	0.098	0.15	J	0.15	0.15	J
Arsenic	1.2	0.3		1.1	0.3		1.1	0.3	
Barium	160	0.2		160	0.2		160	0.2	
Beryllium	0.72	0.3	J	0.84	0.3	J	0.67	0.3	J
Cadmium	0.3	0.08	J	0.3	0.08		0.97	0.08	J
Calcium (Ca)	3,100	15		3,200	15		3,000	15	
Chromium[2]	12	0.2		13	0.2		9.5	0.2	
Cobalt	4.5	0.08		4.7	0.08		3.9	0.08	
Copper	40	0.2		38	0.2		38	0.2	
Iron (Fe)	11,000	8		11,000	8		9,700	8	
Lead	12	0.05		12	0.05		12	0.05	
Magnesium (Mg)	6,500	5		6,900	5		4,700	5	
Manganese (Mn)	300	0.08		290	0.08		280	0.08	
Mercury	0.037	0.045	J	0.035	0.044	J	1.2	0.044	J
Nickel	11	0.2		11	0.2		9.3	0.2	
Potassium (K)	1,600	8		1,700	8		1,300	8	
Selenium	1.4	0.1		1.2	0.1		1.2	0.1	
Silver	0.064	0.05	J	0.061	0.05	J	0.06	0.05	J
Sodium (Na)	19	8		20	8		13	8	
Thallium	0.072	0.05	J	0.062	0.05	J	0.059	0.05	J
Vanadium	17	0.1		17	0.1		14	0.1	
Zinc	42	1.5		43	1.5		38	1.5	

Notes:
< = less than LOD
LOD = Level of Detection
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated not detected

TABLE B-AQ22
ANALYTICAL RESULTS FOR GRID AQ22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AQ22			AQ22			AQ22		
Sample Name	P3IF-SS-IS-SO-AQ022			P3IF-SS-IS-SO-AQ522			P3IF-SS-IS-SO-AQ622		
Date Collected	June 9, 2023			June 9, 2023			June 9, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
1,3-Dinitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,4,6-Trinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,4-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,6-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
3-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
4-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Nitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Nitroglycerin	0.15	0.15	U	0.15	0.15	U	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	0.25	0.25	U	0.25	0.25	U	0.25	0.25	U
Metals (mg/kg)									
Aluminum	9,600	4		11,000	4		12,000	4	
Antimony	0.15	0.15	U	0.15	0.15	U	0.15	0.15	U
Arsenic	0.85	0.3		0.9	0.3		0.86	0.3	
Barium	150	0.2		160	0.2		160	0.2	
Beryllium	0.33	0.3	J	0.39	0.3	J	0.4	0.3	J
Cadmium	0.22	0.08		0.21	0.08		0.2	0.08	
Calcium (Ca)	1,900	15		2,100	15		2,000	15	
Chromium[2]	7.8	0.2		8	0.2		8.9	0.2	
Cobalt	3.2	0.08		3.4	0.08		3.7	0.08	
Copper	28	0.2		30	0.2		29	0.2	
Iron (Fe)	7,300	8		7,200	8		7,400	8	
Lead	9.9	0.05		9.9	0.05		10	0.05	
Magnesium (Mg)	4,000	5		4,500	5		5,100	5	
Manganese (Mn)	230	0.08		250	0.08		240	0.08	
Mercury	0.039	0.041	J	0.026	0.043	J	0.026	0.042	J
Nickel	5.1	0.2		5.5	0.2		6	0.2	
Potassium (K)	590	8		670	8		690	8	
Selenium	0.6	0.1		0.86	0.1		0.73	0.1	
Silver	0.048	0.05	J	0.044	0.05	J	0.05	0.05	J
Sodium (Na)	47	8		51	8		50	8	
Thallium	0.024	0.05	J	0.028	0.05	J	0.053	0.05	J
Vanadium	16	0.1		16	0.1		16	0.1	
Zinc	21	1.5		22	1.5		24	1.5	

Notes:
< = less than LOD
LOD = Level of Detection
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated not detected

TABLE B-C27
ANALYTICAL RESULTS FOR GRID C27
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	C27			C27			C27		
Sample Name	P3IF-SS-IS-SO-C027			P3IF-SS-IS-SO-C527			P3IF-SS-IS-SO-C627		
Date Collected	June 13, 2023			June 13, 2023			June 13, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
1,3-Dinitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,4,6-Trinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,4-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,6-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
3-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
4-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Nitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Nitroglycerin	0.15	0.15	U	0.15	0.15	U	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	0.25	0.25	U	0.25	0.25	U	0.25	0.25	U
Metals (mg/kg)									
Aluminum	12,000	4		14,000	4		15,000	4	
Antimony	0.15	0.15	U	0.15	0.15	U	0.15	0.15	U
Arsenic	0.78	0.3		0.94	0.3		0.81	0.3	
Barium	280	0.2		290	0.2		320	0.2	
Beryllium	0.61	0.3	J	0.73	0.3	J	0.78	0.3	J
Cadmium	0.2	0.08		0.19	0.08		0.16	0.08	
Calcium (Ca)	27,000	15		29,000	15		37,000	15	
Chromium[2]	5.3	0.2		6.2	0.2		6.2	0.2	
Cobalt	2.5	0.08		3	0.08		3.1	0.08	
Copper	31	0.2		36	0.2		20	0.2	
Iron (Fe)	3,900	8		4,900	8		5,000	8	
Lead	6.1	0.05		7.6	0.05		7.3	0.05	
Magnesium (Mg)	3,800	5		4,500	5		4,600	5	
Manganese (Mn)	310	0.08		340	0.08		410	0.08	
Mercury	0.016	0.042	J	0.015	0.044	J	0.014	0.044	J
Nickel	5.8	0.2		6.6	0.2		6.8	0.2	
Potassium (K)	1200	8		1,400	8		1,600	8	
Selenium	1.1	0.1		1.3	0.1		1	0.1	
Silver	0.05	0.05	U	0.027	0.05	J	0.05	0.05	U
Sodium (Na)	60	8		64	8		62	8	
Thallium	0.05	0.05	J	0.067	0.05	J	0.063	0.05	J
Vanadium	4.3	0.1		5.3	0.1		4.9	0.1	
Zinc	14	1.5		16	1.5		15	1.5	

Notes:
< = less than LOD
LOD = Level of Detection
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated not detected

TABLE B-C35
ANALYTICAL RESULTS FOR GRID C35
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	C35			C35			C35		
Sample Name	P3IF-SS-IS-SO-C035			P3IF-SS-IS-SO-C535			P3IF-SS-IS-SO-C635		
Date Collected	June 12, 2023			June 12, 2023			June 12, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
1,3-Dinitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,4,6-Trinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,4-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,6-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
3-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
4-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Nitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Nitroglycerin	0.15	0.15	U	0.15	0.15	U	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	0.25	0.25	U	0.25	0.25	U	0.25	0.25	U
Metals (mg/kg)									
Aluminum	16,000	4		13,000	4		15,000	4	
Antimony	0.077	0.15	J	0.19	0.15	J	0.15	0.15	U
Arsenic	1.4	0.3		1.2	0.3		1.2	0.3	
Barium	260	0.2		240	0.2		240	0.2	
Beryllium	0.69	0.3	J	0.71	0.3	J	0.71	0.3	J
Cadmium	0.28	0.08		0.21	0.08		0.27	0.08	
Calcium (Ca)	16,000	15		19,000	15		17,000	15	
Chromium[2]	11	0.2		8.1	0.2		10	0.2	
Cobalt	4.4	0.08		3.8	0.08		4.3	0.08	
Copper	52	0.2		34	0.2		59	0.2	
Iron (Fe)	8,900	8		7,500	8		8,600	8	
Lead	12	0.05		9.3	0.05		11	0.05	
Magnesium (Mg)	5,300	5		4,500	5		5,200	5	
Manganese (Mn)	650	0.08		630	0.08		630	0.08	
Mercury	0.031	0.043	J	0.025	0.043	J	0.027	0.043	J
Nickel	8.8	0.2		7.7	0.2		8.9	0.2	
Potassium (K)	2,000	8		1,600	8		1,800	8	
Selenium	1.5	0.1		1.3	0.1		1	0.1	
Silver	0.05	0.05	U	0.05	0.05	U	0.05	0.05	U
Sodium (Na)	45	8		35	8		39	8	
Thallium	0.071	0.05	J	0.071	0.05	J	0.065	0.05	J
Vanadium	12	0.1		9.3	0.1		11	0.1	
Zinc	23	1.5		19	1.5		22	1.5	

Notes:
< = less than LOD
LOD = Level of Detection
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated not detected

TABLE B-C37
ANALYTICAL RESULTS FOR GRID C37
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	C37			C37			C37		
Sample Name	P3IF-SS-IS-SO-C037			P3IF-SS-IS-SO-C537			P3IF-SS-IS-SO-C637		
Date Collected	June 19, 2023			June 19, 2023			June 19, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
1,3-Dinitrobenzene	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
2,4,6-Trinitrotoluene	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
2,4-Dinitrotoluene	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
2,6-Dinitrotoluene	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
2-Amino-4,6-dinitrotoluene	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
2-Nitrotoluene	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
3-Nitrotoluene	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
4-Amino-2,6-Dinitrotoluene	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
4-Nitrotoluene	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
Nitrobenzene	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
Nitroglycerin	0.3	0.3	UJ	0.3	0.3	UJ	0.3	0.3	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
Pentaerythritol tetranitrate (PETN)	0.5	0.5	UJ	0.5	0.5	UJ	0.5	0.5	UJ
Metals (mg/kg)									
Aluminum	14,000	4		14,000	4		12,000	4	
Antimony	0.15	0.15	U	0.15	0.15	U	0.15	0.15	U
Arsenic	1.2	0.3		1.4	0.3		1.3	0.3	
Barium	420	0.2		530	0.2		530	0.2	
Beryllium	0.71	0.3	J	0.8	0.3	J	0.79	0.3	J
Cadmium	0.23	0.08		0.24	0.08		0.23	0.08	
Calcium (Ca)	60,000	150		60,000	150		49,000	150	
Chromium[2]	8.7	0.2		9	0.2		7.4	0.2	
Cobalt	3.4	0.08		3.7	0.08		3.7	0.08	
Copper	23	0.2		21	0.2		19	0.2	
Iron (Fe)	7,100	8		7,700	8		6,900	8	
Lead	9.2	0.05		12	0.05		8.4	0.05	
Magnesium (Mg)	4,200	5		4,500	5		4,100	5	
Manganese (Mn)	930	0.08		840	0.08		810	0.08	
Mercury	0.026	0.043	J	0.033	0.042	J	0.023	0.042	J
Nickel	7.8	0.2		8.1	0.2		7.6	0.2	
Potassium (K)	1,900	8		2,000	8		1,500	8	
Selenium	1.2	0.1		1.5	0.1		1.1	0.1	
Silver	0.028	0.05	J	0.052	0.05	J	0.032	0.05	J
Sodium (Na)	37	8		38	8		36	8	
Thallium	0.077	0.05	J	0.091	0.05	J	0.061	0.05	J
Vanadium	6.8	0.1		7	0.1		6.9	0.1	
Zinc	15	1.5		17	1.5		16	1.5	

Notes:
< = less than LOD
LOD = Level of Detection
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated not detected

TABLE B-E27
ANALYTICAL RESULTS FOR GRID E27
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	E27			E27			E27		
Sample Name	P3IF-SS-IS-SO-E027			P3IF-SS-IS-SO-E527			P3IF-SS-IS-SO-E627		
Date Collected	June 14, 2023			June 14, 2023			June 14, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,4,6-Trinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,4-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
3-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
4-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitroglycerin	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.25	0.25	UJ	0.25	0.25	UJ	0.25	0.25	UJ
Metals (mg/kg)									
Aluminum	14,000	4		15,000	4		19,000	4	
Antimony	0.15	0.15	U	0.15	0.15	U	0.15	0.15	U
Arsenic	1.2	0.3		1.3	0.3		1.6	0.3	
Barium	340	0.2		350	0.2		360	0.2	
Beryllium	0.58	0.3	J	0.67	0.3	J	0.71	0.3	J
Cadmium	0.28	0.08		0.24	0.08		0.25	0.08	
Calcium (Ca)	23,000	15		20,000	15		16,000	15	
Chromium[2]	8.4	0.2		9.6	0.2		12	0.2	
Cobalt	3.4	0.08		3.7	0.08		4.1	0.08	
Copper	56	0.2		59	0.2		55	0.2	
Iron (Fe)	7,200	8		8,200	8		9,600	8	
Lead	8.8	0.05		9.1	0.05		9.9	0.05	
Magnesium (Mg)	4,400	5		4,500	5		5,500	5	
Manganese (Mn)	340	0.08		360	0.08		360	0.08	
Mercury	0.025	0.042	J	0.025	0.043	J	0.03	0.043	J
Nickel	7.5	0.2		8.2	0.2		9	0.2	
Potassium (K)	1,300	8		1,400	8		2,000	8	
Selenium	1.1	0.1		1.2	0.1		1.4	0.1	
Silver	0.027	0.05	J	0.033	0.05	J	0.045	0.05	J
Sodium (Na)	33	8		35	8		46	8	
Thallium	0.055	0.05	J	0.063	0.05	J	0.08	0.05	J
Vanadium	8.7	0.1		10	0.1		12	0.1	
Zinc	19	1.5		18	1.5		23	1.5	

Notes:
< = less than LOD
LOD = Level of Detection
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated not detected

TABLE B-F32
ANALYTICAL RESULTS FOR GRID F32
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	F32			F32			F32		
Sample Name	P3IF-SS-IS-SO-F032			P3IF-SS-IS-SO-F532			P3IF-SS-IS-SO-F632		
Date Collected	June 12, 2023			June 12, 2023			June 12, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
1,3-Dinitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,4,6-Trinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,4-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,6-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
3-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
4-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Nitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Nitroglycerin	0.15	0.15	U	0.15	0.15	U	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	0.25	0.25	U	0.25	0.25	U	0.25	0.25	U
Metals (mg/kg)									
Aluminum	17,000	4		17,000	4		16,000	4	
Antimony	0.085	0.15	J	0.12	0.15	J	0.15	0.15	U
Arsenic	1.6	0.3		1.4	0.3		1.3	0.3	
Barium	280	0.2		260	0.2		240	0.2	
Beryllium	0.9	0.3	J	0.86	0.3	J	0.77	0.3	J
Cadmium	0.23	0.08		0.21	0.08		0.2	0.08	
Calcium (Ca)	23,000	15		26,000	15		19,000	15	
Chromium[2]	12	0.2		11	0.2		11	0.2	
Cobalt	5.2	0.08		5	0.08		4.9	0.08	
Copper	34	0.2		24	0.2		35	0.2	
Iron (Fe)	11,000	8		10,000	8		10,000	8	
Lead	12	0.05		11	0.05		11	0.05	
Magnesium (Mg)	5,800	5		6,000	5		5,600	5	
Manganese (Mn)	540	0.08		490	0.08		500	0.08	
Mercury	0.03	0.042	J	0.031	0.043	J	0.029	0.043	J
Nickel	10	0.2		10	0.2		9.6	0.2	
Potassium (K)	1,500	8		1,400	8		1,200	8	
Selenium	1.5	0.1		1.6	0.1		1.5	0.1	
Silver	0.021	0.05	J	0.05	0.05	U	0.05	0.05	U
Sodium (Na)	48	8		50	8		46	8	
Thallium	0.065	0.05	J	0.063	0.05	J	0.051	0.05	J
Vanadium	14	0.1		14	0.1		14	0.1	
Zinc	20	1.5		19	1.5		19	1.5	

Notes:
< = less than LOD
LOD = Level of Detection
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated not detected

TABLE B-G30
ANALYTICAL RESULTS FOR GRID G30
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	G30			G30			G30		
Sample Name	P3IF-SS-IS-SO-G030			P3IF-SS-IS-SO-G530			P3IF-SS-IS-SO-G630		
Date Collected	June 12, 2023			June 12, 2023			June 12, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,4,6-Trinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,4-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
3-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
4-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Nitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Nitroglycerin	0.15	0.15	U	0.15	0.15	U	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.25	0.25	U	0.25	0.25	U	0.25	0.25	U
Metals (mg/kg)									
Aluminum	17,000	4		13,000	4		16,000	4	
Antimony	0.15	0.15	U	0.13	0.15	J	0.15	0.15	UJ
Arsenic	1.3	0.3		1.3	0.3		1.4	0.3	J
Barium	200	0.2		180	0.2		200	0.2	
Beryllium	0.7	0.3	J	0.56	0.3	J	0.71	0.3	J
Cadmium	0.33	0.08		0.33	0.08		0.31	0.08	
Calcium (Ca)	4,800	15		4,900	15		4,700	15	J
Chromium[2]	12	0.2		9.9	0.2		12	0.2	
Cobalt	5.3	0.08		4.3	0.08		4.9	0.08	
Copper	64	0.2		63	0.2		77	0.2	J
Iron (Fe)	9,600	8		8,200	8		9,700	8	
Lead	12	0.05		10	0.05		12	0.05	
Magnesium (Mg)	6,300	5		4,500	5		5,600	5	J
Manganese (Mn)	410	0.08		350	0.08		400	0.08	
Mercury	0.032	0.043	J	0.027	0.043	J	0.03	0.042	J
Nickel	9.8	0.2		8.4	0.2		9.7	0.2	
Potassium (K)	1,300	8		960	8		1,200	8	J
Selenium	1.2	0.1		1.2	0.1		0.97	0.1	J
Silver	0.05	0.05	U	0.028	0.05	J	0.05	0.05	U
Sodium (Na)	55	8		45	8		47	8	
Thallium	0.051	0.05	J	0.046	0.05	J	0.047	0.05	J
Vanadium	17	0.1		14	0.1		16	0.1	
Zinc	23	1.5		19	1.5		22	1.5	

Notes:
< = less than LOD
LOD = Level of Detection
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated not detected

TABLE B-H35
ANALYTICAL RESULTS FOR GRID H35
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	H35			H35			H35		
Sample Name	P3IF-SS-IS-SO-H035			P3IF-SS-IS-SO-H535			P3IF-SS-IS-SO-H635		
Date Collected	June 19, 2023			June 19, 2023			June 19, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg) [1]									
1,3,5-Trinitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
1,3-Dinitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,4,6-Trinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,4-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,6-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
3-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	0.14	0.075		0.13	0.075		0.15	0.075	
4-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Nitroglycerin	0.15	0.15	U	0.15	0.15	U	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	0.25	0.25	U	0.25	0.25	U	0.25	0.25	U
Metals (mg/kg)									
Aluminum	21,000	4		20,000	4		20,000	4	
Antimony	0.15	0.15	U	0.15	0.15	U	0.15	0.15	U
Arsenic	1.4	0.3		1.4	0.3		1.4	0.3	
Barium	320	0.2		280	0.2		310	0.2	
Beryllium	1.1	0.3		1	0.3		1.1	0.3	
Cadmium	0.3	0.08		0.32	0.08		0.27	0.08	
Calcium (Ca)	10,000	15		6,400	15		11,000	15	
Chromium[2]	14	0.2		13	0.2		13	0.2	
Cobalt	6.1	0.08		5.7	0.08		5.8	0.08	
Copper	30	0.2		35	0.2		21	0.2	
Iron (Fe)	11,000	8		10,000	8		10,000	8	
Lead	11	0.05		10	0.05		11	0.05	
Magnesium (Mg)	6,900	5		6,800	5		6,700	5	
Manganese (Mn)	850	0.08		750	0.08		830	0.08	
Mercury	0.032	0.041	J	0.029	0.04	J	0.031	0.042	J
Nickel	12	0.2		11	0.2		11	0.2	
Potassium (K)	1,700	8		1,600	8		1,500	8	
Selenium	1.6	0.1		1.6	0.1		1.9	0.1	
Silver	0.033	0.05	J	0.038	0.05	J	0.037	0.05	J
Sodium (Na)	32	8		33	8		34	8	
Thallium	0.08	0.05	J	0.074	0.05	J	0.091	0.05	J
Vanadium	25	0.1		27	0.1		25	0.1	
Zinc	30	1.5		29	1.5		26	1.5	

Notes:

[1] Explosives where sampled on 22 March 2024

< = less than LOD

LOD = Level of Detection

mg/kg = milligrams per kilogram

Qual = qualifier

J = estimated

U = not detected

UJ = estimated not detected

R = rejected

TABLE B-H39
ANALYTICAL RESULTS FOR GRID H39
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	H39			H39			H39		
Sample Name	P3IF-SS-IS-SO-H039			P3IF-SS-IS-SO-H539			P3IF-SS-IS-SO-H639		
Date Collected	June 19, 2023			June 19, 2023			June 19, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,4,6-Trinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,4-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
3-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
4-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitroglycerin	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.25	0.25	UJ	0.25	0.25	UJ	0.25	0.25	UJ
Metals (mg/kg)									
Aluminum	12,000	4		12,000	4		8,700	4	
Antimony	0.19	0.15	J	0.1	0.15	J	0.15	0.15	U
Arsenic	1.1	0.3		1.2	0.3		1.2	0.3	
Barium	240	0.2		300	0.2		220	0.2	
Beryllium	0.46	0.3	J	0.57	0.3	J	0.38	0.3	J
Cadmium	0.16	0.08		0.18	0.08		0.22	0.08	
Calcium (Ca)	3,000	15		3,100	15		2,900	15	
Chromium[2]	8.9	0.2		8.8	0.2		7.4	0.2	
Cobalt	4.9	0.08		5.1	0.08		4.4	0.08	
Copper	14	0.2		17	0.2	J	23	0.2	
Iron (Fe)	8,300	8		8,500	8		6,900	8	
Lead	8.1	0.05		10	0.05		8.5	0.05	
Magnesium (Mg)	3,800	5		3,700	5		2,800	5	
Manganese (Mn)	590	0.08		610	0.08		560	0.08	
Mercury	0.016	0.041	J	0.017	0.04	J	0.02	0.041	J
Nickel	8.2	0.2		8.3	0.2		7.3	0.2	
Potassium (K)	1,400	8		1,400	8		1,200	8	
Selenium	1.2	0.1		1.1	0.1		0.9	0.1	
Silver	0.03	0.05	J	0.042	0.05	J	0.033	0.05	J
Sodium (Na)	37	8		40	8		33	8	
Thallium	0.072	0.05	J	0.081	0.05	J	0.059	0.05	J
Vanadium	13	0.1		13	0.1		11	0.1	
Zinc	22	1.5		21	1.5		20	1.5	

Notes:
< = less than LOD
LOD = Level of Detection
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated not detected

TABLE B-I29
ANALYTICAL RESULTS FOR GRID I29
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	I29			I29			I29		
Sample Name	P3IF-SS-IS-SO-I029			P3IF-SS-IS-SO-I529			P3IF-SS-IS-SO-I629		
Date Collected	June 13, 2023			June 13, 2023			June 13, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
1,3-Dinitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,4,6-Trinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,4-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,6-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
3-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
4-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Nitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Nitroglycerin	0.15	0.15	U	0.15	0.15	U	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	0.25	0.25	U	0.25	0.25	U	0.25	0.25	U
Metals (mg/kg)									
Aluminum	13,000	4		15,000	4		13,000	4	
Antimony	0.15	0.15	U	0.15	0.15	U	0.15	0.15	U
Arsenic	1.1	0.3		1.3	0.3		1.1	0.3	
Barium	130	0.2		150	0.2		150	0.2	
Beryllium	0.34	0.3	J	0.37	0.3	J	0.38	0.3	J
Cadmium	0.41	0.08		0.46	0.08		0.44	0.08	
Calcium (Ca)	3,000	15		3,700	15		3,700	15	
Chromium[2]	9.3	0.2		8.9	0.2		9.7	0.2	
Cobalt	4	0.08		4.7	0.08		4.3	0.08	
Copper	81	0.2	J	44	0.2	J	67	0.2	
Iron (Fe)	5,700	8		6,700	8		6,200	8	
Lead	9.1	0.05		9.3	0.05		9.5	0.05	
Magnesium (Mg)	5,200	5		6,200	5		5,300	5	
Manganese (Mn)	330	0.08		360	0.08		360	0.08	
Mercury	0.042	0.042	U	0.023	0.042	J	0.025	0.041	J
Nickel	7.8	0.2		7.8	0.2		8.1	0.2	
Potassium (K)	840	8		890	8		880	8	
Selenium	0.92	0.1		1.1	0.1		0.84	0.1	
Silver	0.046	0.05	J	0.038	0.05	J	0.052	0.05	J
Sodium (Na)	92	8		81	8		74	8	
Thallium	0.035	0.05	J	0.047	0.05	J	0.04	0.05	J
Vanadium	10	0.1		12	0.1		11	0.1	
Zinc	21	1.5		23	1.5		24	1.5	

Notes:
< = less than LOD
LOD = Level of Detection
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated not detected

TABLE B-I30
ANALYTICAL RESULTS FOR GRID I30
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	I30			I30			I30		
Sample Name	P3IF-SS-IS-SO-I030			P3IF-SS-IS-SO-I530			P3IF-SS-IS-SO-I630		
Date Collected	June 13, 2023			June 13, 2023			June 13, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
1,3-Dinitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,4,6-Trinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,4-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,6-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
3-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
4-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Nitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Nitroglycerin	0.15	0.15	U	0.15	0.15	U	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	0.25	0.25	U	0.25	0.25	U	0.25	0.25	U
Metals (mg/kg)									
Aluminum	11,000	4		13,000	4		15,000	4	
Antimony	0.15	0.15	U	0.15	0.15	U	0.12	0.15	J
Arsenic	1.1	0.3		1.1	0.3		1.2	0.3	
Barium	130	0.2		120	0.2		130	0.2	
Beryllium	0.37	0.3	J	0.36	0.3	J	0.43	0.3	J
Cadmium	0.4	0.08		0.2	0.08		0.32	0.08	
Calcium (Ca)	3,100	15		3,000	15		3,500	15	
Chromium[2]	7.9	0.2		7.4	0.2		9	0.2	
Cobalt	3.8	0.08		4	0.08		4.4	0.08	
Copper	67	0.2	J	28	0.2	J	49	0.2	
Iron (Fe)	5,500	8		6,000	8		6,400	8	
Lead	9	0.05		7.5	0.05		8.7	0.05	
Magnesium (Mg)	4,300	5		5,200	5		6,100	5	
Manganese (Mn)	380	0.08		350	0.08		350	0.08	
Mercury	0.029	0.041	J	0.025	0.042	J	0.025	0.042	J
Nickel	7.2	0.2		6.7	0.2		7.8	0.2	
Potassium (K)	850	8		850	8		880	8	
Selenium	0.92	0.1		0.95	0.1		1.1	0.1	
Silver	0.045	0.05	J	0.026	0.05	J	0.036	0.05	J
Sodium (Na)	73	8		72	8		76	8	
Thallium	0.036	0.05	J	0.039	0.05	J	0.059	0.05	J
Vanadium	9.2	0.1		10	0.1		12	0.1	
Zinc	21	1.5		19	1.5		22	1.5	

Notes:
< = less than LOD
LOD = Level of Detection
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated not detected

TABLE B-I33
ANALYTICAL RESULTS FOR GRID I33
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	I33			I33			I33		
Sample Name	P3IF-SS-IS-SO-I033			P3IF-SS-IS-SO-I533			P3IF-SS-IS-SO-I633		
Date Collected	June 13, 2023			June 13, 2023			June 13, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
1,3-Dinitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,4,6-Trinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,4-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,6-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
3-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
4-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Nitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Nitroglycerin	0.15	0.15	U	0.15	0.15	U	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	0.25	0.25	U	0.25	0.25	U	0.25	0.25	U
Metals (mg/kg)									
Aluminum	15,000	4		17,000	4		11,000	4	
Antimony	0.15	0.15	U	0.15	0.15	U	0.15	0.15	UJ
Arsenic	1.3	0.3		1.4	0.3		1.3	0.3	J
Barium	180	0.2		200	0.2		190	0.2	
Beryllium	0.59	0.3	J	0.67	0.3	J	0.54	0.3	J
Cadmium	0.22	0.08		0.17	0.08		0.27	0.08	J
Calcium (Ca)	3,700	15		4,000	15		3,800	15	J
Chromium[2]	11	0.2		11	0.2		9.1	0.2	
Cobalt	5.2	0.08		5.3	0.08		4.4	0.08	J
Copper	25	0.2		18	0.2		45	0.2	J
Iron (Fe)	9,000	8		9,500	8		7,700	8	
Lead	8.5	0.05		8.7	0.05		9.3	0.05	J
Magnesium (Mg)	5,800	5		6,100	5		4,100	5	J
Manganese (Mn)	490	0.08		510	0.08		490	0.08	
Mercury	0.027	0.043	J	0.026	0.043	J	0.031	0.042	J
Nickel	9	0.2		9.1	0.2		8	0.2	
Potassium (K)	1,300	8		1,300	8		1,000	8	J
Selenium	0.95	0.1		1.1	0.1		1.2	0.1	J
Silver	0.032	0.05	J	0.05	0.05	U	0.047	0.05	J
Sodium (Na)	54	8		71	8		44	8	J
Thallium	0.043	0.05	J	0.05	0.05	J	0.04	0.05	J
Vanadium	19	0.1		20	0.1		14	0.1	
Zinc	23	1.5		23	1.5		22	1.5	

Notes:
< = less than LOD
LOD = Level of Detection
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated not detected

TABLE B-I38
ANALYTICAL RESULTS FOR GRID I38
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	I38			I38			I38		
Sample Name	P3IF-SS-IS-SO-I038			P3IF-SS-IS-SO-I538			P3IF-SS-IS-SO-I638		
Date Collected	June 19, 2023			June 19, 2023			June 19, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)[1]									
1,3,5-Trinitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
1,3-Dinitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,4,6-Trinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,4-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,6-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
3-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	0.12	0.075		0.14	0.075		0.12	0.075	
4-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Nitroglycerin	0.15	0.15	U	0.15	0.15	U	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	0.25	0.25	U	0.25	0.25	U	0.25	0.25	U
Metals (mg/kg)									
Aluminum	12,000	4		12,000	4		14,000	4	
Antimony	0.15	0.15	U	0.15	0.15	U	0.15	0.15	U
Arsenic	1.4	0.3		1.6	0.3		1.6	0.3	
Barium	210	0.2		250	0.2		210	0.2	
Beryllium	0.62	0.3	J	0.69	0.3	J	0.61	0.3	J
Cadmium	0.18	0.08		0.24	0.08		0.14	0.08	
Calcium (Ca)	6,700	15		5,900	15		4,900	15	
Chromium[2]	9.3	0.2		9.2	0.2		10	0.2	
Cobalt	4.6	0.08		4.9	0.08		4.8	0.08	
Copper	20	0.2		24	0.2		21	0.2	
Iron (Fe)	8,400	8		8,500	8		9,500	8	
Lead	8.4	0.05		11	0.05		8.3	0.05	
Magnesium (Mg)	3,300	5		3,200	5		3,700	5	
Manganese (Mn)	460	0.08		510	0.08		430	0.08	
Mercury	0.019	0.04	J	0.023	0.041	J	0.024	0.041	J
Nickel	7.9	0.2		8.2	0.2		8.6	0.2	
Potassium (K)	1,600	8		1,600	8		1,800	8	
Selenium	0.88	0.1		0.93	0.1		1.1	0.1	
Silver	0.04	0.05	J	0.05	0.05	J	0.041	0.05	J
Sodium (Na)	27	8		30	8		32	8	
Thallium	0.085	0.05	J	0.098	0.05	J	0.096	0.05	J
Vanadium	13	0.1		13	0.1		15	0.1	
Zinc	21	1.5		22	1.5		22	1.5	

Notes:

[1] Explosives where sampled on 22 March 2024

< = less than LOD

LOD = Level of Detection

mg/kg = milligrams per kilogram

Qual = qualifier

J = estimated

U = not detected

UJ = estimated not detected

TABLE B-K30
ANALYTICAL RESULTS FOR GRID K30
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	K30			K30			K30		
Sample Name	P3IF-SS-IS-SO-K030			P3IF-SS-IS-SO-K530			P3IF-SS-IS-SO-K630		
Date Collected	June 15, 2023			June 15, 2023			June 15, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,4,6-Trinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,4-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
3-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
4-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitroglycerin	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.25	0.25	UJ	0.25	0.25	UJ	0.25	0.25	UJ
Metals (mg/kg)									
Aluminum	12,000	4		16,000	4		11,000	4	
Antimony	0.086	0.15	J	0.15	0.15	U	0.15	0.15	U
Arsenic	1.1	0.3		1.1	0.3		1.2	0.3	
Barium	180	0.2		180	0.2		170	0.2	
Beryllium	0.63	0.3	J	0.71	0.3	J	0.62	0.3	J
Cadmium	0.33	0.08		0.23	0.08		0.27	0.08	
Calcium (Ca)	3,400	15		3,400	15		3,200	15	
Chromium[2]	9.2	0.2		11	0.2		8.2	0.2	
Cobalt	4.7	0.08		5.3	0.08		4.4	0.08	
Copper	41	0.2		28	0.2		44	0.2	
Iron (Fe)	8,500	8		9,700	8		7,900	8	
Lead	9.3	0.05		9.3	0.05		9	0.05	
Magnesium (Mg)	5,100	5		6,600	5		4,500	5	
Manganese (Mn)	550	0.08		540	0.08		520	0.08	
Mercury	0.019	0.043	J	0.015	0.041	J	0.019	0.041	J
Nickel	8	0.2		8.6	0.2		7.3	0.2	
Potassium (K)	870	8		960	8		790	8	
Selenium	1.4	0.1		1.3	0.1		1.5	0.1	
Silver	0.044	0.05	J	0.034	0.05	J	0.032	0.05	J
Sodium (Na)	53	8	J	110	8	J	52	8	
Thallium	0.045	0.05	J	0.049	0.05	J	0.037	0.05	J
Vanadium	16	0.1		22	0.1		17	0.1	
Zinc	23	1.5		22	1.5		18	1.5	

Notes:
< = less than LOD
LOD = Level of Detection
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated not detected

TABLE B-K34
ANALYTICAL RESULTS FOR GRID K34
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	K34			K34			K34		
Sample Name	P3IF-SS-IS-SO-K034			P3IF-SS-IS-SO-K534			P3IF-SS-IS-SO-K634		
Date Collected	June 14, 2023			June 14, 2023			June 14, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,4,6-Trinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,4-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
3-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
4-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitroglycerin	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.25	0.25	UJ	0.25	0.25	UJ	0.25	0.25	UJ
Metals (mg/kg)									
Aluminum	15,000	4		15,000	4		14,000	4	
Antimony	0.15	0.15	U	0.23	0.15		0.15	0.15	U
Arsenic	1.1	0.3		1.2	0.3		1.2	0.3	
Barium	170	0.2		190	0.2		190	0.2	
Beryllium	0.55	0.3	J	0.63	0.3	J	0.61	0.3	J
Cadmium	0.25	0.08		0.19	0.08		0.23	0.08	
Calcium (Ca)	2,800	15		3,300	15		3,200	15	
Chromium[2]	11	0.2		10	0.2		11	0.2	
Cobalt	5.2	0.08		5.2	0.08		5.3	0.08	
Copper	48	0.2		33	0.2		35	0.2	
Iron (Fe)	9,800	8		10,000	8		10,000	8	
Lead	9.3	0.05		9.1	0.05		9.7	0.05	
Magnesium (Mg)	5,700	5		5,300	5		5,200	5	
Manganese (Mn)	510	0.08		500	0.08		550	0.08	
Mercury	0.025	0.041	J	0.024	0.042	J	0.022	0.041	J
Nickel	9.5	0.2		9.2	0.2		9.4	0.2	
Potassium (K)	1,400	8		1,400	8		1,300	8	
Selenium	1.3	0.1		1.2	0.1		1.4	0.1	
Silver	0.051	0.05	J	0.023	0.05	J	0.036	0.05	J
Sodium (Na)	46	8		46	8		48	8	
Thallium	0.05	0.05	J	0.06	0.05	J	0.049	0.05	J
Vanadium	22	0.1		20	0.1		23	0.1	
Zinc	24	1.5		23	1.5		23	1.5	

Notes:
< = less than LOD
LOD = Level of Detection
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated not detected

TABLE B-L29
ANALYTICAL RESULTS FOR GRID L29
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	L29			L29			L29		
Sample Name	P3IF-SS-IS-SO-L029			P3IF-SS-IS-SO-L529			P3IF-SS-IS-SO-L629		
Date Collected	June 15, 2023			June 15, 2023			June 15, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,4,6-Trinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,4-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
3-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
4-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitroglycerin	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.25	0.25	UJ	0.25	0.25	UJ	0.25	0.25	UJ
Metals (mg/kg)									
Aluminum	12,000	4		14,000	4		13,000	4	
Antimony	0.15	0.15	U	0.15	0.15	U	0.22	0.15	
Arsenic	1	0.3		1.1	0.3		1.1	0.3	
Barium	120	0.2		120	0.2		110	0.2	
Beryllium	0.47	0.3	J	0.55	0.3	J	0.45	0.3	J
Cadmium	0.31	0.08		0.33	0.08		0.39	0.08	
Calcium (Ca)	2,300	15		2,800	15		2,300	15	
Chromium[2]	9.5	0.2		11	0.2		11	0.2	
Cobalt	4.3	0.08		4.6	0.08		4.5	0.08	
Copper	44	0.2		52	0.2		60	0.2	
Iron (Fe)	8,400	8		9,100	8		8,700	8	
Lead	8.8	0.05		9	0.05		9	0.05	
Magnesium (Mg)	5,400	5		6,200	5		5,900	5	
Manganese (Mn)	350	0.08		350	0.08		320	0.08	
Mercury	0.02	0.042	J	0.021	0.043	J	0.065	0.044	J
Nickel	7.3	0.2		8.2	0.2		8.2	0.2	
Potassium (K)	720	8		820	8		740	8	
Selenium	1.1	0.1		0.88	0.1		0.84	0.1	
Silver	0.049	0.05	J	0.052	0.05	J	0.078	0.05	J
Sodium (Na)	59	8		88	8		62	8	
Thallium	0.036	0.05	J	0.037	0.05	J	0.042	0.05	J
Vanadium	15	0.1		19	0.1		16	0.1	
Zinc	21	1.5		24	1.5		24	1.5	

Notes:
< = less than LOD
LOD = Level of Detection
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated not detected

TABLE B-L34
ANALYTICAL RESULTS FOR GRID L34
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	L34			L34			L34		
Sample Name	P3IF-SS-IS-SO-L034			P3IF-SS-IS-SO-L534			P3IF-SS-IS-SO-L634		
Date Collected	June 14, 2023			June 14, 2023			June 14, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,4,6-Trinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,4-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
3-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
4-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitroglycerin	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.25	0.25	UJ	0.25	0.25	UJ	0.25	0.25	UJ
Metals (mg/kg)									
Aluminum	12,000	4		10,000	4		15,000	4	
Antimony	0.15	0.15	U	0.093	0.15	J	0.15	0.15	U
Arsenic	1.1	0.3		1.1	0.3		1.2	0.3	
Barium	150	0.2		130	0.2		170	0.2	
Beryllium	0.48	0.3	J	0.43	0.3	J	0.62	0.3	J
Cadmium	0.27	0.08		0.26	0.08		0.32	0.08	
Calcium (Ca)	3,300	15		3,000	15		3,700	15	
Chromium[2]	9.5	0.2		8.1	0.2		11	0.2	
Cobalt	4.6	0.08		4.1	0.08		5.1	0.08	
Copper	46	0.2		40	0.2		56	0.2	
Iron (Fe)	8,400	8		7,700	8		9,300	8	
Lead	9.4	0.05		8.4	0.05		9.8	0.05	
Magnesium (Mg)	4,600	5		3,900	5		5,600	5	
Manganese (Mn)	450	0.08		400	0.08		480	0.08	
Mercury	0.031	0.041	J	0.025	0.042	J	0.027	0.04	J
Nickel	8.3	0.2		7.2	0.2		9.4	0.2	
Potassium (K)	1,200	8		1,100	8		1,500	8	
Selenium	1.3	0.1		0.9	0.1		1	0.1	
Silver	0.039	0.05	J	0.05	0.05	J	0.062	0.05	J
Sodium (Na)	44	8		40	8		49	8	
Thallium	0.041	0.05	J	0.046	0.05	J	0.051	0.05	J
Vanadium	17	0.1		15	0.1		19	0.1	
Zinc	23	1.5		21	1.5		27	1.5	

Notes:
< = less than LOD
LOD = Level of Detection
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated not detected

TABLE B-L37
ANALYTICAL RESULTS FOR GRID L37
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	L37			L37			L37		
Sample Name	P3IF-SS-IS-SO-L037			P3IF-SS-IS-SO-L537			P3IF-SS-IS-SO-L637		
Date Collected	June 20, 2023			June 20, 2023			June 20, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,4,6-Trinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,4-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
3-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
4-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitroglycerin	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.25	0.25	UJ	0.25	0.25	UJ	0.25	0.25	UJ
Metals (mg/kg)									
Aluminum	17,000	4		20,000	4		24,000	4	
Antimony	0.15	0.15	U	0.15	0.15	U	0.15	0.15	U
Arsenic	1.4	0.3		1.5	0.3		1.5	0.3	
Barium	250	0.2		250	0.2		260	0.2	
Beryllium	0.73	0.3	J	0.78	0.3	J	0.81	0.3	J
Cadmium	0.26	0.08		0.23	0.08		0.24	0.08	
Calcium (Ca)	3,400	15		3,700	15		3,200	15	
Chromium[2]	13	0.2		14	0.2		16	0.2	
Cobalt	6.2	0.08		6.6	0.08		7.2	0.08	
Copper	34	0.2		32	0.2		39	0.2	
Iron (Fe)	11,000	8		13,000	8		14,000	8	
Lead	9.9	0.05		10	0.05		10	0.05	
Magnesium (Mg)	6,200	5		7,100	5		8,700	5	
Manganese (Mn)	710	0.08		680	0.08		720	0.08	
Mercury	0.03	0.045	J	0.043	0.044	J	0.023	0.042	J
Nickel	11	0.2		11	0.2		13	0.2	
Potassium (K)	1,200	8		1,300	8		1,500	8	
Selenium	1.7	0.1		1.8	0.1		1.6	0.1	
Silver	0.04	0.05	J	0.035	0.05	J	0.045	0.05	J
Sodium (Na)	51	8		53	8		60	8	
Thallium	0.071	0.05	J	0.066	0.05	J	0.07	0.05	J
Vanadium	30	0.1		38	0.1		42	0.1	
Zinc	24	1.5		25	1.5		28	1.5	

Notes:
< = less than LOD
LOD = Level of Detection
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated not detected

TABLE B-M28
ANALYTICAL RESULTS FOR GRID M28
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	M28			M28			M28		
Sample Name	P3IF-SS-IS-SO-M028			P3IF-SS-IS-SO-M528			P3IF-SS-IS-SO-M628		
Date Collected	June 14, 2023			June 14, 2023			June 14, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,4,6-Trinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,4-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
3-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
4-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitroglycerin	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.25	0.25	UJ	0.25	0.25	UJ	0.25	0.25	UJ
Metals (mg/kg)									
Aluminum	16,000	4		14,000	4		20,000	4	
Antimony	0.1	0.15	J	0.17	0.15	J	0.15	0.15	U
Arsenic	1	0.3		1	0.3		1.2	0.3	
Barium	200	0.2		200	0.2		260	0.2	
Beryllium	0.49	0.3	J	0.5	0.3	J	0.56	0.3	J
Cadmium	0.56	0.08	J	2.8	0.08	J	0.5	0.08	
Calcium (Ca)	5,800	15		7,100	15		8,400	15	
Chromium[2]	13	0.2		11	0.2		13	0.2	
Cobalt	5	0.08		4.6	0.08		5.7	0.08	
Copper	120	0.2		80	0.2		77	0.2	
Iron (Fe)	9,100	8		8,600	8		11,000	8	
Lead	11	0.05		10	0.05		12	0.05	
Magnesium (Mg)	6,400	5		5,800	5		7,700	5	
Manganese (Mn)	310	0.08		300	0.08		320	0.08	
Mercury	0.016	0.04	J	0.021	0.042	J	0.026	0.041	J
Nickel	11	0.2		9.5	0.2		12	0.2	
Potassium (K)	1,100	8		950	8		1,400	8	
Selenium	0.95	0.1		1.2	0.1		1.1	0.1	
Silver	0.11	0.05		0.085	0.05	J	0.064	0.05	J
Sodium (Na)	53	8		48	8		64	8	
Thallium	0.047	0.05	J	0.059	0.05	J	0.057	0.05	J
Vanadium	13	0.1		12	0.1		16	0.1	
Zinc	27	1.5		24	1.5		31	1.5	

Notes:
< = less than LOD
LOD = Level of Detection
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated not detected

TABLE B-M32
ANALYTICAL RESULTS FOR GRID M32
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	M32			M32			M32		
Sample Name	P3IF-SS-IS-SO-M032			P3IF-SS-IS-SO-M532			P3IF-SS-IS-SO-M632		
Date Collected	June 14, 2023			June 14, 2023			June 14, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,4,6-Trinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,4-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
3-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
4-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitroglycerin	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.25	0.25	UJ	0.25	0.25	UJ	0.25	0.25	UJ
Metals (mg/kg)									
Aluminum	12,000	4		13,000	4		12,000	4	
Antimony	0.15	0.15	U	0.15	0.15	U	0.15	0.15	UJ
Arsenic	1.1	0.3		1.2	0.3		1.1	0.3	
Barium	100	0.2		110	0.2		110	0.2	
Beryllium	0.42	0.3	J	0.43	0.3	J	0.44	0.3	J
Cadmium	0.29	0.08		0.25	0.08		0.28	0.08	
Calcium (Ca)	2,400	15		2,500	15		2,400	15	J
Chromium[2]	10	0.2		9.9	0.2		9.4	0.2	
Cobalt	3.9	0.08		4.2	0.08		4	0.08	
Copper	66	0.2		47	0.2		56	0.2	J
Iron (Fe)	8,500	8		8,900	8		8,600	8	
Lead	9.5	0.05		9.2	0.05		9.6	0.05	J
Magnesium (Mg)	5,300	5		6,100	5		5,400	5	J
Manganese (Mn)	260	0.08		270	0.08		270	0.08	
Mercury	0.019	0.046	J	0.021	0.041	J	0.019	0.04	J
Nickel	7.2	0.2		7.2	0.2		7	0.2	
Potassium (K)	720	8		800	8		720	8	
Selenium	0.83	0.1		0.72	0.1		0.85	0.1	J
Silver	0.058	0.05	J	0.052	0.05	J	0.058	0.05	J
Sodium (Na)	55	8		62	8		55	8	
Thallium	0.032	0.05	J	0.037	0.05	J	0.029	0.05	J
Vanadium	13	0.1		14	0.1		13	0.1	
Zinc	23	1.5		23	1.5		24	1.5	

Notes:
< = less than LOD
LOD = Level of Detection
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated not detected

TABLE B-M39
ANALYTICAL RESULTS FOR GRID M39
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	M39			M39			M39		
Sample Name	P3IF-SS-IS-SO-M039			P3IF-SS-IS-SO-M539			P3IF-SS-IS-SO-M639		
Date Collected	June 19, 2023			June 19, 2023			June 19, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg) [1]									
1,3,5-Trinitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
1,3-Dinitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,4,6-Trinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,4-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,6-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
3-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	0.13	0.075		0.13	0.075		0.13	0.075	
4-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Nitroglycerin	0.15	0.15	U	0.15	0.15	U	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	0.25	0.25	U	0.25	0.25	U	0.25	0.25	U
Metals (mg/kg)									
Aluminum	21,000	4		15,000	4		18,000	4	
Antimony	0.2	0.15		0.25	0.15		0.11	0.15	J
Arsenic	1.9	0.3		1.3	0.3		1.5	0.3	
Barium	310	0.2		250	0.2		300	0.2	
Beryllium	0.89	0.3	J	0.65	0.3	J	0.84	0.3	J
Cadmium	0.18	0.08		0.14	0.08		0.15	0.08	
Calcium (Ca)	6,200	15		6,000	15		6,900	15	
Chromium[2]	14	0.2		9.3	0.2		11	0.2	
Cobalt	5.5	0.08		4.1	0.08		4.8	0.08	
Copper	25	0.2		15	0.2		19	0.2	
Iron (Fe)	12,000	8		8,200	8		9,600	8	
Lead	9.4	0.05		7	0.05		8.2	0.05	
Magnesium (Mg)	5,900	5		4,200	5		5,000	5	
Manganese (Mn)	510	0.08		460	0.08		440	0.08	
Mercury	0.022	0.042	J	0.023	0.042	J	0.022	0.041	J
Nickel	11	0.2		8.1	0.2		9.4	0.2	
Potassium (K)	2,000	8		1,400	8		1,600	8	
Selenium	1.3	0.1		1.1	0.1		0.93	0.1	
Silver	0.047	0.05	J	0.043	0.05	J	0.046	0.05	J
Sodium (Na)	33	8		24	8		29	8	
Thallium	0.097	0.05	J	0.12	0.05		0.082	0.05	J
Vanadium	27	0.1		17	0.1		21	0.1	
Zinc	27	1.5		20	1.5		24	1.5	

Notes:

[1] Explosives where sampled on 22 March 2024

< = less than LOD

LOD = Level of Detection

mg/kg = milligrams per kilogram

Qual = qualifier

J = estimated

U = not detected

UJ = estimated not detected

TABLE B-N27
ANALYTICAL RESULTS FOR GRID N27
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	N27			N27			N27		
Sample Name	P3IF-SS-IS-SO-N027			P3IF-SS-IS-SO-N527			P3IF-SS-IS-SO-N627		
Date Collected	June 14, 2023			June 14, 2023			June 14, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,4,6-Trinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,4-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
3-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
4-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitroglycerin	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.25	0.25	UJ	0.25	0.25	UJ	0.25	0.25	UJ
Metals (mg/kg)									
Aluminum	20,000	4		21,000	4		17,000	4	
Antimony	0.15	0.15	U	0.15	0.15	U	0.15	0.15	U
Arsenic	1	0.3		0.94	0.3		0.84	0.3	
Barium	420	0.2		370	0.2		520	0.2	
Beryllium	0.81	0.3	J	0.79	0.3	J	0.74	0.3	J
Cadmium	0.44	0.08		0.3	0.08		0.37	0.08	
Calcium (Ca)	20,000	15		21,000	15		20,000	15	
Chromium[2]	14	0.2		12	0.2		11	0.2	
Cobalt	5.9	0.08		5.7	0.08		5.4	0.08	
Copper	75	0.2		54	0.2		62	0.2	
Iron (Fe)	11,000	8		11,000	8		9,900	8	
Lead	14	0.05		12	0.05		12	0.05	
Magnesium (Mg)	6,800	5		6,900	5		6,000	5	
Manganese (Mn)	330	0.08		310	0.08		310	0.08	
Mercury	0.022	0.043	J	0.02	0.042	J	0.021	0.043	J
Nickel	15	0.2		14	0.2		13	0.2	
Potassium (K)	2,200	8		2,200	8		1,800	8	
Selenium	1.6	0.1		1.4	0.1		1.3	0.1	
Silver	0.066	0.05	J	0.042	0.05	J	0.045	0.05	J
Sodium (Na)	43	8		45	8		42	8	
Thallium	0.087	0.05	J	0.089	0.05	J	0.069	0.05	J
Vanadium	13	0.1		12	0.1		11	0.1	
Zinc	27	1.5		25	1.5		24	1.5	

Notes:
< = less than LOD
LOD = Level of Detection
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated not detected

TABLE B-N28
ANALYTICAL RESULTS FOR GRID N28
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	N28			N28			N28		
Sample Name	P3IF-SS-IS-SO-N028			P3IF-SS-IS-SO-N528			P3IF-SS-IS-SO-N628		
Date Collected	June 14, 2023			June 14, 2023			June 14, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,4,6-Trinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,4-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
3-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
4-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitroglycerin	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.25	0.25	UJ	0.25	0.25	UJ	0.25	0.25	UJ
Metals (mg/kg)									
Aluminum	20,000	4		19,000	4		14,000	4	
Antimony	0.15	0.15	U	0.077	0.15	J	0.094	0.15	J
Arsenic	1.5	0.3		1.6	0.3		1.5	0.3	
Barium	200	0.2		210	0.2		200	0.2	
Beryllium	0.43	0.3	J	0.65	0.3	J	0.43	0.3	J
Cadmium	0.47	0.08		0.36	0.08		0.46	0.08	
Calcium (Ca)	4,400	15		4,700	15		4,100	15	
Chromium[2]	15	0.2		13	0.2		12	0.2	
Cobalt	6	0.08		5.9	0.08		5	0.08	
Copper	120	0.2	J	71	0.2	J	110	0.2	
Iron (Fe)	10,000	8		10,000	8		8,600	8	
Lead	11	0.05		10	0.05		10	0.05	
Magnesium (Mg)	7,800	5		7,000	5		5,200	5	
Manganese (Mn)	390	0.08		410	0.08		390	0.08	
Mercury	0.03	0.041	J	0.028	0.043	J	0.027	0.042	J
Nickel	12	0.2		11	0.2		10	0.2	
Potassium (K)	1,300	8		1,300	8		950	8	
Selenium	1	0.1		0.92	0.1		1	0.1	
Silver	0.063	0.05	J	0.054	0.05	J	0.065	0.05	J
Sodium (Na)	66	8		49	8		57	8	
Thallium	0.057	0.05	J	0.061	0.05	J	0.044	0.05	J
Vanadium	22	0.1		20	0.1		17	0.1	
Zinc	31	1.5		27	1.5		23	1.5	

Notes:
< = less than LOD
LOD = Level of Detection
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated not detected

TABLE B-N37
ANALYTICAL RESULTS FOR GRID N37
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	N37			N37			N37		
Sample Name	P3IF-SS-IS-SO-N037			P3IF-SS-IS-SO-N537			P3IF-SS-IS-SO-N637		
Date Collected	June 20, 2023			June 20, 2023			June 20, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
1,3-Dinitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,4,6-Trinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,4-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,6-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
3-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
4-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Nitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Nitroglycerin	0.15	0.15	U	0.15	0.15	U	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	0.25	0.25	U	0.25	0.25	U	0.25	0.25	U
Metals (mg/kg)									
Aluminum	13,000	4		14,000	4		14,000	4	
Antimony	0.15	0.15	U	0.15	0.15	U	0.15	0.15	U
Arsenic	2	0.3		2	0.3		2.2	0.3	
Barium	200	0.2		200	0.2		210	0.2	
Beryllium	0.63	0.3	J	0.64	0.3	J	0.73	0.3	J
Cadmium	0.23	0.08		0.19	0.08		0.24	0.08	
Calcium (Ca)	2,900	15		3,200	15		3,300	15	
Chromium[2]	11	0.2		11	0.2		13	0.2	
Cobalt	5.1	0.08		5.3	0.08		5.5	0.08	
Copper	36	0.2		37	0.2		48	0.2	
Iron (Fe)	10,000	8		11,000	8		11,000	8	
Lead	9.8	0.05		9.5	0.05		9.8	0.05	
Magnesium (Mg)	4,000	5		4,100	5		4,200	5	
Manganese (Mn)	470	0.08		480	0.08		470	0.08	
Mercury	0.021	0.041	J	0.018	0.041	J	0.019	0.04	J
Nickel	9	0.2		9.4	0.2		10	0.2	
Potassium (K)	1,400	8		1,500	8		1,600	8	
Selenium	1.4	0.1		1.3	0.1		1.3	0.1	
Silver	0.05	0.05	U	0.05	0.05	U	0.05	0.05	U
Sodium (Na)	48	8		47	8		48	8	
Thallium	0.078	0.05	J	0.065	0.05	J	0.063	0.05	J
Vanadium	23	0.1		23	0.1		25	0.1	
Zinc	23	1.5		24	1.5		25	1.5	

Notes:
< = less than LOD
LOD = Level of Detection
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated not detected

TABLE B-O27
ANALYTICAL RESULTS FOR GRID O27
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	O27			O27			O27		
Sample Name	P3IF-SS-IS-SO-O027			P3IF-SS-IS-SO-O527			P3IF-SS-IS-SO-O627		
Date Collected	June 14, 2023			June 14, 2023			June 14, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg) [1]									
1,3,5-Trinitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
1,3-Dinitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,4,6-Trinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,4-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,6-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
3-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
4-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Nitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Nitroglycerin	0.15	0.15	U	0.15	0.15	U	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	0.25	0.25	U	0.25	0.25	U	0.25	0.25	U
Metals (mg/kg)									
Aluminum	17,000	4		13,000	4		18,000	4	
Antimony	0.079	0.15	J	0.15	0.15	U	0.15	0.15	UJ
Arsenic	1.1	0.3		0.82	0.3		0.93	0.3	J
Barium	430	0.2		320	0.2		400	0.2	
Beryllium	1	0.3		0.7	0.3	J	0.79	0.3	J
Cadmium	0.22	0.08		0.21	0.08		0.32	0.08	
Calcium (Ca)	36,000	15		24,000	15		29,000	15	
Chromium[2]	10	0.2		7.8	0.2		11	0.2	
Cobalt	5.7	0.08		4.3	0.08		5.2	0.08	J
Copper	35	0.2		32	0.2		59	0.2	J
Iron (Fe)	12,000	8		7,900	8		9,900	8	
Lead	12	0.05		9.4	0.05		12	0.05	J
Magnesium (Mg)	6,200	5		4,700	5		5,900	5	J
Manganese (Mn)	610	0.08		370	0.08		410	0.08	
Mercury	0.015	0.043	J	0.022	0.044	J	0.017	0.043	J
Nickel	14	0.2		10	0.2		13	0.2	J
Potassium (K)	1,500	8		1,100	8		1,700	8	
Selenium	1.3	0.1		1.2	0.1		1.4	0.1	J
Silver	0.023	0.05	J	0.036	0.05	J	0.046	0.05	J
Sodium (Na)	61	8		38	8		51	8	
Thallium	0.2	0.05		0.05	0.05	J	0.07	0.05	J
Vanadium	15	0.1		9.5	0.1		12	0.1	
Zinc	23	1.5		18	1.5		23	1.5	

Notes:

[1] Explosives where sampled on 22 March 2024

< = less than LOD

LOD = Level of Detection

mg/kg = milligrams per kilogram

Qual = qualifier

J = estimated

U = not detected

UJ = estimated not detected

TABLE B-O32
ANALYTICAL RESULTS FOR GRID O32
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	O32			O32			O32		
Sample Name	P3IF-SS-IS-SO-O032			P3IF-SS-IS-SO-O532			P3IF-SS-IS-SO-O632		
Date Collected	June 13, 2023			June 13, 2023			June 13, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
1,3-Dinitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,4,6-Trinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,4-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,6-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
3-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
4-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Nitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Nitroglycerin	0.15	0.15	U	0.15	0.15	U	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	0.25	0.25	U	0.25	0.25	U	0.25	0.25	U
Metals (mg/kg)									
Aluminum	11,000	4		12,000	4		10,000	4	
Antimony	0.15	0.15	U	0.15	0.15	U	0.15	0.15	U
Arsenic	1	0.3		1.1	0.3		0.97	0.3	
Barium	130	0.2		120	0.2		120	0.2	
Beryllium	0.38	0.3	J	0.37	0.3	J	0.32	0.3	J
Cadmium	0.43	0.08		0.27	0.08		0.29	0.08	
Calcium (Ca)	3,000	15		2,900	15		3,000	15	
Chromium[2]	9.4	0.2		8.1	0.2		8.2	0.2	
Cobalt	4	0.08		4.3	0.08		3.9	0.08	
Copper	87	0.2	J	48	0.2	J	62	0.2	
Iron (Fe)	5,600	8		6,200	8		5,200	8	
Lead	9.3	0.05		8.8	0.05		7.9	0.05	
Magnesium (Mg)	4,600	5		5,200	5		4,500	5	
Manganese (Mn)	290	0.08		280	0.08		260	0.08	
Mercury	0.021	0.041	J	0.022	0.042	J	0.024	0.041	J
Nickel	7.8	0.2		7.1	0.2		6.9	0.2	
Potassium (K)	750	8		760	8		710	8	
Selenium	0.78	0.1		0.78	0.1		0.72	0.1	
Silver	0.059	0.05	J	0.03	0.05	J	0.034	0.05	J
Sodium (Na)	70	8		75	8		64	8	
Thallium	0.037	0.05	J	0.04	0.05	J	0.036	0.05	J
Vanadium	9.9	0.1		11	0.1		10	0.1	
Zinc	23	1.5		23	1.5		22	1.5	

Notes:
< = less than LOD
LOD = Level of Detection
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated not detected

TABLE B-O37
ANALYTICAL RESULTS FOR GRID O37
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	O37			O37			O37		
Sample Name	P3IF-SS-IS-SO-O037			P3IF-SS-IS-SO-O537			P3IF-SS-IS-SO-O637		
Date Collected	June 20, 2023			June 20, 2023			June 20, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
1,3-Dinitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,4,6-Trinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,4-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,6-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
3-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
4-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Nitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Nitroglycerin	0.15	0.15	U	0.15	0.15	U	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	0.25	0.25	U	0.25	0.25	U	0.25	0.25	U
Metals (mg/kg)									
Aluminum	13,000	4		14,000	4		14,000	4	
Antimony	0.15	0.15	U	0.15	0.15	U	0.15	0.15	U
Arsenic	2.2	0.3		2.3	0.3		2.2	0.3	
Barium	200	0.2		200	0.2		200	0.2	
Beryllium	0.63	0.3	J	0.65	0.3	J	0.67	0.3	J
Cadmium	0.21	0.08		0.21	0.08		0.21	0.08	
Calcium (Ca)	3,300	15		3,200	15		3,100	15	
Chromium[2]	11	0.2		12	0.2		11	0.2	
Cobalt	5.3	0.08		5.6	0.08		5.2	0.08	
Copper	38	0.2		40	0.2		44	0.2	
Iron (Fe)	11,000	8		11,000	8		11,000	8	
Lead	10	0.05		9.5	0.05		9.8	0.05	
Magnesium (Mg)	3,600	5		4,000	5		3,800	5	
Manganese (Mn)	420	0.08		440	0.08		400	0.08	
Mercury	0.021	0.04	J	0.018	0.041	J	0.02	0.041	J
Nickel	9.1	0.2		10	0.2		9.6	0.2	
Potassium (K)	1,500	8		1,600	8		1,500	8	
Selenium	1.1	0.1		1.3	0.1		1.2	0.1	
Silver	0.05	0.05	U	0.05	0.05	U	0.05	0.05	U
Sodium (Na)	42	8		44	8		43	8	
Thallium	0.065	0.05	J	0.063	0.05	J	0.061	0.05	J
Vanadium	22	0.1		25	0.1		23	0.1	
Zinc	24	1.5		25	1.5		25	1.5	

Notes:
< = less than LOD
LOD = Level of Detection
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated not detected

TABLE B-P32
ANALYTICAL RESULTS FOR GRID P32
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	P32			P32			P32		
Sample Name	P3IF-SS-IS-SO-P032			P3IF-SS-IS-SO-P532			P3IF-SS-IS-SO-P632		
Date Collected	June 13, 2023			June 13, 2023			June 13, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
1,3-Dinitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,4,6-Trinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,4-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,6-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
3-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
4-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Nitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Nitroglycerin	0.15	0.15	U	0.15	0.15	U	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	0.25	0.25	U	0.25	0.25	U	0.25	0.25	U
Metals (mg/kg)									
Aluminum	12,000	4		9,300	4		10,000	4	
Antimony	0.15	0.15	U	0.15	0.15	U	0.15	0.15	U
Arsenic	1.2	0.3		0.99	0.3		1	0.3	
Barium	120	0.2		110	0.2		80	0.2	
Beryllium	0.32	0.3	J	0.28	0.3	J	0.34	0.3	J
Cadmium	0.4	0.08		0.28	0.08		0.32	0.08	
Calcium (Ca)	3,200	15		2,700	15		2,100	15	
Chromium[2]	9.4	0.2		6.9	0.2		8.5	0.2	
Cobalt	4.2	0.08		3.6	0.08		3.6	0.08	
Copper	82	0.2	J	48	0.2	J	62	0.2	J
Iron (Fe)	5,600	8		5,100	8		5,900	8	
Lead	9.8	0.05		7.8	0.05		7.2	0.05	
Magnesium (Mg)	5,300	5		4,100	5		4,500	5	
Manganese (Mn)	260	0.08		230	0.08		210	0.08	
Mercury	0.024	0.041	J	0.023	0.041	J	0.023	0.04	J
Nickel	7.8	0.2		5.9	0.2		6.6	0.2	
Potassium (K)	820	8		660	8		610	8	
Selenium	0.78	0.1		0.87	0.1		0.66	0.1	
Silver	0.048	0.05	J	0.036	0.05	J	0.047	0.05	J
Sodium (Na)	70	8		68	8		120	8	
Thallium	0.035	0.05	J	0.032	0.05	J	0.14	0.05	
Vanadium	11	0.1		9.5	0.1		10	0.1	
Zinc	26	1.5		20	1.5		21	1.5	

Notes:
< = less than LOD
LOD = Level of Detection
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated not detected

TABLE B-P33
ANALYTICAL RESULTS FOR GRID P33
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	P33			P33			P33		
Sample Name	P3IF-SS-IS-SO-P033			P3IF-SS-IS-SO-P533			P3IF-SS-IS-SO-P633		
Date Collected	June 13, 2023			June 13, 2023			June 13, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
1,3-Dinitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,4,6-Trinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,4-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,6-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
3-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
4-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Nitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Nitroglycerin	0.15	0.15	U	0.15	0.15	U	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	0.25	0.25	U	0.25	0.25	U	0.25	0.25	U
Metals (mg/kg)									
Aluminum	13,000	4		8,600	4		15,000	4	
Antimony	0.15	0.15	UJ	0.12	0.15	J	0.15	0.15	UJ
Arsenic	1	0.3	J	1.1	0.3	J	1.1	0.3	J
Barium	110	0.2		110	0.2		120	0.2	
Beryllium	0.35	0.3	J	0.38	0.3	J	0.37	0.3	J
Cadmium	0.44	0.08	J	0.3	0.08	J	0.39	0.08	J
Calcium (Ca)	2,400	15	J	2,500	15	J	2,600	15	J
Chromium[2]	11	0.2	J	7.3	0.2		11	0.2	J
Cobalt	4.6	0.08	J	3.8	0.08		5.1	0.08	J
Copper	110	0.2	J	60	0.2	J	85	0.2	
Iron (Fe)	6,200	8		4,900	8		6,600	8	
Lead	9.8	0.05	J	8.2	0.05	J	9.9	0.05	J
Magnesium (Mg)	5,900	5		3,700	5	J	7,000	5	J
Manganese (Mn)	270	0.08		270	0.08		270	0.08	
Mercury	0.022	0.04	J	0.021	0.042	J	0.019	0.041	J
Nickel	8.8	0.2	J	6.4	0.2		9	0.2	J
Potassium (K)	770	8	J	650	8	J	760	8	J
Selenium	0.72	0.1	J	0.82	0.1	J	1	0.1	J
Silver	0.075	0.05	J	0.038	0.05	J	0.047	0.05	J
Sodium (Na)	75	8	J	70	8		78	8	
Thallium	0.044	0.05	J	0.062	0.05	J	0.044	0.05	J
Vanadium	11	0.1	J	9.6	0.1		13	0.1	J
Zinc	26	1.5	J	19	1.5		26	1.5	J

Notes:
< = less than LOD
LOD = Level of Detection
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated not detected

TABLE B-Q26
ANALYTICAL RESULTS FOR GRID Q26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	Q26			Q26			Q26		
Sample Name	P3IF-SS-IS-SO-Q026			P3IF-SS-IS-SO-Q526			P3IF-SS-IS-SO-Q626		
Date Collected	June 21, 2023			June 21, 2023			June 21, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,4,6-Trinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,4-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
3-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
4-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitroglycerin	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.25	0.25	UJ	0.25	0.25	UJ	0.25	0.25	UJ
Metals (mg/kg)									
Aluminum	18,000	4		16,000	4		17,000	4	
Antimony	0.15	0.15	U	0.15	0.15	U	0.15	0.15	U
Arsenic	1.1	0.3		1.1	0.3		1.1	0.3	
Barium	430	0.2		450	0.2		400	0.2	
Beryllium	1.1	0.3		1	0.3		1	0.3	
Cadmium	0.49	0.08		0.65	0.08		0.57	0.08	
Calcium (Ca)	24,000	15		22,000	15		26,000	15	
Chromium[2]	13	0.2		13	0.2		13	0.2	
Cobalt	5.2	0.08		5.1	0.08		4.9	0.08	
Copper	87	0.2		120	0.2		110	0.2	
Iron (Fe)	12,000	8		11,000	8		11,000	8	
Lead	14	0.05		14	0.05		14	0.05	
Magnesium (Mg)	5,300	5		5,100	5		5,100	5	
Manganese (Mn)	460	0.08		480	0.08		490	0.08	
Mercury	0.023	0.042	J	0.02	0.041	J	0.022	0.042	J
Nickel	13	0.2		14	0.2		13	0.2	
Potassium (K)	2,000	8		1,800	8		2,000	8	
Selenium	1.3	0.1		1.4	0.1		1.6	0.1	
Silver	0.05	0.05	U	0.031	0.05	J	0.05	0.05	U
Sodium (Na)	51	8		47	8		52	8	
Thallium	0.059	0.05	J	0.053	0.05	J	0.059	0.05	J
Vanadium	13	0.1		12	0.1		12	0.1	
Zinc	24	1.5		25	1.5		25	1.5	

Notes:
< = less than LOD
LOD = Level of Detection
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated not detected

TABLE B-Q29
ANALYTICAL RESULTS FOR GRID Q29
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	Q29			Q29			Q29		
Sample Name	P3IF-SS-IS-SO-Q029			P3IF-SS-IS-SO-Q529			P3IF-SS-IS-SO-Q629		
Date Collected	June 21, 2023			June 21, 2023			June 21, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,4,6-Trinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,4-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
3-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
4-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitroglycerin	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.25	0.25	UJ	0.25	0.25	UJ	0.25	0.25	UJ
Metals (mg/kg)									
Aluminum	12,000	4		9,000	4		9,900	4	
Antimony	0.15	0.15	U	0.15	0.15	U	0.15	0.15	U
Arsenic	1.4	0.3		1.2	0.3		1.4	0.3	
Barium	130	0.2		110	0.2		140	0.2	
Beryllium	0.46	0.3	J	0.32	0.3	J	0.36	0.3	J
Cadmium	0.32	0.08	J	0.61	0.08	J	0.53	0.08	J
Calcium (Ca)	2,700	15		2,500	15		2,900	15	
Chromium[2]	10	0.2		12	0.2		11	0.2	
Cobalt	4.6	0.08		3.8	0.08		4.2	0.08	
Copper	62	0.2	J	140	0.2	J	110	0.2	J
Iron (Fe)	9,000	8		8,100	8		8,600	8	
Lead	10	0.05		11	0.05		12	0.05	
Magnesium (Mg)	4,800	5		3,500	5		3,900	5	
Manganese (Mn)	340	0.08		330	0.08		330	0.08	
Mercury	0.022	0.04	J	0.028	0.039	J	0.023	0.041	J
Nickel	7.5	0.2		8.5	0.2		8.1	0.2	
Potassium (K)	870	8		760	8		850	8	
Selenium	0.95	0.1		0.75	0.1		0.8	0.1	
Silver	0.05	0.05	U	0.02	0.05	J	0.05	0.05	U
Sodium (Na)	61	8		60	8		60	8	
Thallium	0.04	0.05	J	0.026	0.05	J	0.028	0.05	J
Vanadium	16	0.1		14	0.1		15	0.1	
Zinc	24	1.5		28	1.5		28	1.5	

Notes:
< = less than LOD
LOD = Level of Detection
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated not detected

TABLE B-Q38
ANALYTICAL RESULTS FOR GRID Q38
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	Q38			Q38			Q38		
Sample Name	P3IF-SS-IS-SO-Q038			P3IF-SS-IS-SO-Q538			P3IF-SS-IS-SO-Q638		
Date Collected	June 20, 2023			June 20, 2023			June 20, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,4,6-Trinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,4-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
3-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
4-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitroglycerin	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.25	0.25	UJ	0.25	0.25	UJ	0.25	0.25	UJ
Metals (mg/kg)									
Aluminum	11,000	4		11,000	4		9,200	4	
Antimony	0.095	0.15	J	0.075	0.15	J	0.15	0.15	UJ
Arsenic	1.9	0.3	J	1.9	0.3	J	1.8	0.3	
Barium	130	0.2	J	130	0.2	J	120	0.2	J
Beryllium	0.55	0.3	J	0.48	0.3	J	0.46	0.3	J
Cadmium	0.22	0.08		0.15	0.08		0.16	0.08	
Calcium (Ca)	2,500	15	J	2,700	15	J	2,700	15	J
Chromium[2]	9.7	0.2		8.6	0.2		7.5	0.2	
Cobalt	4.3	0.08		4.1	0.08		4.1	0.08	
Copper	40	0.2	J	20	0.2	J	20	0.2	
Iron (Fe)	9,100	8		9,000	8		8,000	8	
Lead	8.4	0.05	J	7.5	0.05	J	7.6	0.05	
Magnesium (Mg)	3,000	5	J	2,900	5	J	2,400	5	J
Manganese (Mn)	260	0.08	J	250	0.08	J	270	0.08	J
Mercury	0.021	0.041	J	0.019	0.041	J	0.018	0.04	J
Nickel	7.6	0.2		7	0.2		6.7	0.2	
Potassium (K)	1,300	8	J	1,200	8	J	1,100	8	J
Selenium	0.85	0.1	J	0.83	0.1	J	0.64	0.1	J
Silver	0.042	0.05	J	0.025	0.05	J	0.039	0.05	J
Sodium (Na)	37	8		38	8		33	8	
Thallium	0.086	0.05	J	0.074	0.05	J	0.064	0.05	J
Vanadium	17	0.1		16	0.1		14	0.1	
Zinc	21	1.5		19	1.5		18	1.5	

Notes:
< = less than LOD
LOD = Level of Detection
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated not detected

TABLE B-Q39
ANALYTICAL RESULTS FOR GRID Q39
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	Q39			Q39			Q39		
Sample Name	P3IF-SS-IS-SO-Q039			P3IF-SS-IS-SO-Q539			P3IF-SS-IS-SO-Q639		
Date Collected	June 20, 2023			June 20, 2023			June 20, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,4,6-Trinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,4-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
3-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
4-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitroglycerin	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.25	0.25	UJ	0.25	0.25	UJ	0.25	0.25	UJ
Metals (mg/kg)									
Aluminum	12,000	4		15,000	4		18,000	4	
Antimony	0.15	0.15	U	0.15	0.15	U	0.15	0.15	U
Arsenic	1.4	0.3		1.3	0.3		1.4	0.3	
Barium	190	0.2		210	0.2		200	0.2	
Beryllium	0.45	0.3	J	0.58	0.3	J	0.59	0.3	J
Cadmium	0.18	0.08		0.16	0.08		0.17	0.08	
Calcium (Ca)	2,700	15		2,900	15		3,300	15	
Chromium[2]	9.5	0.2		11	0.2		12	0.2	
Cobalt	4.7	0.08		5.2	0.08		5.6	0.08	
Copper	25	0.2		25	0.2		27	0.2	
Iron (Fe)	9,500	8		10,000	8		11,000	8	
Lead	8.2	0.05		9	0.05		8.7	0.05	
Magnesium (Mg)	4,200	5		5,000	5		5,800	5	
Manganese (Mn)	400	0.08		400	0.08		410	0.08	
Mercury	0.019	0.045	J	0.019	0.045	J	0.017	0.041	J
Nickel	7.9	0.2		8.8	0.2		9.6	0.2	
Potassium (K)	1,100	8		1,300	8		1,600	8	
Selenium	1	0.1		1.1	0.1		1.2	0.1	
Silver	0.028	0.05	J	0.043	0.05	J	0.026	0.05	J
Sodium (Na)	49	8		52	8		52	8	
Thallium	0.052	0.05	J	0.059	0.05	J	0.069	0.05	J
Vanadium	21	0.1		23	0.1		24	0.1	
Zinc	22	1.5		23	1.5		25	1.5	

Notes:
< = less than LOD
LOD = Level of Detection
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated not detected

TABLE B-R24
ANALYTICAL RESULTS FOR GRID R24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	R24			R24			R24		
Sample Name	P3IF-SS-IS-SO-R024			P3IF-SS-IS-SO-R524			P3IF-SS-IS-SO-R624		
Date Collected	June 13, 2023			June 13, 2023			June 13, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
1,3-Dinitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,4,6-Trinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,4-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,6-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
3-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
4-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Nitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Nitroglycerin	0.15	0.15	U	0.15	0.15	U	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	0.25	0.25	U	0.25	0.25	U	0.25	0.25	U
Metals (mg/kg)									
Aluminum	14,000	4		14,000	4		17,000	4	
Antimony	0.15	0.15	U	0.15	0.15	U	0.15	0.15	U
Arsenic	0.89	0.3		0.91	0.3		0.94	0.3	
Barium	260	0.2		280	0.2		280	0.2	
Beryllium	0.7	0.3	J	0.74	0.3	J	0.78	0.3	J
Cadmium	0.39	0.08		0.36	0.08		0.47	0.08	
Calcium (Ca)	34,000	15		34,000	15		30,000	15	
Chromium[2]	10	0.2		9.7	0.2		11	0.2	
Cobalt	3.7	0.08		4	0.08		4.5	0.08	
Copper	93	0.2		78	0.2		72	0.2	
Iron (Fe)	6,300	8		6,100	8		7,300	8	
Lead	8.9	0.05		8.9	0.05		9.6	0.05	
Magnesium (Mg)	4,500	5		4,600	5		5,300	5	
Manganese (Mn)	530	0.08		600	0.08		580	0.08	
Mercury	0.023	0.043	J	0.022	0.044	J	0.027	0.043	J
Nickel	9.6	0.2		10	0.2		11	0.2	
Potassium (K)	1,400	8		1,300	8		1,600	8	
Selenium	1.3	0.1		1.1	0.1		1.5	0.1	
Silver	0.062	0.05	J	0.062	0.05	J	0.08	0.05	J
Sodium (Na)	63	8		67	8		64	8	
Thallium	0.05	0.05	J	0.055	0.05	J	0.065	0.05	J
Vanadium	8.5	0.1		8.5	0.1		11	0.1	
Zinc	17	1.5		17	1.5		19	1.5	

Notes:
< = less than LOD
LOD = Level of Detection
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated not detected

TABLE B-R32
ANALYTICAL RESULTS FOR GRID R32
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	R32			R32			R32		
Sample Name	P3IF-SS-IS-SO-R032			P3IF-SS-IS-SO-R532			P3IF-SS-IS-SO-R632		
Date Collected	June 12, 2023			June 12, 2023			June 12, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
1,3-Dinitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,4,6-Trinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,4-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,6-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
3-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
4-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Nitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Nitroglycerin	0.15	0.15	U	0.15	0.15	U	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	0.25	0.25	U	0.25	0.25	U	0.25	0.25	U
Metals (mg/kg)									
Aluminum	13,000	4		11,000	4		11,000	4	
Antimony	0.15	0.15	U	0.08	0.15	J	0.15	0.15	U
Arsenic	1.3	0.3		1.3	0.3		1.2	0.3	
Barium	160	0.2		170	0.2		150	0.2	
Beryllium	0.47	0.3	J	0.5	0.3	J	0.46	0.3	J
Cadmium	0.35	0.08		0.28	0.08		0.24	0.08	
Calcium (Ca)	2,600	15		2,600	15		2,300	15	
Chromium[2]	11	0.2		8.6	0.2		8.8	0.2	
Cobalt	4.9	0.08		4.6	0.08		4.6	0.08	
Copper	68	0.2	J	46	0.2		39	0.2	J
Iron (Fe)	8,600	8		7,800	8		7,900	8	
Lead	10	0.05		9.4	0.05		8.7	0.05	
Magnesium (Mg)	4,900	5		3,900	5		4,300	5	
Manganese (Mn)	400	0.08		440	0.08		370	0.08	
Mercury	0.025	0.042	J	0.022	0.042	J	0.021	0.042	J
Nickel	8.7	0.2		7.5	0.2		7.3	0.2	
Potassium (K)	1,100	8		940	8		890	8	
Selenium	0.96	0.1		1.2	0.1		1.1	0.1	
Silver	0.024	0.05	J	0.037	0.05	J	0.05	0.05	U
Sodium (Na)	51	8		47	8		50	8	
Thallium	0.053	0.05	J	0.15	0.05		0.047	0.05	J
Vanadium	15	0.1		13	0.1		14	0.1	
Zinc	24	1.5		21	1.5		20	1.5	

Notes:
< = less than LOD
LOD = Level of Detection
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated not detected

TABLE B-S26
ANALYTICAL RESULTS FOR GRID S26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	S26			S26			S26		
Sample Name	P3IF-SS-IS-SO-S026			P3IF-SS-IS-SO-S526			P3IF-SS-IS-SO-S626		
Date Collected	June 21, 2023			June 21, 2023			June 21, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,4,6-Trinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,4-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
3-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
4-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ	43	0.15	J	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitroglycerin	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.25	0.25	UJ	0.25	0.25	UJ	0.25	0.25	UJ
Metals (mg/kg)									
Aluminum	19,000	4		19,000	4		23,000	4	
Antimony	0.17	0.15	J	0.13	0.15	J	0.11	0.15	J
Arsenic	1.5	0.3		1.5	0.3		1.4	0.3	
Barium	270	0.2		270	0.2		280	0.2	
Beryllium	0.82	0.3	J	0.74	0.3	J	0.83	0.3	J
Cadmium	0.38	0.08	J	0.71	0.08	J	0.55	0.08	
Calcium (Ca)	5,200	15		5,300	15		5,200	15	
Chromium[2]	14	0.2		17	0.2		19	0.2	
Cobalt	5.7	0.08		5.7	0.08		6.2	0.08	
Copper	90	0.2	J	170	0.2	J	180	0.2	J
Iron (Fe)	13,000	8		13,000	8		14,000	8	
Lead	11	0.05		11	0.05		12	0.05	
Magnesium (Mg)	6,300	5		6,400	5		7,500	5	
Manganese (Mn)	420	0.08		410	0.08		410	0.08	
Mercury	0.026	0.042	J	0.024	0.041	J	0.022	0.042	J
Nickel	11	0.2		13	0.2		14	0.2	
Potassium (K)	1,900	8		1,700	8		2,400	8	
Selenium	1.1	0.1		1.1	0.1		1.2	0.1	
Silver	0.07	0.05	J	0.13	0.05		0.14	0.05	
Sodium (Na)	56	8		71	8		63	8	
Thallium	0.073	0.05	J	0.068	0.05	J	0.084	0.05	J
Vanadium	19	0.1		20	0.1		24	0.1	
Zinc	28	1.5		31	1.5		32	1.5	

Notes:
< = less than LOD
LOD = Level of Detection
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated not detected

TABLE B-S29
ANALYTICAL RESULTS FOR GRID S29
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	S29			S29			S29		
Sample Name	P3IF-SS-IS-SO-S029			P3IF-SS-IS-SO-S529			P3IF-SS-IS-SO-S629		
Date Collected	June 21, 2023			June 21, 2023			June 21, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,4,6-Trinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,4-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
3-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
4-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitroglycerin	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.25	0.25	UJ	0.25	0.25	UJ	0.25	0.25	UJ
Metals (mg/kg)									
Aluminum	15,000	4		14,000	4		14,000	4	
Antimony	0.15	0.15	U	0.15	0.15	U	0.15	0.15	UJ
Arsenic	1.5	0.3		1.5	0.3		1.4	0.3	
Barium	220	0.2		230	0.2		250	0.2	
Beryllium	0.56	0.3	J	0.52	0.3	J	0.54	0.3	J
Cadmium	0.36	0.08		0.54	0.08		0.47	0.08	
Calcium (Ca)	6,600	15		6,000	15		7,500	15	J
Chromium[2]	12	0.2		13	0.2		12	0.2	
Cobalt	5	0.08		4.8	0.08		4.9	0.08	
Copper	76	0.2	J	140	0.2	J	120	0.2	
Iron (Fe)	11,000	8		11,000	8		11,000	8	
Lead	9.8	0.05		11	0.05		11	0.05	J
Magnesium (Mg)	5,500	5		5,200	5		5,200	5	J
Manganese (Mn)	250	0.08		270	0.08		260	0.08	
Mercury	0.027	0.041	J	0.023	0.041	J	0.024	0.041	J
Nickel	9.5	0.2		10	0.2		10	0.2	
Potassium (K)	980	8		960	8		940	8	J
Selenium	1	0.1		0.95	0.1		0.98	0.1	J
Silver	0.05	0.05	U	0.02	0.05	J	0.05	0.05	U
Sodium (Na)	58	8		61	8		60	8	
Thallium	0.034	0.05	J	0.033	0.05	J	0.033	0.05	J
Vanadium	19	0.1		19	0.1		18	0.1	
Zinc	26	1.5		28	1.5		26	1.5	

Notes:
< = less than LOD
LOD = Level of Detection
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated not detected

TABLE B-S36
ANALYTICAL RESULTS FOR GRID S36
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	S36			S36			S36		
Sample Name	P3IF-SS-IS-SO-S036			P3IF-SS-IS-SO-S536			P3IF-SS-IS-SO-S636		
Date Collected	June 15, 2023			June 15, 2023			June 15, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,4,6-Trinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,4-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
3-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
4-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitroglycerin	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.25	0.25	UJ	0.25	0.25	UJ	0.25	0.25	UJ
Metals (mg/kg)									
Aluminum	14,000	4		14,000	4		14,000	4	
Antimony	0.23	0.15	J	0.15	0.15	UJ	0.11	0.15	J
Arsenic	1.5	0.3	J	1.5	0.3	J	1.5	0.3	J
Barium	160	0.2		170	0.2		160	0.2	
Beryllium	0.54	0.3	J	0.63	0.3	J	0.56	0.3	J
Cadmium	0.21	0.08		0.15	0.08		0.17	0.08	
Calcium (Ca)	4,900	15	J	6,600	15		6,800	15	J
Chromium[2]	10	0.2		10	0.2		10	0.2	
Cobalt	5.6	0.08	J	5.5	0.08	J	5.4	0.08	J
Copper	30	0.2	J	22	0.2	J	29	0.2	J
Iron (Fe)	9,900	8		10,000	8		10,000	8	
Lead	9	0.05	J	8.6	0.05	J	8.6	0.05	J
Magnesium (Mg)	4,300	5	J	4,300	5	J	4,400	5	
Manganese (Mn)	410	0.08		400	0.08		390	0.08	
Mercury	0.037	0.042	J	0.016	0.044	J	0.018	0.042	J
Nickel	8.8	0.2		8.6	0.2		8.7	0.2	J
Potassium (K)	1,500	8	J	1,500	8	J	1,400	8	J
Selenium	1.1	0.1	J	1	0.1	J	1.1	0.1	
Silver	0.039	0.05	J	0.031	0.05	J	0.044	0.05	J
Sodium (Na)	50	8		47	8		48	8	
Thallium	0.087	0.05	J	0.078	0.05	J	0.069	0.05	J
Vanadium	18	0.1	J	17	0.1	J	18	0.1	
Zinc	25	1.5	J	24	1.5		24	1.5	J

Notes:
< = less than LOD
LOD = Level of Detection
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated not detected

TABLE B-T23
ANALYTICAL RESULTS FOR GRID T23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	T23			T23			T23		
Sample Name	P3IF-SS-IS-SO-T023			P3IF-SS-IS-SO-T523			P3IF-SS-IS-SO-T623		
Date Collected	June 15, 2023			June 15, 2023			June 15, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,4,6-Trinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,4-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
3-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
4-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitroglycerin	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.25	0.25	UJ	0.25	0.25	UJ	0.25	0.25	UJ
Metals (mg/kg)									
Aluminum	15,000	4		15,000	4		11,000	4	J
Antimony	0.18	0.15	J	0.36	0.15	J	0.23	0.15	J
Arsenic	1.9	0.3		1.8	0.3		1.6	0.3	J
Barium	270	0.2		250	0.2		250	0.2	
Beryllium	0.67	0.3	J	0.69	0.3	J	0.55	0.3	J
Cadmium	0.93	0.08		0.61	0.08		1.1	0.08	
Calcium (Ca)	6,500	15		7,000	15		6,500	15	J
Chromium[2]	22	0.2		15	0.2		14	0.2	
Cobalt	5.3	0.08		5.1	0.08		4.3	0.08	J
Copper	220	0.2		150	0.2		220	0.2	J
Iron (Fe)	11,000	8		10,000	8		8,400	8	J
Lead	14	0.05		12	0.05		14	0.05	J
Magnesium (Mg)	5,000	5		5,000	5		3,700	5	J
Manganese (Mn)	480	0.08		440	0.08		420	0.08	J
Mercury	0.022	0.046	J	0.022	0.042	J	0.02	0.041	J
Nickel	14	0.2		11	0.2		11	0.2	
Potassium (K)	1,800	8		1,800	8		1,500	8	J
Selenium	1	0.1		0.94	0.1		0.88	0.1	J
Silver	0.19	0.05		0.16	0.05		0.22	0.05	
Sodium (Na)	59	8		52	8		51	8	
Thallium	0.077	0.05	J	0.076	0.05	J	0.061	0.05	J
Vanadium	20	0.1		19	0.1		15	0.1	J
Zinc	40	1.5		33	1.5		37	1.5	J

Notes:
< = less than LOD
LOD = Level of Detection
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated not detected

TABLE B-T28
ANALYTICAL RESULTS FOR GRID T28
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	T28			T28			T28		
Sample Name	P3IF-SS-IS-SO-T028			P3IF-SS-IS-SO-T528			P3IF-SS-IS-SO-T628		
Date Collected	June 21, 2023			June 21, 2023			June 21, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,4,6-Trinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,4-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
3-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
4-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitroglycerin	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.25	0.25	UJ	0.25	0.25	UJ	0.25	0.25	UJ
Metals (mg/kg)									
Aluminum	18,000	4		17,000	4		22,000	4	
Antimony	0.15	0.15		0.086	0.15	J	0.089	0.15	J
Arsenic	1.7	0.3		1.7	0.3		1.9	0.3	J
Barium	340	0.2		300	0.2		320	0.2	
Beryllium	0.88	0.3	J	0.8	0.3	J	0.91	0.3	J
Cadmium	0.19	0.08	J	0.66	0.08	J	0.4	0.08	J
Calcium (Ca)	19,000	15		14,000	15		14,000	15	
Chromium[2]	12	0.2		14	0.2		15	0.2	
Cobalt	5.8	0.08		5.6	0.08		6.4	0.08	J
Copper	46	0.2	J	130	0.2	J	87	0.2	J
Iron (Fe)	13,000	8		13,000	8		15,000	8	
Lead	9.7	0.05		12	0.05		12	0.05	J
Magnesium (Mg)	6,500	5		6,100	5		7,200	5	
Manganese (Mn)	230	0.08		260	0.08		290	0.08	
Mercury	0.025	0.042	J	0.022	0.04	J	0.022	0.041	J
Nickel	12	0.2		13	0.2		13	0.2	J
Potassium (K)	1,400	8		1,500	8		2,000	8	
Selenium	1.2	0.1		1.3	0.1		1.5	0.1	J
Silver	0.051	0.05	J	0.12	0.05		0.078	0.05	J
Sodium (Na)	54	8		50	8		53	8	
Thallium	0.072	0.05	J	0.07	0.05	J	0.086	0.05	J
Vanadium	17	0.1		17	0.1		22	0.1	
Zinc	25	1.5	J	31	1.5		42	1.5	J

Notes:
< = less than LOD
LOD = Level of Detection
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated not detected

TABLE B-T32
ANALYTICAL RESULTS FOR GRID T32
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	T32			T32			T32		
Sample Name	P3IF-SS-IS-SO-T032			P3IF-SS-IS-SO-T532			P3IF-SS-IS-SO-T632		
Date Collected	June 9, 2023			June 9, 2023			June 9, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
1,3-Dinitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,4,6-Trinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,4-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,6-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
3-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
4-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Nitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Nitroglycerin	0.15	0.15	U	0.15	0.15	U	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	0.25	0.25	U	0.25	0.25	U	0.25	0.25	U
Metals (mg/kg)									
Aluminum	13,000	4		15,000	4		12,000	4	
Antimony	0.15	0.15	U	0.15	0.15	U	0.11	0.15	J
Arsenic	1.3	0.3		1.2	0.3		1.3	0.3	
Barium	170	0.2		160	0.2		150	0.2	
Beryllium	0.44	0.3	J	0.52	0.3	J	0.39	0.3	J
Cadmium	0.45	0.08	J	0.19	0.08	J	0.28	0.08	
Calcium (Ca)	2,600	15		2,800	15		2,500	15	
Chromium[2]	11	0.2		10	0.2		9.5	0.2	
Cobalt	4.4	0.08		4.8	0.08		4.1	0.08	
Copper	79	0.2	J	32	0.2	J	54	0.2	
Iron (Fe)	8,600	8		9,600	8		8,200	8	
Lead	11	0.05		8.5	0.05		10	0.05	
Magnesium (Mg)	4,700	5		5,500	5		4,300	5	
Manganese (Mn)	460	0.08		400	0.08		410	0.08	
Mercury	0.038	0.042	J	0.036	0.044	J	0.037	0.043	J
Nickel	8.3	0.2		8.2	0.2		7.3	0.2	
Potassium (K)	960	8		940	8		900	8	
Selenium	0.95	0.1		0.88	0.1		0.85	0.1	
Silver	0.055	0.05	J	0.038	0.05	J	0.04	0.05	J
Sodium (Na)	56	8		55	8		61	8	
Thallium	0.044	0.05	J	0.045	0.05	J	0.044	0.05	J
Vanadium	17	0.1		19	0.1		17	0.1	
Zinc	27	1.5		22	1.5		23	1.5	

Notes:
< = less than LOD
LOD = Level of Detection
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated not detected

TABLE B-T39
ANALYTICAL RESULTS FOR GRID T39
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	T39			T39			T39		
Sample Name	P3IF-SS-IS-SO-T039			P3IF-SS-IS-SO-T539			P3IF-SS-IS-SO-T639		
Date Collected	June 20, 2023			June 20, 2023			June 20, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,4,6-Trinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,4-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
3-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
4-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitroglycerin	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.25	0.25	UJ	0.25	0.25	UJ	0.25	0.25	UJ
Metals (mg/kg)									
Aluminum	16,000	4		20,000	4		20,000	4	
Antimony	0.15	0.15	U	0.15	0.15	U	0.15	0.15	U
Arsenic	1.2	0.3		1.3	0.3		1.2	0.3	
Barium	170	0.2		180	0.2		160	0.2	
Beryllium	0.57	0.3	J	0.73	0.3	J	0.51	0.3	J
Cadmium	0.19	0.08		0.18	0.08		0.16	0.08	
Calcium (Ca)	10,000	15		22,000	15		8,100	15	
Chromium[2]	11	0.2		12	0.2		12	0.2	
Cobalt	5.2	0.08		5.6	0.08		5.4	0.08	
Copper	27	0.2		28	0.2		22	0.2	
Iron (Fe)	11,000	8		12,000	8		11,000	8	
Lead	7.8	0.05		7.9	0.05		7.5	0.05	
Magnesium (Mg)	5,800	5		7,000	5		7,500	5	
Manganese (Mn)	410	0.08		430	0.08		360	0.08	
Mercury	0.018	0.041	J	0.017	0.042	J	0.02	0.042	J
Nickel	9.1	0.2		11	0.2		9.1	0.2	
Potassium (K)	1,300	8		1,500	8		1,200	8	
Selenium	1.2	0.1		1	0.1		1.2	0.1	
Silver	0.032	0.05	J	0.029	0.05	J	0.031	0.05	J
Sodium (Na)	55	8		59	8		61	8	
Thallium	0.051	0.05	J	0.064	0.05	J	0.05	0.05	J
Vanadium	20	0.1		20	0.1		22	0.1	
Zinc	24	1.5		25	1.5		25	1.5	

Notes:
< = less than LOD
LOD = Level of Detection
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated not detected

TABLE B-U28
ANALYTICAL RESULTS FOR GRID U28
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	U28			U28			U28		
Sample Name	P3IF-SS-IS-SO-U028			P3IF-SS-IS-SO-U528			P3IF-SS-IS-SO-U628		
Date Collected	June 21, 2023			June 21, 2023			June 21, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,4,6-Trinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,4-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
3-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
4-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitroglycerin	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.25	0.25	UJ	0.25	0.25	UJ	0.25	0.25	UJ
Metals (mg/kg)									
Aluminum	23,000	4		23,000	4		24,000	4	
Antimony	0.15	0.15		0.15	0.15		0.15	0.15	
Arsenic	1.1	0.3		1	0.3		1.1	0.3	
Barium	670	0.2		480	0.2		470	0.2	
Beryllium	1.1	0.3		1.1	0.3		1	0.3	
Cadmium	0.13	0.08		0.2	0.08		0.17	0.08	
Calcium (Ca)	21,000	15		26,000	15		27,000	15	
Chromium[2]	13	0.2		14	0.2		14	0.2	
Cobalt	6.5	0.08		6.4	0.08		6.6	0.08	
Copper	27	0.2	J	48	0.2	J	32	0.2	
Iron (Fe)	14,000	8		14,000	8		15,000	8	
Lead	11	0.05		12	0.05		11	0.05	
Magnesium (Mg)	7,800	5		7,500	5		8,000	5	
Manganese (Mn)	300	0.08		290	0.08		320	0.08	
Mercury	0.014	0.042	J	0.013	0.042	J	0.016	0.042	J
Nickel	16	0.2		16	0.2		15	0.2	
Potassium (K)	2,800	8		3,000	8		2,800	8	
Selenium	1.6	0.1		1.6	0.1		1.6	0.1	
Silver	0.029	0.05	J	0.049	0.05	J	0.037	0.05	J
Sodium (Na)	65	8		86	8		65	8	
Thallium	0.1	0.05		0.1	0.05		0.098	0.05	J
Vanadium	15	0.1		14	0.1		17	0.1	
Zinc	25	1.5		26	1.5		26	1.5	

Notes:
< = less than LOD
LOD = Level of Detection
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated not detected

TABLE B-U32
ANALYTICAL RESULTS FOR GRID U32
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	U32			U32			U32		
Sample Name	P3IF-SS-IS-SO-U032			P3IF-SS-IS-SO-U532			P3IF-SS-IS-SO-U632		
Date Collected	June 9, 2023			June 9, 2023			June 9, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
1,3-Dinitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,4,6-Trinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,4-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,6-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
3-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
4-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Nitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Nitroglycerin	0.15	0.15	U	0.15	0.15	U	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	0.25	0.25	U	0.25	0.25	U	0.25	0.25	U
Metals (mg/kg)									
Aluminum	12,000	4		15,000	4		11,000	4	
Antimony	0.22	0.15		0.15	0.15	U	0.076	0.15	J
Arsenic	1.1	0.3		1.2	0.3		1.1	0.3	
Barium	150	0.2		160	0.2		140	0.2	
Beryllium	0.4	0.3	J	0.5	0.3	J	0.4	0.3	J
Cadmium	0.47	0.08		0.29	0.08		0.27	0.08	
Calcium (Ca)	2,200	15		2,500	15		2,200	15	
Chromium[2]	11	0.2		11	0.2		8.8	0.2	
Cobalt	4.2	0.08		5	0.08		4	0.08	
Copper	96	0.2	J	44	0.2	J	52	0.2	J
Iron (Fe)	7,800	8		9,600	8		7,800	8	
Lead	11	0.05		9.4	0.05		8.8	0.05	
Magnesium (Mg)	4,500	5		5,600	5		3,900	5	
Manganese (Mn)	420	0.08		470	0.08		410	0.08	
Mercury	0.039	0.043	J	0.033	0.043	J	0.032	0.043	J
Nickel	8.2	0.2		8.3	0.2		6.8	0.2	
Potassium (K)	800	8		930	8		790	8	
Selenium	0.86	0.1		0.7	0.1		0.83	0.1	
Silver	0.06	0.05	J	0.035	0.05	J	0.048	0.05	J
Sodium (Na)	55	8		60	8		50	8	
Thallium	0.052	0.05	J	0.044	0.05	J	0.038	0.05	J
Vanadium	16	0.1		20	0.1		16	0.1	
Zinc	26	1.5		24	1.5		21	1.5	

Notes:
< = less than LOD
LOD = Level of Detection
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated not detected

TABLE B-U33
ANALYTICAL RESULTS FOR GRID U33
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	U33			U33			U33		
Sample Name	P3IF-SS-IS-SO-U033			P3IF-SS-IS-SO-U533			P3IF-SS-IS-SO-U633		
Date Collected	June 12, 2023			June 12, 2023			June 12, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
1,3-Dinitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,4,6-Trinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,4-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,6-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
3-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
4-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Nitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Nitroglycerin	0.15	0.15	U	0.15	0.15	U	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	0.25	0.25	U	0.25	0.25	U	0.25	0.25	U
Metals (mg/kg)									
Aluminum	9,500	4		11,000	4		9,600	4	
Antimony	0.15	0.15	U	0.15	0.15	U	0.15	0.15	U
Arsenic	1.2	0.3		1.2	0.3		1.1	0.3	
Barium	160	0.2		210	0.2		170	0.2	
Beryllium	0.39	0.3	J	0.48	0.3	J	0.38	0.3	J
Cadmium	0.32	0.08		0.24	0.08		0.32	0.08	
Calcium (Ca)	2,400	15		3,400	15		2,400	15	
Chromium[2]	8.8	0.2		8	0.2		8.5	0.2	
Cobalt	3.9	0.08		4.3	0.08		3.8	0.08	
Copper	69	0.2	J	41	0.2	J	62	0.2	
Iron (Fe)	7,300	8		7,500	8		7,300	8	
Lead	9	0.05		8.6	0.05		9	0.05	
Magnesium (Mg)	3,500	5		3,800	5		3,600	5	
Manganese (Mn)	310	0.08		340	0.08		290	0.08	
Mercury	0.022	0.042	J	0.18	0.043		0.018	0.041	J
Nickel	7	0.2		7.2	0.2		6.8	0.2	
Potassium (K)	860	8		1,000	8		830	8	
Selenium	0.94	0.1		1.1	0.1		0.61	0.1	
Silver	0.054	0.05	J	0.023	0.05	J	0.03	0.05	J
Sodium (Na)	46	8		47	8		48	8	
Thallium	0.044	0.05	J	0.074	0.05	J	0.041	0.05	J
Vanadium	12	0.1		13	0.1		12	0.1	
Zinc	23	1.5		23	1.5		24	1.5	

Notes:
< = less than LOD
LOD = Level of Detection
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated not detected

TABLE B-U35
ANALYTICAL RESULTS FOR GRID U35
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	U35			U35			U35		
Sample Name	P3IF-SS-IS-SO-U035			P3IF-SS-IS-SO-U535			P3IF-SS-IS-SO-U635		
Date Collected	June 15, 2023			June 15, 2023			June 15, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,4,6-Trinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,4-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
3-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
4-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitroglycerin	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.25	0.25	UJ	0.25	0.25	UJ	0.25	0.25	UJ
Metals (mg/kg)									
Aluminum	13,000	4		11,000	4		10,000	4	
Antimony	0.28	0.15		0.18	0.15	J	0.086	0.15	J
Arsenic	2.2	0.3		1.9	0.3		1.7	0.3	
Barium	180	0.2		180	0.2		170	0.2	
Beryllium	0.65	0.3	J	0.63	0.3	J	0.56	0.3	J
Cadmium	0.35	0.08		0.35	0.08		0.39	0.08	
Calcium (Ca)	3,700	15		4,200	15		3,800	15	
Chromium[2]	11	0.2		10	0.2		9.3	0.2	
Cobalt	5.6	0.08		5.2	0.08		5.1	0.08	
Copper	55	0.2		67	0.2		62	0.2	
Iron (Fe)	9,700	8		9,100	8		8,300	8	
Lead	11	0.05		10	0.05		11	0.05	
Magnesium (Mg)	3,800	5		3,400	5		3,200	5	
Manganese (Mn)	440	0.08		440	0.08		430	0.08	
Mercury	0.021	0.041	J	0.025	0.041	J	0.026	0.041	J
Nickel	9.3	0.2		8.9	0.2		8.2	0.2	
Potassium (K)	1,400	8		1,300	8		1,200	8	
Selenium	1.3	0.1		1.1	0.1		0.97	0.1	
Silver	0.071	0.05	J	0.059	0.05	J	0.079	0.05	J
Sodium (Na)	48	8		47	8		47	8	
Thallium	0.1	0.05		0.084	0.05	J	0.076	0.05	J
Vanadium	19	0.1		17	0.1		16	0.1	
Zinc	27	1.5		25	1.5		26	1.5	

Notes:
< = less than LOD
LOD = Level of Detection
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated not detected

TABLE B-U37
ANALYTICAL RESULTS FOR GRID U37
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	U37			U37			U37		
Sample Name	P3IF-SS-IS-SO-U037			P3IF-SS-IS-SO-U537			P3IF-SS-IS-SO-U637		
Date Collected	June 15, 2023			June 15, 2023			June 15, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,4,6-Trinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,4-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
3-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
4-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitroglycerin	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.25	0.25	UJ	0.25	0.25	UJ	0.25	0.25	UJ
Metals (mg/kg)									
Aluminum	12,000	4		13,000	4		13,000	4	
Antimony	0.15	0.15	U	0.15	0.15	U	0.3	0.15	
Arsenic	2.5	0.3		2.7	0.3		2.7	0.3	
Barium	180	0.2		190	0.2		190	0.2	
Beryllium	0.64	0.3	J	0.69	0.3	J	0.71	0.3	J
Cadmium	0.21	0.08		0.26	0.08		0.3	0.08	
Calcium (Ca)	3,800	15		4,200	15		4,600	15	
Chromium[2]	9.7	0.2		10	0.2		10	0.2	
Cobalt	5	0.08		5.1	0.08		5.1	0.08	
Copper	28	0.2		36	0.2		37	0.2	
Iron (Fe)	10,000	8		10,000	8		10,000	8	
Lead	9.6	0.05		10	0.05		10	0.05	
Magnesium (Mg)	3,100	5		3,300	5		3,400	5	
Manganese (Mn)	350	0.08		350	0.08		390	0.08	
Mercury	0.02	0.042	J	0.02	0.042	J	0.021	0.041	J
Nickel	8.4	0.2		8.6	0.2		8.8	0.2	
Potassium (K)	1,400	8		1,400	8		1,500	8	
Selenium	0.96	0.1		0.97	0.1		1.2	0.1	
Silver	0.053	0.05	J	0.064	0.05	J	0.067	0.05	J
Sodium (Na)	39	8		39	8		41	8	
Thallium	0.09	0.05	J	0.08	0.05	J	0.089	0.05	J
Vanadium	20	0.1		20	0.1		21	0.1	
Zinc	24	1.5		25	1.5		29	1.5	

Notes:
< = less than LOD
LOD = Level of Detection
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated not detected

TABLE B-V30
ANALYTICAL RESULTS FOR GRID V30
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	V30			V30			V30		
Sample Name	P3IF-SS-IS-SO-V030			P3IF-SS-IS-SO-V530			P3IF-SS-IS-SO-V630		
Date Collected	June 16, 2023			June 16, 2023			June 16, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
1,3-Dinitrobenzene	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
2,4,6-Trinitrotoluene	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
2,4-Dinitrotoluene	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
2,6-Dinitrotoluene	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
2-Amino-4,6-dinitrotoluene	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
2-Nitrotoluene	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
3-Nitrotoluene	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
4-Amino-2,6-Dinitrotoluene	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
4-Nitrotoluene	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
Nitrobenzene	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
Nitroglycerin	0.3	0.3	UJ	0.3	0.3	UJ	0.3	0.3	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
Pentaerythritol tetranitrate (PETN)	0.5	0.5	UJ	0.5	0.5	UJ	0.5	0.5	UJ
Metals (mg/kg)									
Aluminum	15,000	4		16,000	4		17,000	4	
Antimony	0.15	0.15	U	0.15	0.15	U	0.15	0.15	U
Arsenic	1.4	0.3		1.4	0.3		1.5	0.3	
Barium	210	0.2		220	0.2		230	0.2	
Beryllium	0.58	0.3	J	0.59	0.3	J	0.69	0.3	J
Cadmium	0.55	0.08		0.45	0.08		0.4	0.08	
Calcium (Ca)	4,300	15		3,800	15		4,100	15	
Chromium[2]	13	0.2		13	0.2		13	0.2	
Cobalt	4.6	0.08		5	0.08		5	0.08	
Copper	140	0.2		100	0.2		89	0.2	
Iron (Fe)	7,800	8		8,400	8		8,500	8	
Lead	10	0.05		10	0.05		9.9	0.05	
Magnesium (Mg)	5,700	5		6,100	5		6,400	5	
Manganese (Mn)	330	0.08		390	0.08		440	0.08	
Mercury	0.025	0.041	J	0.029	0.042	J	0.028	0.041	J
Nickel	9.8	0.2		9.7	0.2		9.9	0.2	
Potassium (K)	1,200	8		1,200	8		1,100	8	
Selenium	0.84	0.1		0.98	0.1		0.94	0.1	
Silver	0.098	0.05	J	0.082	0.05	J	0.084	0.05	J
Sodium (Na)	48	8		51	8		50	8	
Thallium	0.061	0.05	J	0.063	0.05	J	0.064	0.05	J
Vanadium	14	0.1		15	0.1		16	0.1	
Zinc	30	1.5		31	1.5		29	1.5	

Notes:
< = less than LOD
LOD = Level of Detection
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated not detected

TABLE B-V33
ANALYTICAL RESULTS FOR GRID V33
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	V33			V33			V33		
Sample Name	P3IF-SS-IS-SO-V033			P3IF-SS-IS-SO-V533			P3IF-SS-IS-SO-V633		
Date Collected	June 12, 2023			June 12, 2023			June 12, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
1,3-Dinitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,4,6-Trinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,4-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,6-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
3-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
4-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Nitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Nitroglycerin	0.15	0.15	U	0.15	0.15	U	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	0.25	0.25	U	0.25	0.25	U	0.25	0.25	U
Metals (mg/kg)									
Aluminum	14,000	4		12,000	4		13,000	4	
Antimony	0.15	0.15	U	0.15	0.15	U	0.15	0.15	U
Arsenic	1.3	0.3		1.4	0.3		1.3	0.3	
Barium	190	0.2		200	0.2		180	0.2	
Beryllium	0.48	0.3	J	0.47	0.3	J	0.47	0.3	J
Cadmium	0.36	0.08		0.36	0.08		0.23	0.08	
Calcium (Ca)	2,400	15		2,700	15		2,500	15	
Chromium[2]	11	0.2		9.9	0.2		9.3	0.2	
Cobalt	4.8	0.08		4.8	0.08		4.7	0.08	
Copper	80	0.2	J	72	0.2		44	0.2	J
Iron (Fe)	9,000	8		8,700	8		8,600	8	
Lead	11	0.05		11	0.05		9.3	0.05	
Magnesium (Mg)	5,000	5		4,400	5		4,700	5	
Manganese (Mn)	360	0.08		390	0.08		350	0.08	
Mercury	0.023	0.041	J	0.021	0.042	J	0.02	0.043	J
Nickel	8.8	0.2		8.5	0.2		7.9	0.2	
Potassium (K)	1,100	8		1,100	8		1,100	8	
Selenium	0.86	0.1		1	0.1		1.1	0.1	
Silver	0.059	0.05	J	0.056	0.05	J	0.031	0.05	J
Sodium (Na)	49	8		55	8		49	8	
Thallium	0.06	0.05	J	0.064	0.05	J	0.051	0.05	J
Vanadium	15	0.1		14	0.1		14	0.1	
Zinc	30	1.5		27	1.5		25	1.5	

Notes:
< = less than LOD
LOD = Level of Detection
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated not detected

TABLE B-V36
ANALYTICAL RESULTS FOR GRID V36
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	V36			V36			V36		
Sample Name	P3IF-SS-IS-SO-V036			P3IF-SS-IS-SO-V536			P3IF-SS-IS-SO-V636		
Date Collected	June 15, 2023			June 15, 2023			15 Jun 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,4,6-Trinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,4-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
3-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
4-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitroglycerin	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.25	0.25	UJ	0.25	0.25	UJ	0.25	0.25	UJ
Metals (mg/kg)									
Aluminum	10,000	4		11,000	4		12,000	4	
Antimony	0.15	0.15	U	0.15	0.15	U	0.15	0.15	U
Arsenic	1.8	0.3		2.2	0.3		2.1	0.3	
Barium	180	0.2		200	0.2		190	0.2	
Beryllium	0.6	0.3	J	0.7	0.3	J	0.6	0.3	J
Cadmium	0.28	0.08		0.28	0.08		0.25	0.08	
Calcium (Ca)	3,700	15		4,200	15		4,100	15	
Chromium[2]	8.7	0.2		9.5	0.2		9.7	0.2	
Cobalt	4.9	0.08		5.2	0.08		5.3	0.08	
Copper	41	0.2		40	0.2		41	0.2	
Iron (Fe)	8,500	8		9,400	8		9,700	8	
Lead	9.4	0.05		11	0.05		10	0.05	
Magnesium (Mg)	2,800	5		3,000	5		3,300	5	
Manganese (Mn)	370	0.08		400	0.08		410	0.08	
Mercury	0.017	0.041	J	0.019	0.042	J	0.018	0.058	J
Nickel	8	0.2		8.3	0.2		8.6	0.2	
Potassium (K)	1,200	8		1,400	8		1,400	8	
Selenium	0.95	0.1		1.2	0.1		0.87	0.1	
Silver	0.06	0.05	J	0.055	0.05	J	0.056	0.05	J
Sodium (Na)	37	8		40	8		45	8	
Thallium	0.073	0.05	J	0.087	0.05	J	0.081	0.05	J
Vanadium	17	0.1		18	0.1		19	0.1	
Zinc	31	1.5		25	1.5		24	1.5	

Notes:
< = less than LOD
LOD = Level of Detection
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated not detected

TABLE B-W26
ANALYTICAL RESULTS FOR GRID W26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	W26			W26			W26		
Sample Name	P3IF-SS-IS-SO-W026			P3IF-SS-IS-SO-W526			P3IF-SS-IS-SO-W626		
Date Collected	June 23, 2023			June 23, 2023			June 23, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,4,6-Trinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,4-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
3-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
4-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitroglycerin	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.25	0.25	UJ	0.25	0.25	UJ	0.25	0.25	UJ
Metals (mg/kg)									
Aluminum	25,000	4		21,000	4		25,000	4	
Antimony	0.16	0.15	J	0.15	0.15	J	0.15	0.15	J
Arsenic	1.5	0.3		1.2	0.3		1.4	0.3	
Barium	420	0.2		360	0.2		360	0.2	
Beryllium	0.76	0.3	J	0.62	0.3	J	0.74	0.3	J
Cadmium	0.56	0.08		0.59	0.08		0.47	0.08	
Calcium (Ca)	5,800	15		4,500	15		7,500	15	
Chromium[2]	19	0.2		18	0.2		18	0.2	
Cobalt	6.8	0.08		5.8	0.08		6.3	0.08	
Copper	100	0.2		120	0.2		80	0.2	
Iron (Fe)	16,000	8		14,000	8		15,000	8	
Lead	17	0.05		15	0.05		15	0.05	
Magnesium (Mg)	8,600	5		7,000	5		8,300	5	
Manganese (Mn)	520	0.08		400	0.08		420	0.08	
Mercury	0.032	0.04	J	0.025	0.041	J	0.036	0.041	J
Nickel	14	0.2		13	0.2		13	0.2	
Potassium (K)	1,900	8		1,500	8		1,700	8	
Selenium	1.2	0.1		1.2	0.1		1.3	0.1	
Silver	0.16	0.05		0.12	0.05		0.11	0.05	
Sodium (Na)	63	8		57	8		61	8	
Thallium	0.088	0.05	J	0.067	0.05	J	0.08	0.05	J
Vanadium	27	0.1		22	0.1		26	0.1	
Zinc	38	1.5		34	1.5		33	1.5	

Notes:
< = less than LOD
LOD = Level of Detection
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated not detected

TABLE B-W28
ANALYTICAL RESULTS FOR GRID W28
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	W28			W28			W28		
Sample Name	P3IF-SS-IS-SO-W028			P3IF-SS-IS-SO-W528			P3IF-SS-IS-SO-W628		
Date Collected	June 23, 2023			June 23, 2023			June 23, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,4,6-Trinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,4-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
3-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
4-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitroglycerin	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.25	0.25	UJ	0.25	0.25	UJ	0.25	0.25	UJ
Metals (mg/kg)									
Aluminum	22,000	4		20,000	4		27,000	4	
Antimony	0.2	0.15		0.16	0.15	J	0.18	0.15	J
Arsenic	1.4	0.3		1.3	0.3		1.5	0.3	
Barium	620	0.2		600	0.2		790	0.2	
Beryllium	0.67	0.3	J	0.71	0.3	J	0.91	0.3	J
Cadmium	0.44	0.08		0.51	0.08		0.52	0.08	
Calcium (Ca)	11,000	15		14,000	15		18,000	15	
Chromium[2]	17	0.2		16	0.2		20	0.2	
Cobalt	5.9	0.08		5.8	0.08		7	0.08	
Copper	80	0.2		95	0.2		120	0.2	
Iron (Fe)	15,000	8		15,000	8		19,000	8	
Lead	14	0.05		15	0.05		18	0.05	
Magnesium (Mg)	7,600	5		6,800	5		8,900	5	
Manganese (Mn)	410	0.08		430	0.08		500	0.08	
Mercury	0.081	0.041	J	0.084	0.041	J	0.03	0.041	J
Nickel	13	0.2		13	0.2		15	0.2	
Potassium (K)	1,700	8		1,800	8		2,600	8	
Selenium	1.6	0.1		1.6	0.1		1.9	0.1	
Silver	0.1	0.05		0.12	0.05		0.11	0.05	
Sodium (Na)	62	8		54	8		69	8	
Thallium	0.077	0.05	J	0.077	0.05	J	0.11	0.05	
Vanadium	24	0.1		20	0.1		26	0.1	
Zinc	31	1.5		32	1.5		37	1.5	

Notes:
< = less than LOD
LOD = Level of Detection
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated not detected

TABLE B-W31
ANALYTICAL RESULTS FOR GRID W31
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	W31			W31			W31		
Sample Name	P3IF-SS-IS-W031			P3IF-SS-IS-W531			P3IF-SS-IS-W631		
Date Collected	June 16, 2023			June 16, 2023			June 16, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,4,6-Trinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,4-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
3-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
4-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitroglycerin	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.25	0.25	UJ	0.25	0.25	UJ	0.25	0.25	UJ
Metals (mg/kg)									
Aluminum	18,000	4		16,000	4		16,000	4	
Antimony	0.083	0.15	J	0.15	0.15	U	0.15	0.15	U
Arsenic	1.3	0.3		1.1	0.3		1.3	0.3	
Barium	150	0.2		150	0.2		160	0.2	
Beryllium	0.51	0.3	J	0.56	0.3	J	0.53	0.3	J
Cadmium	0.33	0.08		0.26	0.08		0.41	0.08	
Calcium (Ca)	3,300	15		3,100	15		3,900	15	
Chromium[2]	13	0.2		11	0.2		12	0.2	
Cobalt	5.6	0.08		5	0.08		5.2	0.08	
Copper	59	0.2		54	0.2		95	0.2	
Iron (Fe)	11,000	8		9,800	8		10,000	8	
Lead	10	0.05		9.3	0.05		10	0.05	
Magnesium (Mg)	7,600	5		6,600	5		6,800	5	
Manganese (Mn)	310	0.08		270	0.08		300	0.08	
Mercury	0.018	0.041	J	0.017	0.041	J	0.019	0.041	J
Nickel	9.6	0.2		8.8	0.2		9.5	0.2	
Potassium (K)	930	8		890	8		900	8	
Selenium	1	0.1		0.75	0.1		0.6	0.1	
Silver	0.077	0.05	J	0.061	0.05	J	0.07	0.05	J
Sodium (Na)	74	8		62	8		65	8	
Thallium	0.18	0.05		0.071	0.05	J	0.057	0.05	J
Vanadium	21	0.1		18	0.1		19	0.1	
Zinc	30	1.5		26	1.5		30	1.5	

Notes:
< = less than LOD
LOD = Level of Detection
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated not detected

TABLE B-W34
ANALYTICAL RESULTS FOR GRID W34
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	W34			W34			W34		
Sample Name	P3IF-SS-IS-SO-W034			P3IF-SS-IS-SO-W534			P3IF-SS-IS-SO-W634		
Date Collected	June 16, 2023			June 16, 2023			June 16, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,4,6-Trinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,4-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
3-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
4-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitroglycerin	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.25	0.25	UJ	0.25	0.25	UJ	0.25	0.25	UJ
Metals (mg/kg)									
Aluminum	18,000	4	J	19,000	4		14,000	4	
Antimony	0.15	0.15	UJ	0.15	0.15	UJ	0.077	0.15	J
Arsenic	1.3	0.3		1.3	0.3	J	1.4	0.3	J
Barium	250	0.2		270	0.2		240	0.2	J
Beryllium	0.65	0.3	J	0.67	0.3	J	0.54	0.3	J
Cadmium	0.29	0.08		0.21	0.08		0.37	0.08	
Calcium (Ca)	3,000	15		3,300	15	J	2,800	15	J
Chromium[2]	13	0.2		14	0.2	J	11	0.2	
Cobalt	5.8	0.08	J	6.1	0.08	J	5.3	0.08	J
Copper	50	0.2	J	39	0.2		64	0.2	J
Iron (Fe)	11,000	8	J	12,000	8		10,000	8	
Lead	9.5	0.05		9.4	0.05	J	11	0.05	
Magnesium (Mg)	6,200	5	J	6,500	5	J	4,900	5	J
Manganese (Mn)	390	0.08	J	410	0.08		390	0.08	
Mercury	0.013	0.041	J	0.014	0.041	J	0.017	0.042	J
Nickel	9.6	0.2		10	0.2	J	8.9	0.2	J
Potassium (K)	1,500	8	J	1,600	8	J	1,200	8	J
Selenium	0.89	0.1		0.68	0.1		0.82	0.1	
Silver	0.054	0.05	J	0.03	0.05	J	0.072	0.05	J
Sodium (Na)	60	8		62	8		57	8	
Thallium	0.068	0.05	J	0.075	0.05	J	0.061	0.05	J
Vanadium	23	0.1	J	24	0.1		20	0.1	
Zinc	30	1.5		30	1.5	J	30	1.5	J

Notes:
< = less than LOD
LOD = Level of Detection
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated not detected

TABLE B-W39
ANALYTICAL RESULTS FOR GRID W39
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	W39			W39			W39		
Sample Name	P3IF-SS-IS-SO-W039			P3IF-SS-IS-SO-W539			P3IF-SS-IS-SO-W639		
Date Collected	June 20, 2023			June 20, 2023			June 20, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,4,6-Trinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,4-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
2-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
3-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
4-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Nitroglycerin	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	UJ	0.075	0.075	UJ	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.25	0.25	UJ	0.25	0.25	UJ	0.25	0.25	UJ
Metals (mg/kg)									
Aluminum	20,000	4		18,000	4		17,000	4	
Antimony	0.15	0.15	U	0.15	0.15	U	0.15	0.15	U
Arsenic	1.2	0.3		1.2	0.3		1.1	0.3	
Barium	410	0.2		320	0.2		350	0.2	
Beryllium	0.93	0.3	J	0.88	0.3	J	0.84	0.3	J
Cadmium	0.075	0.08	J	0.1	0.08		0.097	0.08	J
Calcium (Ca)	21,000	15		20,000	15		19,000	15	
Chromium[2]	11	0.2		9.6	0.2		9.7	0.2	
Cobalt	6	0.08		5.8	0.08		5.5	0.08	
Copper	9.6	0.2		9.9	0.2		14	0.2	
Iron (Fe)	15,000	8		14,000	8		14,000	8	
Lead	8.4	0.05		7.9	0.05		7.4	0.05	
Magnesium (Mg)	7,700	5		7,100	5		6,900	5	
Manganese (Mn)	330	0.08		380	0.08		330	0.08	
Mercury	0.011	0.041	J	0.042	0.042	U	0.012	0.041	J
Nickel	13	0.2		12	0.2		12	0.2	
Potassium (K)	1,200	8		1,100	8		1,100	8	
Selenium	1.3	0.1		1.2	0.1		1.2	0.1	
Silver	0.035	0.05	J	0.022	0.05	J	0.039	0.05	J
Sodium (Na)	49	8		45	8		42	8	
Thallium	0.069	0.05	J	0.06	0.05	J	0.056	0.05	J
Vanadium	14	0.1		13	0.1		13	0.1	
Zinc	26	1.5		25	1.5		24	1.5	

Notes:
< = less than LOD
LOD = Level of Detection
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated not detected

TABLE B-X25
ANALYTICAL RESULTS FOR GRID X25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	X25			X25			X25		
Sample Name	P3IF-SS-IS-SO-X025			P3IF-SS-IS-SO-X525			P3IF-SS-IS-SO-X625		
Date Collected	June 20, 2023			June 20, 2023			June 20, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
1,3-Dinitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,4,6-Trinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,4-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,6-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
3-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
4-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Nitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Nitroglycerin	0.15	0.15	U	0.15	0.15	U	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	0.25	0.25	U	0.25	0.25	U	0.25	0.25	U
Metals (mg/kg)									
Aluminum	17,000	4		18,000	4		17,000	4	
Antimony	0.15	0.15	U	0.15	0.15	U	0.15	0.15	U
Arsenic	0.93	0.3		0.93	0.3		0.87	0.3	
Barium	430	0.2		390	0.2		420	0.2	
Beryllium	0.85	0.3	J	0.91	0.3	J	1	0.3	
Cadmium	0.49	0.08		0.51	0.08		0.52	0.08	
Calcium (Ca)	27,000	15		28,000	15		25,000	15	
Chromium[2]	13	0.2		13	0.2		13	0.2	
Cobalt	4.8	0.08		5	0.08		5	0.08	
Copper	99	0.2		89	0.2		100	0.2	
Iron (Fe)	11,000	8		11,000	8		11,000	8	
Lead	12	0.05		11	0.05		12	0.05	
Magnesium (Mg)	6,200	5		6,500	5		6,300	5	
Manganese (Mn)	490	0.08		490	0.08		460	0.08	
Mercury	0.019	0.042	J	0.085	0.042	J	0.026	0.04	J
Nickel	12	0.2		12	0.2		12	0.2	
Potassium (K)	1,600	8		1,600	8		1,600	8	
Selenium	1.4	0.1		1.6	0.1		1.4	0.1	
Silver	0.05	0.05	U	0.02	0.05	J	0.026	0.05	J
Sodium (Na)	51	8		52	8		51	8	
Thallium	0.045	0.05	J	0.045	0.05	J	0.046	0.05	J
Vanadium	15	0.1		15	0.1		15	0.1	
Zinc	27	1.5		27	1.5		28	1.5	

Notes:
< = less than LOD
LOD = Level of Detection
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated not detected

TABLE B-X33
ANALYTICAL RESULTS FOR GRID X33
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	X33			X33			X33		
Sample Name	P3IF-SS-IS-SO-X033			P3IF-SS-IS-SO-X533			P3IF-SS-IS-SO-X633		
Date Collected	June 16, 2023			June 16, 2023			June 16, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
1,3-Dinitrobenzene	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
2,4,6-Trinitrotoluene	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
2,4-Dinitrotoluene	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
2,6-Dinitrotoluene	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
2-Amino-4,6-dinitrotoluene	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
2-Nitrotoluene	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
3-Nitrotoluene	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
4-Amino-2,6-Dinitrotoluene	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
4-Nitrotoluene	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
Nitrobenzene	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
Nitroglycerin	0.3	0.3	UJ	0.3	0.3	UJ	0.3	0.3	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
Pentaerythritol tetranitrate (PETN)	0.5	0.5	UJ	0.5	0.5	UJ	0.5	0.5	UJ
Metals (mg/kg)									
Aluminum	13,000	4		14,000	4		12,000	4	
Antimony	0.23	0.15		0.087	0.15	J	0.15	0.15	U
Arsenic	1.2	0.3		1.2	0.3		1.1	0.3	
Barium	200	0.2		240	0.2		240	0.2	
Beryllium	0.55	0.3	J	0.59	0.3	J	0.48	0.3	J
Cadmium	0.4	0.08		0.28	0.08		0.33	0.08	
Calcium (Ca)	2,700	15		2,900	15		2,800	15	
Chromium[2]	11	0.2		11	0.2		9.8	0.2	
Cobalt	4.8	0.08		5.2	0.08		4.7	0.08	
Copper	84	0.2		58	0.2		69	0.2	
Iron (Fe)	7,600	8		8,300	8		7,200	8	
Lead	9.6	0.05		9.2	0.05		8.6	0.05	
Magnesium (Mg)	4,800	5		5,200	5		4,000	5	
Manganese (Mn)	380	0.08		400	0.08		380	0.08	
Mercury	0.018	0.041	J	0.016	0.041	J	0.019	0.041	J
Nickel	8.7	0.2		8.8	0.2		8.1	0.2	
Potassium (K)	1,100	8		1,200	8		1,100	8	
Selenium	0.65	0.1		0.71	0.1		0.75	0.1	
Silver	0.079	0.05	J	0.064	0.05	J	0.065	0.05	J
Sodium (Na)	44	8		46	8		43	8	
Thallium	0.087	0.05	J	0.07	0.05	J	0.066	0.05	J
Vanadium	12	0.1		14	0.1		12	0.1	
Zinc	28	1.5		27	1.5		25	1.5	

Notes:
< = less than LOD
LOD = Level of Detection
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated not detected

TABLE B-X36
ANALYTICAL RESULTS FOR GRID X36
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	X36			X36			X36		
Sample Name	P3IF-SS-IS-SO-X036			P3IF-SS-IS-SO-X536			P3IF-SS-IS-SO-X636		
Date Collected	June 16, 2023			June 16, 2023			June 16, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
1,3-Dinitrobenzene	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
2,4,6-Trinitrotoluene	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
2,4-Dinitrotoluene	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
2,6-Dinitrotoluene	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
2-Amino-4,6-dinitrotoluene	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
2-Nitrotoluene	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
3-Nitrotoluene	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
4-Amino-2,6-Dinitrotoluene	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
4-Nitrotoluene	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
Nitrobenzene	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
Nitroglycerin	0.3	0.3	UJ	0.3	0.3	UJ	0.3	0.3	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.15	0.15	UJ	0.15	0.15	UJ	0.15	0.15	UJ
Pentaerythritol tetranitrate (PETN)	0.5	0.5	UJ	0.5	0.5	UJ	0.5	0.5	UJ
Metals (mg/kg)									
Aluminum	12,000	4		12,000	4		11,000	4	
Antimony	0.15	0.15	U	0.15	0.15	U	0.15	0.15	U
Arsenic	1.3	0.3		1.4	0.3		1.4	0.3	
Barium	170	0.2		170	0.2		180	0.2	
Beryllium	0.46	0.3	J	0.5	0.3	J	0.54	0.3	J
Cadmium	0.23	0.08		0.27	0.08		0.3	0.08	
Calcium (Ca)	2,700	15		2,600	15		3,000	15	
Chromium[2]	8.2	0.2		9	0.2		8.9	0.2	
Cobalt	4.6	0.08		4.8	0.08		4.6	0.08	
Copper	32	0.2		46	0.2		47	0.2	
Iron (Fe)	7,400	8		7,600	8		7,500	8	
Lead	9.4	0.05		9.4	0.05		9.8	0.05	
Magnesium (Mg)	4,000	5		4,000	5		3,700	5	
Manganese (Mn)	390	0.08		370	0.08		390	0.08	
Mercury	0.017	0.041	J	0.015	0.041	J	0.019	0.04	J
Nickel	7.3	0.2		7.8	0.2		7.9	0.2	
Potassium (K)	1,000	8		1,000	8		1,000	8	
Selenium	0.84	0.1		0.87	0.1		0.96	0.1	
Silver	0.064	0.05	J	0.079	0.05	J	0.071	0.05	J
Sodium (Na)	43	8		47	8		39	8	
Thallium	0.084	0.05	J	0.096	0.05	J	0.066	0.05	J
Vanadium	13	0.1		13	0.1		12	0.1	
Zinc	23	1.5		23	1.5		24	1.5	

Notes:
< = less than LOD
LOD = Level of Detection
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated not detected

TABLE B-Z29
ANALYTICAL RESULTS FOR GRID Z29
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	Z29			Z29			Z29		
Sample Name	P3IF-SS-IS-SO-Z029			P3IF-SS-IS-SO-Z529			P3IF-SS-IS-SO-Z629		
Date Collected	June 8, 2023			June 8, 2023			June 8, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
1,3-Dinitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,4,6-Trinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,4-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2,6-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
2-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
3-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
4-Nitrotoluene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Nitroglycerin	0.15	0.15	U	0.15	0.15	U	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	U	0.075	0.075	U	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	0.25	0.25	U	0.25	0.25	U	0.25	0.25	U
Metals (mg/kg)									
Aluminum	21,000	4		23,000	4		22,000	4	
Antimony	0.15	0.15	U	0.15	0.15	U	0.15	0.15	UJ
Arsenic	1	0.3		1.1	0.3		1.1	0.3	
Barium	560	0.2		580	0.2		610	0.2	
Beryllium	0.88	0.3	J	1	0.3		0.96	0.3	J
Cadmium	0.28	0.08		0.24	0.08		0.27	0.08	
Calcium (Ca)	5,200	15		5,800	15		4,900	15	J
Chromium[2]	15	0.2		15	0.2		16	0.2	
Cobalt	5.6	0.08		5.9	0.08		5.8	0.08	
Copper	72	0.2		48	0.2		72	0.2	J
Iron (Fe)	13,000	8		15,000	8		15,000	8	
Lead	10	0.05		11	0.05		11	0.05	J
Magnesium (Mg)	8,000	5		8,600	5		8,500	5	
Manganese (Mn)	240	0.08		240	0.08		240	0.08	
Mercury	0.017	0.044	J	0.016	0.044	J	0.013	0.044	J
Nickel	12	0.2		12	0.2		12	0.2	
Potassium (K)	1,300	8		1,300	8		1,300	8	J
Selenium	1.4	0.1		1.5	0.1		1.3	0.1	J
Silver	0.076	0.05	J	0.064	0.05	J	0.065	0.05	J
Sodium (Na)	65	8		69	8		67	8	
Thallium	0.048	0.05	J	0.054	0.05	J	0.051	0.05	J
Vanadium	21	0.1		22	0.1		23	0.1	J
Zinc	29	1.5		30	1.5		29	1.5	

Notes:
< = less than LOD
LOD = Level of Detection
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated not detected

Appendix B.2 Buffer Area Soil Sampling Results

TABLE B-AA24
ANALYTICAL RESULTS FOR GRID AA24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AA24			AA24			AA24		
Sample Name	P3IF-BA-GRID-AA024			P3IF-SS-IS-SO-AA024			P3IF-SS-IS-SO-AA524		
Date Collected	June 20, 2023			June 20, 2023			June 20, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)									
1,1,1,2-Tetrachloroethane	0.0018	0.0018	U	-			-		
1,1,1-Trichloroethane	0.0018	0.0018	U	-			-		
1,1,2,2-Tetrachloroethane	0.0018	0.0018	U	-			-		
1,1,2-Trichloroethane	0.0018	0.0018	U	-			-		
1,1-Dichloroethane	0.0018	0.0018	U	-			-		
1,1-Dichloroethene	0.0018	0.0018	U	-			-		
1,1-Dichloropropene	0.0018	0.0018	U	-			-		
1,2,3-Trichlorobenzene	0.0018	0.0018	U	-			-		
1,2,3-Trichloropropane	0.0045	0.0045	U	-			-		
1,2,4-Trichlorobenzene	0.0018	0.0018	U	-			-		
1,2,4-Trimethylbenzene	0.0018	0.0018	U	-			-		
1,2-Dibromo-3-chloropropane	0.0045	0.0045	U	-			-		
1,2-Dibromoethane	0.0018	0.0018	U	-			-		
1,2-Dichlorobenzene	0.0018	0.0018	U	-			-		
1,2-Dichloroethane	0.0018	0.0018	U	-			-		
1,2-Dichloropropane	0.0018	0.0018	U	-			-		
1,3,5-Trimethylbenzene	0.0018	0.0018	U	-			-		
1,3-Dichlorobenzene	0.0018	0.0018	U	-			-		
1,3-Dichloropropane	0.0018	0.0018	U	-			-		
1,4-Dichlorobenzene	0.0018	0.0018	U	-			-		
2,2-Dichloropropane	0.0018	0.0018	U	-			-		
2-Butanone	0.0027	0.0027	U	-			-		
2-Chlorotoluene	0.0018	0.0018	U	-			-		
2-Hexanone	0.0018	0.0018	U	-			-		
4-Chlorotoluene	0.0018	0.0018	U	-			-		
4-Methyl-2-pentanone	0.0018	0.0018	U	-			-		
Acetone	0.15	0.0045		-			-		
Benzene	0.0018	0.0018	U	-			-		
Bromobenzene	0.0018	0.0018	U	-			-		
Bromochloromethane	0.0018	0.0018	U	-			-		
Bromodichloromethane	0.0018	0.0018	U	-			-		
Bromoform	0.0018	0.0018	U	-			-		
Bromomethane	0.0018	0.0018	U	-			-		
Carbon disulfide	0.0018	0.0018	U	-			-		
Carbon tetrachloride	0.0018	0.0018	U	-			-		
Chlorobenzene	0.0018	0.0018	U	-			-		
Chloroethane	0.0018	0.0018	U	-			-		
Chloroform	0.0018	0.0018	U	-			-		
Chloromethane	0.0045	0.0045	U	-			-		
cis-1,2-Dichloroethene	0.0018	0.0018	U	-			-		
cis-1,3-Dichloropropene	0.0018	0.0018	U	-			-		
Dibromochloromethane	0.0018	0.0018	U	-			-		
Dibromomethane	0.0018	0.0018	U	-			-		
Dichlorodifluoromethane	0.0018	0.0018	U	-			-		
Ethylbenzene	0.0018	0.0018	U	-			-		
Hexachlorobutadiene	0.0018	0.0018	U	-			-		
Isopropylbenzene	0.0018	0.0018	U	-			-		
m+p-Xylene	0.0045	0.0045	U	-			-		
Methyl Tertiary Butyl Ether	0.0018	0.0018	U	-			-		
Methylene chloride	0.009	0.009	U	-			-		
n-Butylbenzene	0.0018	0.0018	U	-			-		
n-Propylbenzene	0.0018	0.0018	U	-			-		
Naphthalene	0.0018	0.0018	U	-			-		
o-Xylene	0.0022	0.0022	U	-			-		
4-Isopropyltoluene	0.0018	0.0018	U	-			-		
sec-Butylbenzene	0.0018	0.0018	U	-			-		
Styrene	0.0018	0.0018	U	-			-		
tert-Butylbenzene	0.0018	0.0018	U	-			-		
Tetrachloroethene	0.0018	0.0018	U	-			-		
Toluene	0.0018	0.0018	U	-			-		
trans-1,2-Dichloroethene	0.0018	0.0018	U	-			-		
trans-1,3-Dichloropropene	0.0018	0.0018	U	-			-		
Trichloroethene	0.0018	0.0018	U	-			-		
Trichlorofluoromethane	0.0018	0.0018	U	-			-		
Vinyl chloride	0.0018	0.0018	U	-			-		
Semivolatile Organic Compounds (mg/kg)									
1,2,4-Trichlorobenzene	0.17	0.17	UJ	-			-		
1,2-Dichlorobenzene	0.17	0.17	UJ	-			-		
1,3-Dichlorobenzene	0.17	0.17	UJ	-			-		
1,4-Dichlorobenzene	0.17	0.17	UJ	-			-		
2,4,5-Trichlorophenol	0.17	0.17	UJ	-			-		
2,4,6-Trichlorophenol	0.17	0.17	UJ	-			-		
2,4-Dichlorophenol	0.17	0.17	UJ	-			-		
2,4-Dimethylphenol	0.17	0.17	UJ	-			-		
2,4-Dinitrophenol	0.17	0.17	UJ	-			-		
2,4-Dinitrotoluene	0.17	0.17	UJ	-			-		
2,6-Dinitrotoluene	0.17	0.17	UJ	-			-		
2-Chloronaphthalene	0.17	0.17	UJ	-			-		
2-Chlorophenol	0.17	0.17	UJ	-			-		
2-Methylnaphthalene	0.17	0.17	UJ	-			-		
2-Methylphenol	0.17	0.17	UJ	-			-		
2-Nitroaniline	0.17	0.17	UJ	-			-		
2-Nitrophenol	0.17	0.17	UJ	-			-		
3,3-Dichlorobenzidine	0.17	0.17	UJ	-			-		
3-Nitroaniline	0.17	0.17	UJ	-			-		
4,6-Dinitro-2-methylphenol	0.17	0.17	UJ	-			-		
4-Bromophenyl-phenylether	0.17	0.17	UJ	-			-		
4-Chloro-3-methylphenol	0.17	0.17	UJ	-			-		
4-Chloroaniline	0.17	0.17	UJ	-			-		

TABLE B-AA24
ANALYTICAL RESULTS FOR GRID AA24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AA24			AA24			AA24		
Sample Name	P3IF-BA-GRID-AA024			P3IF-SS-IS-SO-AA024			P3IF-SS-IS-SO-AA524		
Date Collected	June 20, 2023			June 20, 2023			June 20, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Semivolatile Organic Compounds (mg/kg), continued									
4-Chlorophenyl-phenylether	0.17	0.17	UJ	-			-		
4-Nitroaniline	0.17	0.17	UJ	-			-		
4-Nitrophenol	0.17	0.17	UJ	-			-		
Acenaphthene	0.17	0.17	UJ	-			-		
Acenaphthylene	0.17	0.17	UJ	-			-		
Anthracene	0.17	0.17	UJ	-			-		
Benzo(a)anthracene	0.17	0.17	UJ	-			-		
Benzo(a)pyrene	0.13	0.13	UJ	-			-		
Benzo(b)fluoranthene	0.17	0.17	UJ	-			-		
Benzo(g,h,i)perylene	0.17	0.17	UJ	-			-		
Benzo(k)fluoranthene	0.17	0.17	UJ	-			-		
Benzoic acid	0.17	0.17	UJ	-			-		
Benzyl Alcohol	0.17	0.17	UJ	-			-		
Bis(2-chloro-1-methylethyl) ether	0.17	0.17	UJ	-			-		
Bis(2-chloroethoxy)methane	0.17	0.17	UJ	-			-		
Bis(2-chloroethyl)ether	0.17	0.17	UJ	-			-		
Bis(2-ethylhexyl)phthalate	0.17	0.17	UJ	-			-		
Butyl benzyl phthalate	0.17	0.17	UJ	-			-		
Carbazole	0.17	0.17	UJ	-			-		
Chrysene	0.17	0.17	UJ	-			-		
Di-n-butyl phthalate	0.17	0.17	UJ	-			-		
Di-n-octyl phthalate	0.17	0.17	UJ	-			-		
Dibenz(a,h)anthracene	0.13	0.13	UJ	-			-		
Dibenzofuran	0.17	0.17	UJ	-			-		
Diethyl phthalate	0.17	0.17	UJ	-			-		
Dimethyl phthalate	0.17	0.17	UJ	-			-		
Fluoranthene	0.17	0.17	UJ	-			-		
Fluorene	0.17	0.17	UJ	-			-		
Hexachlorobenzene	0.17	0.17	UJ	-			-		
Hexachlorobutadiene	0.17	0.17	UJ	-			-		
Hexachloroethane	0.17	0.17	UJ	-			-		
Indeno(1,2,3-cd)pyrene	0.17	0.17	UJ	-			-		
Isophorone	0.17	0.17	UJ	-			-		
n-Nitroso-di-n-propylamine	0.17	0.17	UJ	-			-		
n-Nitrosodimethylamine	0.02	0.02	UJ	-			-		
n-Nitrosodiphenylamine	0.17	0.17	UJ	-			-		
Naphthalene	0.17	0.17	UJ	-			-		
Nitrobenzene	0.17	0.17	UJ	-			-		
Pentachlorophenol	0.17	0.17	UJ	-			-		
Phenanthrene	0.17	0.17	UJ	-			-		
Phenol	0.17	0.17	UJ	-			-		
Pyrene	0.17	0.17	UJ	-			-		
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
1,3-Dinitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,4,6-Trinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,4-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,6-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
3-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
4-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	-			0.075	0.075	UJ	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	-			0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
Nitroglycerin	-			0.15	0.15	UJ	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	-			0.075	0.075	UJ	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	-			0.25	0.25	UJ	0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)									
Aroclor 1016	0.02	0.02	U	-			-		
Aroclor 1221	0.02	0.02	U	-			-		
Aroclor 1232	0.01	0.01	U	-			-		
Aroclor 1242	0.01	0.01	U	-			-		
Aroclor 1248	0.01	0.01	U	-			-		
Aroclor 1254	0.01	0.01	U	-			-		
Aroclor 1260	0.01	0.01	U	-			-		
Dioxins/Furans (mg/kg)									
Octachlorodibenzofuran (OCDF)	0.00000023	0.00000023	U	-			-		
Octachlorodibenzo-p-dioxin (OCDD)	0.00001	0.00001	U	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.00000015	0.00000015	U	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	0.0000021	0.0000021	U	-			-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.00000019	0.00000019	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.00000011	0.00000011	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000011	0.00000011	J	-			-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000046	0.000000046	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000054	0.000000054	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.00000014	0.00000014	UJ	-			-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000087	0.000000087	U	-			-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000013	0.00000013	U	-			-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.0000001	0.0000001	U	-			-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.00000011	0.00000011	U	-			-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000013	0.00000013	U	-			-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.00000031	0.00000031	U	-			-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.0000001	0.0000001	U	-			-		

TABLE B-AA24
ANALYTICAL RESULTS FOR GRID AA24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AA24			AA24			AA24		
Sample Name	P3IF-BA-GRID-AA024			P3IF-SS-IS-SO-AA024			P3IF-SS-IS-SO-AA524		
Date Collected	June 20, 2023			June 20, 2023			June 20, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Metals (mg/kg)									
Aluminum	-			13,000	4		15,000	4	
Antimony	-			0.19	0.15	J	<	0.15	U
Arsenic	-			1.4	0.3		1.3	0.3	
Barium	-			160	0.2		170	0.2	
Beryllium	-			0.48	0.3	J	0.49	0.3	J
Cadmium	-			0.71	0.08		0.52	0.08	
Calcium (Ca)	-			2,100	15		3,100	15	
Chromium[2]	-			14	0.2		13	0.2	
Cobalt	-			4.7	0.08		5	0.08	
Copper	-			170	0.2	J	110	0.2	
Iron (Fe)	-			9,300	8		9,600	8	
Lead	-			17	0.05		15	0.05	
Magnesium (Mg)	-			5,700	5		6,200	5	
Manganese (Mn)	-			330	0.08		370	0.08	
Mercury	-			0.018	0.04	J	0.031	0.041	J
Nickel	-			11	0.2		9.7	0.2	
Potassium (K)	-			610	8		840	8	
Selenium	-			0.78	0.1		0.99	0.1	
Silver	-			0.17	0.05		0.088	0.05	J
Sodium (Na)	-			69	8		66	8	
Thallium	-			0.046	0.05	J	0.042	0.05	J
Vanadium	-			17	0.1		17	0.1	
Zinc	-			36	1.5		34	1.5	
Other Parameters (mg/kg)									
Cyanide (CN-)	0.32	0.32	U	-			-		
Nitrate	6.8	2.1	J	-			-		
Perchlorate	0.0018	0.0018	UJ	-			-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-AA24
ANALYTICAL RESULTS FOR GRID AA24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AA24		
Sample Name	P3IF-SS-IS-SO-AA624		
Date Collected	June 20, 2023		
	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)			
1,1,1,2-Tetrachloroethane	-		
1,1,1-Trichloroethane	-		
1,1,2,2-Tetrachloroethane	-		
1,1,2-Trichloroethane	-		
1,1-Dichloroethane	-		
1,1-Dichloroethene	-		
1,1-Dichloropropene	-		
1,2,3-Trichlorobenzene	-		
1,2,3-Trichloropropane	-		
1,2,4-Trichlorobenzene	-		
1,2,4-Trimethylbenzene	-		
1,2-Dibromo-3-chloropropane	-		
1,2-Dibromoethane	-		
1,2-Dichlorobenzene	-		
1,2-Dichloroethane	-		
1,2-Dichloropropane	-		
1,3,5-Trimethylbenzene	-		
1,3-Dichlorobenzene	-		
1,3-Dichloropropane	-		
1,4-Dichlorobenzene	-		
2,2-Dichloropropane	-		
2-Butanone	-		
2-Chlorotoluene	-		
2-Hexanone	-		
4-Chlorotoluene	-		
4-Methyl-2-pentanone	-		
Acetone	-		
Benzene	-		
Bromobenzene	-		
Bromochloromethane	-		
Bromodichloromethane	-		
Bromoform	-		
Bromomethane	-		
Carbon disulfide	-		
Carbon tetrachloride	-		
Chlorobenzene	-		
Chloroethane	-		
Chloroform	-		
Chloromethane	-		
cis-1,2-Dichloroethene	-		
cis-1,3-Dichloropropene	-		
Dibromochloromethane	-		
Dibromomethane	-		
Dichlorodifluoromethane	-		
Ethylbenzene	-		
Hexachlorobutadiene	-		
Isopropylbenzene	-		
m+p-Xylene	-		
Methyl Tertiary Butyl Ether	-		
Methylene chloride	-		
n-Butylbenzene	-		
n-Propylbenzene	-		
Naphthalene	-		
o-Xylene	-		
4-Isopropyltoluene	-		
sec-Butylbenzene	-		
Styrene	-		
tert-Butylbenzene	-		
Tetrachloroethene	-		
Toluene	-		
trans-1,2-Dichloroethene	-		
trans-1,3-Dichloropropene	-		
Trichloroethene	-		
Trichlorofluoromethane	-		
Vinyl chloride	-		
Semivolatile Organic Compounds (mg/kg)			
1,2,4-Trichlorobenzene	-		
1,2-Dichlorobenzene	-		
1,3-Dichlorobenzene	-		
1,4-Dichlorobenzene	-		
2,4,5-Trichlorophenol	-		
2,4,6-Trichlorophenol	-		
2,4-Dichlorophenol	-		
2,4-Dimethylphenol	-		
2,4-Dinitrophenol	-		
2,4-Dinitrotoluene	-		
2,6-Dinitrotoluene	-		
2-Chloronaphthalene	-		
2-Chlorophenol	-		
2-Methylnaphthalene	-		
2-Methylphenol	-		
2-Nitroaniline	-		
2-Nitrophenol	-		
3,3-Dichlorobenzidine	-		
3-Nitroaniline	-		
4,6-Dinitro-2-methylphenol	-		
4-Bromophenyl-phenylether	-		
4-Chloro-3-methylphenol	-		
4-Chloroaniline	-		

TABLE B-AA24
ANALYTICAL RESULTS FOR GRID AA24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AA24		
Sample Name	P3IF-SS-IS-SO-AA624		
Date Collected	June 20, 2023		
	Result	LOD	Qual
Semivolatile Organic Compounds (mg/kg), continued			
4-Chlorophenyl-phenylether	-		
4-Nitroaniline	-		
4-Nitrophenol	-		
Acenaphthene	-		
Acenaphthylene	-		
Anthracene	-		
Benzo(a)anthracene	-		
Benzo(a)pyrene	-		
Benzo(b)fluoranthene	-		
Benzo(g,h,i)perylene	-		
Benzo(k)fluoranthene	-		
Benzoic acid	-		
Benzyl Alcohol	-		
Bis(2-chloro-1-methylethyl) ether	-		
Bis(2-chloroethoxy)methane	-		
Bis(2-chloroethyl)ether	-		
Bis(2-ethylhexyl)phthalate	-		
Butyl benzyl phthalate	-		
Carbazole	-		
Chrysene	-		
Di-n-butyl phthalate	-		
Di-n-octyl phthalate	-		
Dibenz(a,h)anthracene	-		
Dibenzofuran	-		
Diethyl phthalate	-		
Dimethyl phthalate	-		
Fluoranthene	-		
Fluorene	-		
Hexachlorobenzene	-		
Hexachlorobutadiene	-		
Hexachloroethane	-		
Indeno(1,2,3-cd)pyrene	-		
Isophorone	-		
n-Nitroso-di-n-propylamine	-		
n-Nitrosodimethylamine	-		
n-Nitrosodiphenylamine	-		
Naphthalene	-		
Nitrobenzene	-		
Pentachlorophenol	-		
Phenanthrene	-		
Phenol	-		
Pyrene	-		
Explosives (mg/kg)			
1,3,5-Trinitrobenzene	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	UJ
2,4,6-Trinitrotoluene	0.075	0.075	UJ
2,4-Dinitrotoluene	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	UJ
2-Nitrotoluene	0.075	0.075	UJ
3-Nitrotoluene	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	0.075	0.075	UJ
4-Nitrotoluene	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	UJ
Nitroglycerin	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)			
Aroclor 1016	-		
Aroclor 1221	-		
Aroclor 1232	-		
Aroclor 1242	-		
Aroclor 1248	-		
Aroclor 1254	-		
Aroclor 1260	-		
Dioxins/Furans (mg/kg)			
Octachlorodibenzofuran (OCDF)	-		
Octachlorodibenzo-p-dioxin (OCDD)	-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	-		

TABLE B-AA24
ANALYTICAL RESULTS FOR GRID AA24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AA24		
Sample Name	P3IF-SS-IS-SO-AA624		
Date Collected	June 20, 2023		
	Result	LOD	Qual
Metals (mg/kg)			
Aluminum	16,000	4	
Antimony	<	0.15	U
Arsenic	1.4	0.3	
Barium	170	0.2	
Beryllium	0.52	0.3	J
Cadmium	0.56	0.08	
Calcium (Ca)	3,500	15	
Chromium[2]	13	0.2	
Cobalt	5.1	0.08	
Copper	100	0.2	J
Iron (Fe)	9,600	8	
Lead	13	0.05	
Magnesium (Mg)	6,900	5	
Manganese (Mn)	380	0.08	
Mercury	0.035	0.041	J
Nickel	10	0.2	
Potassium (K)	930	8	
Selenium	1.1	0.1	
Silver	0.13	0.05	
Sodium (Na)	73	8	
Thallium	0.044	0.05	J
Vanadium	18	0.1	
Zinc	37	1.5	
Other Parameters (mg/kg)			
Cyanide (CN-)	-		
Nitrate	-		
Perchlorate	-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-AB24
ANALYTICAL RESULTS FOR GRID AB24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AB24			AB24			AB24		
Sample Name	P3IF-BA-GRID-AB024			P3IF-SS-IS-SO-AB024			P3IF-SS-IS-SO-AB524		
Date Collected	June 20, 2023			June 20, 2023			June 20, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)									
1,1,1,2-Tetrachloroethane	0.0025	0.0025	U	-			-		
1,1,1-Trichloroethane	0.0025	0.0025	U	-			-		
1,1,2,2-Tetrachloroethane	0.0025	0.0025	U	-			-		
1,1,2-Trichloroethane	0.0025	0.0025	U	-			-		
1,1-Dichloroethane	0.0025	0.0025	U	-			-		
1,1-Dichloroethene	0.0025	0.0025	U	-			-		
1,1-Dichloropropene	0.0025	0.0025	U	-			-		
1,2,3-Trichlorobenzene	0.0025	0.0025	U	-			-		
1,2,3-Trichloropropane	0.0062	0.0062	U	-			-		
1,2,4-Trichlorobenzene	0.0025	0.0025	U	-			-		
1,2,4-Trimethylbenzene	0.0025	0.0025	U	-			-		
1,2-Dibromo-3-chloropropane	0.0062	0.0062	U	-			-		
1,2-Dibromoethane	0.0025	0.0025	U	-			-		
1,2-Dichlorobenzene	0.0025	0.0025	U	-			-		
1,2-Dichloroethane	0.0025	0.0025	U	-			-		
1,2-Dichloropropane	0.0025	0.0025	U	-			-		
1,3,5-Trimethylbenzene	0.0025	0.0025	U	-			-		
1,3-Dichlorobenzene	0.0025	0.0025	U	-			-		
1,3-Dichloropropane	0.0025	0.0025	U	-			-		
1,4-Dichlorobenzene	0.0025	0.0025	U	-			-		
2,2-Dichloropropane	0.0025	0.0025	U	-			-		
2-Butanone	0.02	0.0037	J	-			-		
2-Chlorotoluene	0.0025	0.0025	U	-			-		
2-Hexanone	0.0025	0.0025	U	-			-		
4-Chlorotoluene	0.0025	0.0025	U	-			-		
4-Methyl-2-pentanone	0.0025	0.0025	U	-			-		
Acetone	0.38	0.0062	J	-			-		
Benzene	0.0025	0.0025	U	-			-		
Bromobenzene	0.0025	0.0025	U	-			-		
Bromochloromethane	0.0025	0.0025	U	-			-		
Bromodichloromethane	0.0025	0.0025	U	-			-		
Bromoform	0.0025	0.0025	U	-			-		
Bromomethane	0.0089	0.0025	J	-			-		
Carbon disulfide	0.0025	0.0025	U	-			-		
Carbon tetrachloride	0.0025	0.0025	U	-			-		
Chlorobenzene	0.0025	0.0025	U	-			-		
Chloroethane	0.0025	0.0025	U	-			-		
Chloroform	0.0025	0.0025	U	-			-		
Chloromethane	0.0062	0.0062	U	-			-		
cis-1,2-Dichloroethene	0.0025	0.0025	U	-			-		
cis-1,3-Dichloropropene	0.0025	0.0025	U	-			-		
Dibromochloromethane	0.0025	0.0025	U	-			-		
Dibromomethane	0.0025	0.0025	U	-			-		
Dichlorodifluoromethane	0.0025	0.0025	U	-			-		
Ethylbenzene	0.0025	0.0025	U	-			-		
Hexachlorobutadiene	0.0025	0.0025	U	-			-		
Isopropylbenzene	0.0025	0.0025	U	-			-		
m+p-Xylene	0.0062	0.0062	U	-			-		
Methyl Tertiary Butyl Ether	0.0025	0.0025	U	-			-		
Methylene chloride	0.012	0.012	U	-			-		
n-Butylbenzene	0.0025	0.0025	U	-			-		
n-Propylbenzene	0.0025	0.0025	U	-			-		
Naphthalene	0.0025	0.0025	U	-			-		
o-Xylene	0.0031	0.0031	U	-			-		
4-Isopropyltoluene	0.0025	0.0025	U	-			-		
sec-Butylbenzene	0.0025	0.0025	U	-			-		
Styrene	0.0025	0.0025	U	-			-		
tert-Butylbenzene	0.0025	0.0025	U	-			-		
Tetrachloroethene	0.0025	0.0025	U	-			-		
Toluene	0.0025	0.0025	U	-			-		
trans-1,2-Dichloroethene	0.0025	0.0025	U	-			-		
trans-1,3-Dichloropropene	0.0025	0.0025	U	-			-		
Trichloroethene	0.0025	0.0025	U	-			-		
Trichlorofluoromethane	0.0025	0.0025	U	-			-		
Vinyl chloride	0.0025	0.0025	U	-			-		
Semivolatile Organic Compounds (mg/kg)									
1,2,4-Trichlorobenzene	0.17	0.17	U	-			-		
1,2-Dichlorobenzene	0.17	0.17	U	-			-		
1,3-Dichlorobenzene	0.17	0.17	U	-			-		
1,4-Dichlorobenzene	0.17	0.17	U	-			-		
2,4,5-Trichlorophenol	0.17	0.17	U	-			-		
2,4,6-Trichlorophenol	0.17	0.17	U	-			-		
2,4-Dichlorophenol	0.17	0.17	U	-			-		
2,4-Dimethylphenol	0.17	0.17	U	-			-		
2,4-Dinitrophenol	0.17	0.17	U	-			-		
2,4-Dinitrotoluene	0.17	0.17	U	-			-		
2,6-Dinitrotoluene	0.17	0.17	U	-			-		
2-Chloronaphthalene	0.17	0.17	U	-			-		
2-Chlorophenol	0.17	0.17	U	-			-		
2-Methylnaphthalene	0.17	0.17	U	-			-		
2-Methylphenol	0.17	0.17	U	-			-		
2-Nitroaniline	0.17	0.17	U	-			-		
2-Nitrophenol	0.17	0.17	U	-			-		
3,3-Dichlorobenzidine	0.17	0.17	U	-			-		
3-Nitroaniline	0.17	0.17	U	-			-		
4,6-Dinitro-2-methylphenol	0.17	0.17	U	-			-		
4-Bromophenyl-phenylether	0.17	0.17	U	-			-		
4-Chloro-3-methylphenol	0.17	0.17	U	-			-		
4-Chloroaniline	0.17	0.17	U	-			-		

TABLE B-AB24
ANALYTICAL RESULTS FOR GRID AB24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AB24			AB24			AB24		
Sample Name	P3IF-BA-GRID-AB024			P3IF-SS-IS-SO-AB024			P3IF-SS-IS-SO-AB524		
Date Collected	June 20, 2023			June 20, 2023			June 20, 2023		
Semivolatile Organic Compounds (mg/kg), continued									
4-Chlorophenyl-phenylether	0.17	0.17	U	-			-		
4-Nitroaniline	0.17	0.17	U	-			-		
4-Nitrophenol	0.17	0.17	U	-			-		
Acenaphthene	0.17	0.17	U	-			-		
Acenaphthylene	0.17	0.17	U	-			-		
Anthracene	0.17	0.17	U	-			-		
Benzo(a)anthracene	0.17	0.17	U	-			-		
Benzo(a)pyrene	0.14	0.14	U	-			-		
Benzo(b)fluoranthene	0.17	0.17	U	-			-		
Benzo(g,h,i)perylene	0.17	0.17	U	-			-		
Benzo(k)fluoranthene	0.17	0.17	U	-			-		
Benzoic acid	0.17	0.17	U	-			-		
Benzyl Alcohol	0.17	0.17	U	-			-		
Bis(2-chloro-1-methylethyl) ether	0.17	0.17	U	-			-		
Bis(2-chloroethoxy)methane	0.17	0.17	U	-			-		
Bis(2-chloroethyl)ether	0.17	0.17	U	-			-		
Bis(2-ethylhexyl)phthalate	0.17	0.17	U	-			-		
Butyl benzyl phthalate	0.17	0.17	U	-			-		
Carbazole	0.17	0.17	U	-			-		
Chrysene	0.17	0.17	U	-			-		
Di-n-butyl phthalate	0.17	0.17	U	-			-		
Di-n-octyl phthalate	0.17	0.17	U	-			-		
Dibenz(a,h)anthracene	0.14	0.14	U	-			-		
Dibenzofuran	0.17	0.17	U	-			-		
Diethyl phthalate	0.17	0.17	U	-			-		
Dimethyl phthalate	0.17	0.17	U	-			-		
Fluoranthene	0.17	0.17	U	-			-		
Fluorene	0.17	0.17	U	-			-		
Hexachlorobenzene	0.17	0.17	U	-			-		
Hexachlorobutadiene	0.17	0.17	U	-			-		
Hexachloroethane	0.17	0.17	U	-			-		
Indeno(1,2,3-cd)pyrene	0.17	0.17	U	-			-		
Isophorone	0.17	0.17	U	-			-		
n-Nitroso-di-n-propylamine	0.17	0.17	U	-			-		
n-Nitrosodimethylamine	0.021	0.021	UJ	-			-		
n-Nitrosodiphenylamine	0.17	0.17	U	-			-		
Naphthalene	0.17	0.17	U	-			-		
Nitrobenzene	0.17	0.17	U	-			-		
Pentachlorophenol	0.17	0.17	U	-			-		
Phenanthrene	0.17	0.17	U	-			-		
Phenol	0.17	0.17	U	-			-		
Pyrene	0.17	0.17	U	-			-		
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
1,3-Dinitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,4,6-Trinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,4-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,6-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
3-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
4-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	-			0.075	0.075	UJ	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	-			0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
Nitroglycerin	-			0.15	0.15	UJ	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	-			0.075	0.075	UJ	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	-			0.25	0.25	UJ	0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)									
Aroclor 1016	0.021	0.021	U	-			-		
Aroclor 1221	0.021	0.021	U	-			-		
Aroclor 1232	0.01	0.01	U	-			-		
Aroclor 1242	0.01	0.01	U	-			-		
Aroclor 1248	0.01	0.01	U	-			-		
Aroclor 1254	0.01	0.01	U	-			-		
Aroclor 1260	0.01	0.01	U	-			-		
Dioxins/Furans (mg/kg)									
Octachlorodibenzofuran (OCDF)	0.00000063	0.00000063	U	-			-		
Octachlorodibenzo-p-dioxin (OCDD)	0.000036	0.000013		-			-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.0000011	0.0000011	U	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	0.0000065	0.0000065	J	-			-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.00000017	0.00000017	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.00000015	0.00000015	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000016	0.00000016	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.00000014	0.00000014	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000034	0.00000034	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.00000021	0.00000021	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000014	0.00000014	U	-			-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000018	0.00000018	U	-			-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.00000015	0.00000015	U	-			-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.00000055	0.00000055	U	-			-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000019	0.00000019	U	-			-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.00000029	0.00000029	U	-			-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.00000023	0.00000023	U	-			-		

TABLE B-AB24
ANALYTICAL RESULTS FOR GRID AB24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AB24			AB24			AB24		
Sample Name	P3IF-BA-GRID-AB024			P3IF-SS-IS-SO-AB024			P3IF-SS-IS-SO-AB524		
Date Collected	June 20, 2023			June 20, 2023			June 20, 2023		
Metals (mg/kg)									
Aluminum	-			8,200	4		10,000	4	
Antimony	-			0.1	0.15	J	0.15	0.15	U
Arsenic	-			1	0.3		1.1	0.3	
Barium	-			170	0.2		180	0.2	
Beryllium	-			0.38	0.3	J	0.44	0.3	J
Cadmium	-			0.57	0.08		0.55	0.08	
Calcium (Ca)	-			2,600	15		2,800	15	
Chromium	-			9	0.2		10	0.2	
Cobalt	-			3.4	0.08		4	0.08	
Copper	-			96	0.2		87	0.2	
Iron (Fe)	-			6,800	8		7,800	8	
Lead	-			11	0.05		11	0.05	
Magnesium (Mg)	-			2,700	5		3,400	5	
Manganese (Mn)	-			340	0.08		380	0.08	
Mercury	-			0.021	0.039	J	0.024	0.04	J
Nickel	-			7.3	0.2		7.9	0.2	
Potassium (K)	-			680	8		820	8	
Selenium	-			0.6	0.1		0.65	0.1	
Silver	-			0.12	0.05		0.12	0.05	
Sodium (Na)	-			43	8		44	8	
Thallium	-			0.07	0.05	J	0.058	0.05	J
Vanadium	-			11	0.1		13	0.1	
Zinc	-			24	1.5		27	1.5	
Other Parameters (mg/kg)									
Cyanide (CN-)	0.32	0.32	U	-			-		
Nitrate	2.5	2.1	J	-			-		
Perchlorate	0.0021	0.0021	U	-			-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-AB24
ANALYTICAL RESULTS FOR GRID AB24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AB24		
Sample Name	P3IF-SS-IS-SO-AB624		
Date Collected	June 20, 2023		
	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)			
1,1,1,2-Tetrachloroethane	-		
1,1,1-Trichloroethane	-		
1,1,2,2-Tetrachloroethane	-		
1,1,2-Trichloroethane	-		
1,1-Dichloroethane	-		
1,1-Dichloroethene	-		
1,1-Dichloropropene	-		
1,2,3-Trichlorobenzene	-		
1,2,3-Trichloropropane	-		
1,2,4-Trichlorobenzene	-		
1,2,4-Trimethylbenzene	-		
1,2-Dibromo-3-chloropropane	-		
1,2-Dibromoethane	-		
1,2-Dichlorobenzene	-		
1,2-Dichloroethane	-		
1,2-Dichloropropane	-		
1,3,5-Trimethylbenzene	-		
1,3-Dichlorobenzene	-		
1,3-Dichloropropane	-		
1,4-Dichlorobenzene	-		
2,2-Dichloropropane	-		
2-Butanone	-		
2-Chlorotoluene	-		
2-Hexanone	-		
4-Chlorotoluene	-		
4-Methyl-2-pentanone	-		
Acetone	-		
Benzene	-		
Bromobenzene	-		
Bromochloromethane	-		
Bromodichloromethane	-		
Bromoform	-		
Bromomethane	-		
Carbon disulfide	-		
Carbon tetrachloride	-		
Chlorobenzene	-		
Chloroethane	-		
Chloroform	-		
Chloromethane	-		
cis-1,2-Dichloroethene	-		
cis-1,3-Dichloropropene	-		
Dibromochloromethane	-		
Dibromomethane	-		
Dichlorodifluoromethane	-		
Ethylbenzene	-		
Hexachlorobutadiene	-		
Isopropylbenzene	-		
m+p-Xylene	-		
Methyl Tertiary Butyl Ether	-		
Methylene chloride	-		
n-Butylbenzene	-		
n-Propylbenzene	-		
Naphthalene	-		
o-Xylene	-		
4-Isopropyltoluene	-		
sec-Butylbenzene	-		
Styrene	-		
tert-Butylbenzene	-		
Tetrachloroethene	-		
Toluene	-		
trans-1,2-Dichloroethene	-		
trans-1,3-Dichloropropene	-		
Trichloroethene	-		
Trichlorofluoromethane	-		
Vinyl chloride	-		
Semivolatile Organic Compounds (mg/kg)			
1,2,4-Trichlorobenzene	-		
1,2-Dichlorobenzene	-		
1,3-Dichlorobenzene	-		
1,4-Dichlorobenzene	-		
2,4,5-Trichlorophenol	-		
2,4,6-Trichlorophenol	-		
2,4-Dichlorophenol	-		
2,4-Dimethylphenol	-		
2,4-Dinitrophenol	-		
2,4-Dinitrotoluene	-		
2,6-Dinitrotoluene	-		
2-Chloronaphthalene	-		
2-Chlorophenol	-		
2-Methylnaphthalene	-		
2-Methylphenol	-		
2-Nitroaniline	-		
2-Nitrophenol	-		
3,3-Dichlorobenzidine	-		
3-Nitroaniline	-		
4,6-Dinitro-2-methylphenol	-		
4-Bromophenyl-phenylether	-		
4-Chloro-3-methylphenol	-		
4-Chloroaniline	-		

TABLE B-AB24
ANALYTICAL RESULTS FOR GRID AB24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AB24		
Sample Name	P3IF-SS-IS-SO-AB624		
Date Collected	June 20, 2023		
Semivolatile Organic Compounds (mg/kg), continued			
4-Chlorophenyl-phenylether	-		
4-Nitroaniline	-		
4-Nitrophenol	-		
Acenaphthene	-		
Acenaphthylene	-		
Anthracene	-		
Benzo(a)anthracene	-		
Benzo(a)pyrene	-		
Benzo(b)fluoranthene	-		
Benzo(g,h,i)perylene	-		
Benzo(k)fluoranthene	-		
Benzoic acid	-		
Benzyl Alcohol	-		
Bis(2-chloro-1-methylethyl) ether	-		
Bis(2-chloroethoxy)methane	-		
Bis(2-chloroethyl)ether	-		
Bis(2-ethylhexyl)phthalate	-		
Butyl benzyl phthalate	-		
Carbazole	-		
Chrysene	-		
Di-n-butyl phthalate	-		
Di-n-octyl phthalate	-		
Dibenz(a,h)anthracene	-		
Dibenzofuran	-		
Diethyl phthalate	-		
Dimethyl phthalate	-		
Fluoranthene	-		
Fluorene	-		
Hexachlorobenzene	-		
Hexachlorobutadiene	-		
Hexachloroethane	-		
Indeno(1,2,3-cd)pyrene	-		
Isophorone	-		
n-Nitroso-di-n-propylamine	-		
n-Nitrosodimethylamine	-		
n-Nitrosodiphenylamine	-		
Naphthalene	-		
Nitrobenzene	-		
Pentachlorophenol	-		
Phenanthrene	-		
Phenol	-		
Pyrene	-		
Explosives (mg/kg)			
1,3,5-Trinitrobenzene	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	UJ
2,4,6-Trinitrotoluene	0.075	0.075	UJ
2,4-Dinitrotoluene	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	UJ
2-Nitrotoluene	0.075	0.075	UJ
3-Nitrotoluene	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	0.075	0.075	UJ
4-Nitrotoluene	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	UJ
Nitroglycerin	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)			
Aroclor 1016	-		
Aroclor 1221	-		
Aroclor 1232	-		
Aroclor 1242	-		
Aroclor 1248	-		
Aroclor 1254	-		
Aroclor 1260	-		
Dioxins/Furans (mg/kg)			
Octachlorodibenzofuran (OCDF)	-		
Octachlorodibenzo-p-dioxin (OCDD)	-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	-		

TABLE B-AB24
ANALYTICAL RESULTS FOR GRID AB24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AB24		
Sample Name	P3IF-SS-IS-SO-AB624		
Date Collected	June 20, 2023		
Metals (mg/kg)			
Aluminum	11,000	4	
Antimony	0.15	0.15	U
Arsenic	1.1	0.3	
Barium	170	0.2	
Beryllium	0.47	0.3	J
Cadmium	0.55	0.08	
Calcium (Ca)	2,800	15	
Chromium	10	0.2	
Cobalt	4	0.08	
Copper	91	0.2	
Iron (Fe)	8,200	8	
Lead	10	0.05	
Magnesium (Mg)	3,600	5	
Manganese (Mn)	370	0.08	
Mercury	0.021	0.041	J
Nickel	8.2	0.2	
Potassium (K)	820	8	
Selenium	0.82	0.1	
Silver	0.11	0.05	
Sodium (Na)	45	8	
Thallium	0.05	0.05	J
Vanadium	14	0.1	
Zinc	26	1.5	
Other Parameters (mg/kg)			
Cyanide (CN-)	-		
Nitrate	-		
Perchlorate	-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-AB25
ANALYTICAL RESULTS FOR GRID AB25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AB25			AB25			AB25		
Sample Name	P3IF-BA-GRID-AB025			P3IF-SS-IS-SO-AB025			P3IF-SS-IS-SO-AB525		
Date Collected	June 20, 2023			June 20, 2023			June 20, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)									
1,1,1,2-Tetrachloroethane	0.0025	0.0025	U	-			-		
1,1,1-Trichloroethane	0.0025	0.0025	U	-			-		
1,1,2,2-Tetrachloroethane	0.0025	0.0025	U	-			-		
1,1,2-Trichloroethane	0.0025	0.0025	U	-			-		
1,1-Dichloroethane	0.0025	0.0025	U	-			-		
1,1-Dichloroethene	0.0025	0.0025	U	-			-		
1,1-Dichloropropene	0.0025	0.0025	U	-			-		
1,2,3-Trichlorobenzene	0.0025	0.0025	U	-			-		
1,2,3-Trichloropropane	0.0062	0.0062	U	-			-		
1,2,4-Trichlorobenzene	0.0025	0.0025	U	-			-		
1,2,4-Trimethylbenzene	0.0025	0.0025	U	-			-		
1,2-Dibromo-3-chloropropane	0.0062	0.0062	U	-			-		
1,2-Dibromoethane	0.0025	0.0025	U	-			-		
1,2-Dichlorobenzene	0.0025	0.0025	U	-			-		
1,2-Dichloroethane	0.0025	0.0025	U	-			-		
1,2-Dichloropropane	0.0025	0.0025	U	-			-		
1,3,5-Trimethylbenzene	0.0025	0.0025	U	-			-		
1,3-Dichlorobenzene	0.0025	0.0025	U	-			-		
1,3-Dichloropropane	0.0025	0.0025	U	-			-		
1,4-Dichlorobenzene	0.0025	0.0025	U	-			-		
2,2-Dichloropropane	0.0025	0.0025	U	-			-		
2-Butanone	0.02	0.0037	J	-			-		
2-Chlorotoluene	0.0025	0.0025	U	-			-		
2-Hexanone	0.0025	0.0025	U	-			-		
4-Chlorotoluene	0.0025	0.0025	U	-			-		
4-Methyl-2-pentanone	0.0025	0.0025	U	-			-		
Acetone	0.38	0.0062	J	-			-		
Benzene	0.0025	0.0025	U	-			-		
Bromobenzene	0.0025	0.0025	U	-			-		
Bromochloromethane	0.0025	0.0025	U	-			-		
Bromodichloromethane	0.0025	0.0025	U	-			-		
Bromoform	0.0025	0.0025	U	-			-		
Bromomethane	0.0089	0.0025	J	-			-		
Carbon disulfide	0.0025	0.0025	U	-			-		
Carbon tetrachloride	0.0025	0.0025	U	-			-		
Chlorobenzene	0.0025	0.0025	U	-			-		
Chloroethane	0.0025	0.0025	U	-			-		
Chloroform	0.0025	0.0025	U	-			-		
Chloromethane	0.0062	0.0062	U	-			-		
cis-1,2-Dichloroethene	0.0025	0.0025	U	-			-		
cis-1,3-Dichloropropene	0.0025	0.0025	U	-			-		
Dibromochloromethane	0.0025	0.0025	U	-			-		
Dibromomethane	0.0025	0.0025	U	-			-		
Dichlorodifluoromethane	0.0025	0.0025	U	-			-		
Ethylbenzene	0.0025	0.0025	U	-			-		
Hexachlorobutadiene	0.0025	0.0025	U	-			-		
Isopropylbenzene	0.0025	0.0025	U	-			-		
m+p-Xylene	0.0062	0.0062	U	-			-		
Methyl Tertiary Butyl Ether	0.0025	0.0025	U	-			-		
Methylene chloride	0.012	0.012	U	-			-		
n-Butylbenzene	0.0025	0.0025	U	-			-		
n-Propylbenzene	0.0025	0.0025	U	-			-		
Naphthalene	0.0025	0.0025	U	-			-		
o-Xylene	0.0031	0.0031	U	-			-		
4-Isopropyltoluene	0.0025	0.0025	U	-			-		
sec-Butylbenzene	0.0025	0.0025	U	-			-		
Styrene	0.0025	0.0025	U	-			-		
tert-Butylbenzene	0.0025	0.0025	U	-			-		
Tetrachloroethene	0.0025	0.0025	U	-			-		
Toluene	0.0025	0.0025	U	-			-		
trans-1,2-Dichloroethene	0.0025	0.0025	U	-			-		
trans-1,3-Dichloropropene	0.0025	0.0025	U	-			-		
Trichloroethene	0.0025	0.0025	U	-			-		
Trichlorofluoromethane	0.0025	0.0025	U	-			-		
Vinyl chloride	0.0025	0.0025	U	-			-		
Semivolatile Organic Compounds (mg/kg)									
1,2,4-Trichlorobenzene	0.17	0.17	U	-			-		
1,2-Dichlorobenzene	0.17	0.17	U	-			-		
1,3-Dichlorobenzene	0.17	0.17	U	-			-		
1,4-Dichlorobenzene	0.17	0.17	U	-			-		
2,4,5-Trichlorophenol	0.17	0.17	U	-			-		
2,4,6-Trichlorophenol	0.17	0.17	U	-			-		
2,4-Dichlorophenol	0.17	0.17	U	-			-		
2,4-Dimethylphenol	0.17	0.17	U	-			-		
2,4-Dinitrophenol	0.17	0.17	U	-			-		
2,4-Dinitrotoluene	0.17	0.17	U	-			-		
2,6-Dinitrotoluene	0.17	0.17	U	-			-		
2-Chloronaphthalene	0.17	0.17	U	-			-		
2-Chlorophenol	0.17	0.17	U	-			-		
2-Methylnaphthalene	0.17	0.17	U	-			-		
2-Methylphenol	0.17	0.17	U	-			-		
2-Nitroaniline	0.17	0.17	U	-			-		
2-Nitrophenol	0.17	0.17	U	-			-		
3,3-Dichlorobenzidine	0.17	0.17	U	-			-		
3-Nitroaniline	0.17	0.17	U	-			-		
4,6-Dinitro-2-methylphenol	0.17	0.17	U	-			-		
4-Bromophenyl-phenylether	0.17	0.17	U	-			-		
4-Chloro-3-methylphenol	0.17	0.17	U	-			-		
4-Chloroaniline	0.17	0.17	U	-			-		

TABLE B-AB25
ANALYTICAL RESULTS FOR GRID AB25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AB25			AB25			AB25		
Sample Name	P3IF-BA-GRID-AB025			P3IF-SS-IS-SO-AB025			P3IF-SS-IS-SO-AB525		
Date Collected	June 20, 2023			June 20, 2023			June 20, 2023		
Semivolatile Organic Compounds (mg/kg), continued									
4-Chlorophenyl-phenylether	0.17	0.17	U	-			-		
4-Nitroaniline	0.17	0.17	U	-			-		
4-Nitrophenol	0.17	0.17	U	-			-		
Acenaphthene	0.17	0.17	U	-			-		
Acenaphthylene	0.17	0.17	U	-			-		
Anthracene	0.17	0.17	U	-			-		
Benzo(a)anthracene	0.17	0.17	U	-			-		
Benzo(a)pyrene	0.14	0.14	U	-			-		
Benzo(b)fluoranthene	0.17	0.17	U	-			-		
Benzo(g,h,i)perylene	0.17	0.17	U	-			-		
Benzo(k)fluoranthene	0.17	0.17	U	-			-		
Benzoic acid	0.17	0.17	U	-			-		
Benzyl Alcohol	0.17	0.17	U	-			-		
Bis(2-chloro-1-methylethyl) ether	0.17	0.17	U	-			-		
Bis(2-chloroethoxy)methane	0.17	0.17	U	-			-		
Bis(2-chloroethyl)ether	0.17	0.17	U	-			-		
Bis(2-ethylhexyl)phthalate	0.17	0.17	U	-			-		
Butyl benzyl phthalate	0.17	0.17	U	-			-		
Carbazole	0.17	0.17	U	-			-		
Chrysene	0.17	0.17	U	-			-		
Di-n-butyl phthalate	0.17	0.17	U	-			-		
Di-n-octyl phthalate	0.17	0.17	U	-			-		
Dibenz(a,h)anthracene	0.14	0.14	U	-			-		
Dibenzofuran	0.17	0.17	U	-			-		
Diethyl phthalate	0.17	0.17	U	-			-		
Dimethyl phthalate	0.17	0.17	U	-			-		
Fluoranthene	0.17	0.17	U	-			-		
Fluorene	0.17	0.17	U	-			-		
Hexachlorobenzene	0.17	0.17	U	-			-		
Hexachlorobutadiene	0.17	0.17	U	-			-		
Hexachloroethane	0.17	0.17	U	-			-		
Indeno(1,2,3-cd)pyrene	0.17	0.17	U	-			-		
Isophorone	0.17	0.17	U	-			-		
n-Nitroso-di-n-propylamine	0.17	0.17	U	-			-		
n-Nitrosodimethylamine	0.021	0.021	UJ	-			-		
n-Nitrosodiphenylamine	0.17	0.17	U	-			-		
Naphthalene	0.17	0.17	U	-			-		
Nitrobenzene	0.17	0.17	U	-			-		
Pentachlorophenol	0.17	0.17	U	-			-		
Phenanthrene	0.17	0.17	U	-			-		
Phenol	0.17	0.17	U	-			-		
Pyrene	0.17	0.17	U	-			-		
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
1,3-Dinitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,4,6-Trinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,4-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,6-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
3-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
4-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	-			0.075	0.075	UJ	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	-			0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
Nitroglycerin	-			0.15	0.15	UJ	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	-			0.075	0.075	UJ	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	-			0.25	0.25	UJ	0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)									
Aroclor 1016	0.021	0.021	U	-			-		
Aroclor 1221	0.021	0.021	U	-			-		
Aroclor 1232	0.01	0.01	U	-			-		
Aroclor 1242	0.01	0.01	U	-			-		
Aroclor 1248	0.01	0.01	U	-			-		
Aroclor 1254	0.01	0.01	U	-			-		
Aroclor 1260	0.01	0.01	U	-			-		
Dioxins/Furans (mg/kg)									
Octachlorodibenzofuran (OCDF)	0.00000063	0.00000063	U	-			-		
Octachlorodibenzo-p-dioxin (OCDD)	0.000036	0.000013		-			-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.0000011	0.0000011	U	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	0.0000065	0.0000065	J	-			-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.00000017	0.00000017	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.00000015	0.00000015	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000016	0.00000016	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.00000014	0.00000014	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000034	0.00000034	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.00000021	0.00000021	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000014	0.00000014	U	-			-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000018	0.00000018	U	-			-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.00000015	0.00000015	U	-			-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.00000055	0.00000055	U	-			-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000019	0.00000019	U	-			-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.00000029	0.00000029	U	-			-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.00000023	0.00000023	U	-			-		

TABLE B-AB25
ANALYTICAL RESULTS FOR GRID AB25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AB25			AB25			AB25		
Sample Name	P3IF-BA-GRID-AB025			P3IF-SS-IS-SO-AB025			P3IF-SS-IS-SO-AB525		
Date Collected	June 20, 2023			June 20, 2023			June 20, 2023		
Metals (mg/kg)									
Aluminum	-			8200	4		10000	4	
Antimony	-			0.1	0.15	J	0.15	0.15	U
Arsenic	-			1	0.3		1.1	0.3	
Barium	-			170	0.2		180	0.2	
Beryllium	-			0.38	0.3	J	0.44	0.3	J
Cadmium	-			0.57	0.08		0.55	0.08	
Calcium (Ca)	-			2600	15		2800	15	
Chromium	-			9	0.2		10	0.2	
Cobalt	-			3.4	0.08		4	0.08	
Copper	-			96	0.2		87	0.2	
Iron (Fe)	-			6800	8		7800	8	
Lead	-			11	0.05		11	0.05	
Magnesium (Mg)	-			2700	5		3400	5	
Manganese (Mn)	-			340	0.08		380	0.08	
Mercury	-			0.021	0.039	J	0.024	0.04	J
Nickel	-			7.3	0.2		7.9	0.2	
Potassium (K)	-			680	8		820	8	
Selenium	-			0.6	0.1		0.65	0.1	
Silver	-			0.12	0.05		0.12	0.05	
Sodium (Na)	-			43	8		44	8	
Thallium	-			0.07	0.05	J	0.058	0.05	J
Vanadium	-			11	0.1		13	0.1	
Zinc	-			24	1.5		27	1.5	
Other Parameters (mg/kg)									
Cyanide (CN-)	0.32	0.32	U	-			-		
Nitrate	2.5	2.1	J	-			-		
Perchlorate	0.0021	0.0021	U	-			-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-AB25
ANALYTICAL RESULTS FOR GRID AB25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AB25		
Sample Name	P3IF-SS-IS-SO-AB625		
Date Collected	June 20, 2023		
	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)			
1,1,1,2-Tetrachloroethane	-		
1,1,1-Trichloroethane	-		
1,1,2,2-Tetrachloroethane	-		
1,1,2-Trichloroethane	-		
1,1-Dichloroethane	-		
1,1-Dichloroethene	-		
1,1-Dichloropropene	-		
1,2,3-Trichlorobenzene	-		
1,2,3-Trichloropropane	-		
1,2,4-Trichlorobenzene	-		
1,2,4-Trimethylbenzene	-		
1,2-Dibromo-3-chloropropane	-		
1,2-Dibromoethane	-		
1,2-Dichlorobenzene	-		
1,2-Dichloroethane	-		
1,2-Dichloropropane	-		
1,3,5-Trimethylbenzene	-		
1,3-Dichlorobenzene	-		
1,3-Dichloropropane	-		
1,4-Dichlorobenzene	-		
2,2-Dichloropropane	-		
2-Butanone	-		
2-Chlorotoluene	-		
2-Hexanone	-		
4-Chlorotoluene	-		
4-Methyl-2-pentanone	-		
Acetone	-		
Benzene	-		
Bromobenzene	-		
Bromochloromethane	-		
Bromodichloromethane	-		
Bromoform	-		
Bromomethane	-		
Carbon disulfide	-		
Carbon tetrachloride	-		
Chlorobenzene	-		
Chloroethane	-		
Chloroform	-		
Chloromethane	-		
cis-1,2-Dichloroethene	-		
cis-1,3-Dichloropropene	-		
Dibromochloromethane	-		
Dibromomethane	-		
Dichlorodifluoromethane	-		
Ethylbenzene	-		
Hexachlorobutadiene	-		
Isopropylbenzene	-		
m+p-Xylene	-		
Methyl Tertiary Butyl Ether	-		
Methylene chloride	-		
n-Butylbenzene	-		
n-Propylbenzene	-		
Naphthalene	-		
o-Xylene	-		
4-Isopropyltoluene	-		
sec-Butylbenzene	-		
Styrene	-		
tert-Butylbenzene	-		
Tetrachloroethene	-		
Toluene	-		
trans-1,2-Dichloroethene	-		
trans-1,3-Dichloropropene	-		
Trichloroethene	-		
Trichlorofluoromethane	-		
Vinyl chloride	-		
Semivolatile Organic Compounds (mg/kg)			
1,2,4-Trichlorobenzene	-		
1,2-Dichlorobenzene	-		
1,3-Dichlorobenzene	-		
1,4-Dichlorobenzene	-		
2,4,5-Trichlorophenol	-		
2,4,6-Trichlorophenol	-		
2,4-Dichlorophenol	-		
2,4-Dimethylphenol	-		
2,4-Dinitrophenol	-		
2,4-Dinitrotoluene	-		
2,6-Dinitrotoluene	-		
2-Chloronaphthalene	-		
2-Chlorophenol	-		
2-Methylnaphthalene	-		
2-Methylphenol	-		
2-Nitroaniline	-		
2-Nitrophenol	-		
3,3-Dichlorobenzidine	-		
3-Nitroaniline	-		
4,6-Dinitro-2-methylphenol	-		
4-Bromophenyl-phenylether	-		
4-Chloro-3-methylphenol	-		
4-Chloroaniline	-		

TABLE B-AB25
ANALYTICAL RESULTS FOR GRID AB25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AB25		
Sample Name	P3IF-SS-IS-SO-AB625		
Date Collected	June 20, 2023		
Semivolatile Organic Compounds (mg/kg), continued			
4-Chlorophenyl-phenylether	-		
4-Nitroaniline	-		
4-Nitrophenol	-		
Acenaphthene	-		
Acenaphthylene	-		
Anthracene	-		
Benzo(a)anthracene	-		
Benzo(a)pyrene	-		
Benzo(b)fluoranthene	-		
Benzo(g,h,i)perylene	-		
Benzo(k)fluoranthene	-		
Benzoic acid	-		
Benzyl Alcohol	-		
Bis(2-chloro-1-methylethyl) ether	-		
Bis(2-chloroethoxy)methane	-		
Bis(2-chloroethyl)ether	-		
Bis(2-ethylhexyl)phthalate	-		
Butyl benzyl phthalate	-		
Carbazole	-		
Chrysene	-		
Di-n-butyl phthalate	-		
Di-n-octyl phthalate	-		
Dibenz(a,h)anthracene	-		
Dibenzofuran	-		
Diethyl phthalate	-		
Dimethyl phthalate	-		
Fluoranthene	-		
Fluorene	-		
Hexachlorobenzene	-		
Hexachlorobutadiene	-		
Hexachloroethane	-		
Indeno(1,2,3-cd)pyrene	-		
Isophorone	-		
n-Nitroso-di-n-propylamine	-		
n-Nitrosodimethylamine	-		
n-Nitrosodiphenylamine	-		
Naphthalene	-		
Nitrobenzene	-		
Pentachlorophenol	-		
Phenanthrene	-		
Phenol	-		
Pyrene	-		
Explosives (mg/kg)			
1,3,5-Trinitrobenzene	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	UJ
2,4,6-Trinitrotoluene	0.075	0.075	UJ
2,4-Dinitrotoluene	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	UJ
2-Nitrotoluene	0.075	0.075	UJ
3-Nitrotoluene	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	0.075	0.075	UJ
4-Nitrotoluene	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	UJ
Nitroglycerin	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)			
Aroclor 1016	-		
Aroclor 1221	-		
Aroclor 1232	-		
Aroclor 1242	-		
Aroclor 1248	-		
Aroclor 1254	-		
Aroclor 1260	-		
Dioxins/Furans (mg/kg)			
Octachlorodibenzofuran (OCDF)	-		
Octachlorodibenzo-p-dioxin (OCDD)	-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	-		

TABLE B-AB25
ANALYTICAL RESULTS FOR GRID AB25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AB25		
Sample Name	P3IF-SS-IS-SO-AB625		
Date Collected	June 20, 2023		
Metals (mg/kg)			
Aluminum	11000	4	
Antimony	0.15	0.15	U
Arsenic	1.1	0.3	
Barium	170	0.2	
Beryllium	0.47	0.3	J
Cadmium	0.55	0.08	
Calcium (Ca)	2800	15	
Chromium	10	0.2	
Cobalt	4	0.08	
Copper	91	0.2	
Iron (Fe)	8200	8	
Lead	10	0.05	
Magnesium (Mg)	3600	5	
Manganese (Mn)	370	0.08	
Mercury	0.021	0.041	J
Nickel	8.2	0.2	
Potassium (K)	820	8	
Selenium	0.82	0.1	
Silver	0.11	0.05	
Sodium (Na)	45	8	
Thallium	0.05	0.05	J
Vanadium	14	0.1	
Zinc	26	1.5	
Other Parameters (mg/kg)			
Cyanide (CN-)	-		
Nitrate	-		
Perchlorate	-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-AC25
ANALYTICAL RESULTS FOR GRID AC25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AC25			AC25			AC25		
Sample Name	P3IF-BA-GRID-AC025			P3IF-SS-IS-SO-AC025			P3IF-SS-IS-SO-AC525		
Date Collected	June 20, 2023			June 20, 2023			June 20, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)									
1,1,1,2-Tetrachloroethane	0.0019	0.0019	U	-			-		
1,1,1-Trichloroethane	0.0019	0.0019	U	-			-		
1,1,2,2-Tetrachloroethane	0.0019	0.0019	U	-			-		
1,1,2-Trichloroethane	0.0019	0.0019	U	-			-		
1,1-Dichloroethane	0.0019	0.0019	U	-			-		
1,1-Dichloroethene	0.0019	0.0019	U	-			-		
1,1-Dichloropropene	0.0019	0.0019	U	-			-		
1,2,3-Trichlorobenzene	0.0019	0.0019	U	-			-		
1,2,3-Trichloropropane	0.0048	0.0048	U	-			-		
1,2,4-Trichlorobenzene	0.0019	0.0019	U	-			-		
1,2,4-Trimethylbenzene	0.0019	0.0019	U	-			-		
1,2-Dibromo-3-chloropropane	0.0048	0.0048	U	-			-		
1,2-Dibromoethane	0.0019	0.0019	U	-			-		
1,2-Dichlorobenzene	0.0019	0.0019	U	-			-		
1,2-Dichloroethane	0.0019	0.0019	U	-			-		
1,2-Dichloropropane	0.0019	0.0019	U	-			-		
1,3,5-Trimethylbenzene	0.0019	0.0019	U	-			-		
1,3-Dichlorobenzene	0.0019	0.0019	U	-			-		
1,3-Dichloropropane	0.0019	0.0019	U	-			-		
1,4-Dichlorobenzene	0.0019	0.0019	U	-			-		
2,2-Dichloropropane	0.0019	0.0019	U	-			-		
2-Butanone	0.0029	0.0029	U	-			-		
2-Chlorotoluene	0.0019	0.0019	U	-			-		
2-Hexanone	0.0019	0.0019	U	-			-		
4-Chlorotoluene	0.0019	0.0019	U	-			-		
4-Methyl-2-pentanone	0.0019	0.0019	U	-			-		
Acetone	0.057	0.0048		-			-		
Benzene	0.0019	0.0019	U	-			-		
Bromobenzene	0.0019	0.0019	U	-			-		
Bromochloromethane	0.0019	0.0019	U	-			-		
Bromodichloromethane	0.0019	0.0019	U	-			-		
Bromoform	0.0019	0.0019	U	-			-		
Bromomethane	0.0019	0.0019	U	-			-		
Carbon disulfide	0.0019	0.0019	U	-			-		
Carbon tetrachloride	0.0019	0.0019	U	-			-		
Chlorobenzene	0.0019	0.0019	U	-			-		
Chloroethane	0.0019	0.0019	U	-			-		
Chloroform	0.0019	0.0019	U	-			-		
Chloromethane	0.0048	0.0048	U	-			-		
cis-1,2-Dichloroethene	0.0019	0.0019	U	-			-		
cis-1,3-Dichloropropene	0.0019	0.0019	U	-			-		
Dibromochloromethane	0.0019	0.0019	U	-			-		
Dibromomethane	0.0019	0.0019	U	-			-		
Dichlorodifluoromethane	0.0019	0.0019	U	-			-		
Ethylbenzene	0.0019	0.0019	U	-			-		
Hexachlorobutadiene	0.0019	0.0019	U	-			-		
Isopropylbenzene	0.0019	0.0019	U	-			-		
m+p-Xylene	0.0048	0.0048	U	-			-		
Methyl Tertiary Butyl Ether	0.0019	0.0019	U	-			-		
Methylene chloride	0.0097	0.0097	U	-			-		
n-Butylbenzene	0.0019	0.0019	U	-			-		
n-Propylbenzene	0.0019	0.0019	U	-			-		
Naphthalene	0.0019	0.0019	U	-			-		
o-Xylene	0.0024	0.0024	U	-			-		
4-Isopropyltoluene	0.0019	0.0019	U	-			-		
sec-Butylbenzene	0.0019	0.0019	U	-			-		
Styrene	0.0019	0.0019	U	-			-		
tert-Butylbenzene	0.0019	0.0019	U	-			-		
Tetrachloroethene	0.0019	0.0019	U	-			-		
Toluene	0.0019	0.0019	U	-			-		
trans-1,2-Dichloroethene	0.0019	0.0019	U	-			-		
trans-1,3-Dichloropropene	0.0019	0.0019	U	-			-		
Trichloroethene	0.0019	0.0019	U	-			-		
Trichlorofluoromethane	0.0019	0.0019	U	-			-		
Vinyl chloride	0.0019	0.0019	U	-			-		
Semivolatile Organic Compounds (mg/kg)									
1,2,4-Trichlorobenzene	0.17	0.17	U	-			-		
1,2-Dichlorobenzene	0.17	0.17	U	-			-		
1,3-Dichlorobenzene	0.17	0.17	U	-			-		
1,4-Dichlorobenzene	0.17	0.17	U	-			-		
2,4,5-Trichlorophenol	0.17	0.17	U	-			-		
2,4,6-Trichlorophenol	0.17	0.17	U	-			-		
2,4-Dichlorophenol	0.17	0.17	U	-			-		
2,4-Dimethylphenol	0.17	0.17	U	-			-		
2,4-Dinitrophenol	0.17	0.17	U	-			-		
2,4-Dinitrotoluene	0.17	0.17	U	-			-		
2,6-Dinitrotoluene	0.17	0.17	U	-			-		
2-Chloronaphthalene	0.17	0.17	U	-			-		
2-Chlorophenol	0.17	0.17	U	-			-		
2-Methylnaphthalene	0.17	0.17	U	-			-		
2-Methylphenol	0.17	0.17	U	-			-		
2-Nitroaniline	0.17	0.17	U	-			-		
2-Nitrophenol	0.17	0.17	U	-			-		
3,3-Dichlorobenzidine	0.17	0.17	U	-			-		
3-Nitroaniline	0.17	0.17	U	-			-		
4,6-Dinitro-2-methylphenol	0.17	0.17	U	-			-		
4-Bromophenyl-phenylether	0.17	0.17	U	-			-		
4-Chloro-3-methylphenol	0.17	0.17	U	-			-		
4-Chloroaniline	0.17	0.17	U	-			-		

TABLE B-AC25
ANALYTICAL RESULTS FOR GRID AC25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AC25			AC25			AC25		
Sample Name	P3IF-BA-GRID-AC025			P3IF-SS-IS-SO-AC025			P3IF-SS-IS-SO-AC525		
Date Collected	June 20, 2023			June 20, 2023			June 20, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Semivolatile Organic Compounds (mg/kg), continued									
4-Chlorophenyl-phenylether	0.17	0.17	U	-			-		
4-Nitroaniline	0.17	0.17	U	-			-		
4-Nitrophenol	0.17	0.17	U	-			-		
Acenaphthene	0.17	0.17	U	-			-		
Acenaphthylene	0.17	0.17	U	-			-		
Anthracene	0.17	0.17	U	-			-		
Benzo(a)anthracene	0.17	0.17	U	-			-		
Benzo(a)pyrene	0.13	0.13	U	-			-		
Benzo(b)fluoranthene	0.17	0.17	U	-			-		
Benzo(g,h,i)perylene	0.17	0.17	U	-			-		
Benzo(k)fluoranthene	0.17	0.17	U	-			-		
Benzoic acid	0.17	0.17	U	-			-		
Benzyl Alcohol	0.17	0.17	U	-			-		
Bis(2-chloro-1-methylethyl) ether	0.17	0.17	U	-			-		
Bis(2-chloroethoxy)methane	0.17	0.17	U	-			-		
Bis(2-chloroethyl)ether	0.17	0.17	U	-			-		
Bis(2-ethylhexyl)phthalate	0.17	0.17	U	-			-		
Butyl benzyl phthalate	0.17	0.17	U	-			-		
Carbazole	0.17	0.17	U	-			-		
Chrysene	0.17	0.17	U	-			-		
Di-n-butyl phthalate	0.17	0.17	U	-			-		
Di-n-octyl phthalate	0.17	0.17	U	-			-		
Dibenz(a,h)anthracene	0.13	0.13	U	-			-		
Dibenzofuran	0.17	0.17	U	-			-		
Diethyl phthalate	0.17	0.17	U	-			-		
Dimethyl phthalate	0.17	0.17	U	-			-		
Fluoranthene	0.17	0.17	U	-			-		
Fluorene	0.17	0.17	U	-			-		
Hexachlorobenzene	0.17	0.17	U	-			-		
Hexachlorobutadiene	0.17	0.17	U	-			-		
Hexachloroethane	0.17	0.17	U	-			-		
Indeno(1,2,3-cd)pyrene	0.17	0.17	U	-			-		
Isophorone	0.17	0.17	U	-			-		
n-Nitrosodimethylamine	0.02	0.02	UJ	-			-		
n-Nitroso-di-n-propylamine	0.17	0.17	U	-			-		
n-Nitrosodiphenylamine	0.17	0.17	U	-			-		
Naphthalene	0.17	0.17	U	-			-		
Nitrobenzene	0.17	0.17	U	-			-		
Pentachlorophenol	0.17	0.17	U	-			-		
Phenanthrene	0.17	0.17	U	-			-		
Phenol	0.17	0.17	U	-			-		
Pyrene	0.17	0.17	U	-			-		
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
1,3-Dinitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,4,6-Trinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,4-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,6-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
3-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
4-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	-			0.075	0.075	UJ	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	-			0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
Nitroglycerin	-			0.15	0.15	UJ	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	-			0.075	0.075	UJ	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	-			0.25	0.25	UJ	0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)									
Aroclor 1016	0.02	0.02	U	-			-		
Aroclor 1221	0.02	0.02	U	-			-		
Aroclor 1232	0.01	0.01	U	-			-		
Aroclor 1242	0.01	0.01	U	-			-		
Aroclor 1248	0.01	0.01	U	-			-		
Aroclor 1254	0.01	0.01	U	-			-		
Aroclor 1260	0.01	0.01	U	-			-		
Dioxins/Furans (mg/kg)									
Octachlorodibenzofuran (OCDF)	0.000000038	0.000000038	U	-			-		
Octachlorodibenzo-p-dioxin (OCDD)	0.0000017	0.0000017	U	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.000000045	0.000000045	U	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	0.00000045	0.00000045	U	-			-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.000000057	0.000000057	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000035	0.000000035	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000054	0.000000054	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.00000003	0.00000003	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000049	0.000000049	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.000000043	0.000000043	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000052	0.000000052	U	-			-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.0000001	0.0000001	U	-			-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.000000071	0.000000071	U	-			-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000036	0.000000036	U	-			-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.0000001	0.0000001	U	-			-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.00000016	0.00000016	U	-			-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.000000051	0.000000051	U	-			-		

TABLE B-AC25
ANALYTICAL RESULTS FOR GRID AC25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AC25			AC25			AC25		
Sample Name	P3IF-BA-GRID-AC025			P3IF-SS-IS-SO-AC025			P3IF-SS-IS-SO-AC525		
Date Collected	June 20, 2023			June 20, 2023			June 20, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Metals (mg/kg)									
Aluminum	-			19000	4		19000	4	
Antimony	-			0.11	0.15	J	0.11	0.15	J
Arsenic	-			1.6	0.3		1.6	0.3	
Barium	-			270	0.2		260	0.2	
Beryllium	-			1.4	0.3		1.3	0.3	
Cadmium	-			0.83	0.08		0.6	0.08	
Calcium (Ca)	-			9200	15	J	18000	15	J
Chromium	-			14	0.2		14	0.2	
Cobalt	-			4.9	0.08		5	0.08	
Copper	-			77	0.2		73	0.2	
Iron (Fe)	-			12000	8		13000	8	
Lead	-			14	0.05		13	0.05	
Magnesium (Mg)	-			6300	5		6300	5	
Manganese (Mn)	-			590	0.08		650	0.08	
Mercury	-			0.043	0.04	J	0.033	0.041	J
Nickel	-			12	0.2		12	0.2	
Potassium (K)	-			1600	8		1600	8	
Selenium	-			1.6	0.1		1.7	0.1	
Silver	-			0.12	0.05		0.1	0.05	
Sodium (Na)	-			44	8		46	8	
Thallium	-			0.072	0.05	J	0.066	0.05	J
Vanadium	-			17	0.1		16	0.1	
Zinc	-			32	1.5		30	1.5	
Other Parameters (mg/kg)									
Cyanide (CN-)	0.31	0.31	U	-			-		
Nitrate	3.5	2.1	J	-			-		
Perchlorate	0.002	0.002	U	-			-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-AC25
ANALYTICAL RESULTS FOR GRID AC25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AC25		
Sample Name	P3IF-SS-IS-SO-AC625		
Date Collected	June 20, 2023		
	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)			
1,1,1,2-Tetrachloroethane	-		
1,1,1-Trichloroethane	-		
1,1,2,2-Tetrachloroethane	-		
1,1,2-Trichloroethane	-		
1,1-Dichloroethane	-		
1,1-Dichloroethene	-		
1,1-Dichloropropene	-		
1,2,3-Trichlorobenzene	-		
1,2,3-Trichloropropane	-		
1,2,4-Trichlorobenzene	-		
1,2,4-Trimethylbenzene	-		
1,2-Dibromo-3-chloropropane	-		
1,2-Dibromoethane	-		
1,2-Dichlorobenzene	-		
1,2-Dichloroethane	-		
1,2-Dichloropropane	-		
1,3,5-Trimethylbenzene	-		
1,3-Dichlorobenzene	-		
1,3-Dichloropropane	-		
1,4-Dichlorobenzene	-		
2,2-Dichloropropane	-		
2-Butanone	-		
2-Chlorotoluene	-		
2-Hexanone	-		
4-Chlorotoluene	-		
4-Methyl-2-pentanone	-		
Acetone	-		
Benzene	-		
Bromobenzene	-		
Bromochloromethane	-		
Bromodichloromethane	-		
Bromoform	-		
Bromomethane	-		
Carbon disulfide	-		
Carbon tetrachloride	-		
Chlorobenzene	-		
Chloroethane	-		
Chloroform	-		
Chloromethane	-		
cis-1,2-Dichloroethene	-		
cis-1,3-Dichloropropene	-		
Dibromochloromethane	-		
Dibromomethane	-		
Dichlorodifluoromethane	-		
Ethylbenzene	-		
Hexachlorobutadiene	-		
Isopropylbenzene	-		
m+p-Xylene	-		
Methyl Tertiary Butyl Ether	-		
Methylene chloride	-		
n-Butylbenzene	-		
n-Propylbenzene	-		
Naphthalene	-		
o-Xylene	-		
4-Isopropyltoluene	-		
sec-Butylbenzene	-		
Styrene	-		
tert-Butylbenzene	-		
Tetrachloroethene	-		
Toluene	-		
trans-1,2-Dichloroethene	-		
trans-1,3-Dichloropropene	-		
Trichloroethene	-		
Trichlorofluoromethane	-		
Vinyl chloride	-		
Semivolatile Organic Compounds (mg/kg)			
1,2,4-Trichlorobenzene	-		
1,2-Dichlorobenzene	-		
1,3-Dichlorobenzene	-		
1,4-Dichlorobenzene	-		
2,4,5-Trichlorophenol	-		
2,4,6-Trichlorophenol	-		
2,4-Dichlorophenol	-		
2,4-Dimethylphenol	-		
2,4-Dinitrophenol	-		
2,4-Dinitrotoluene	-		
2,6-Dinitrotoluene	-		
2-Chloronaphthalene	-		
2-Chlorophenol	-		
2-Methylnaphthalene	-		
2-Methylphenol	-		
2-Nitroaniline	-		
2-Nitrophenol	-		
3,3-Dichlorobenzidine	-		
3-Nitroaniline	-		
4,6-Dinitro-2-methylphenol	-		
4-Bromophenyl-phenylether	-		
4-Chloro-3-methylphenol	-		
4-Chloroaniline	-		

TABLE B-AC25
ANALYTICAL RESULTS FOR GRID AC25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AC25		
Sample Name	P3IF-SS-IS-SO-AC625		
Date Collected	June 20, 2023		
	Result	LOD	Qual
Semivolatile Organic Compounds (mg/kg), continued			
4-Chlorophenyl-phenylether	-		
4-Nitroaniline	-		
4-Nitrophenol	-		
Acenaphthene	-		
Acenaphthylene	-		
Anthracene	-		
Benzo(a)anthracene	-		
Benzo(a)pyrene	-		
Benzo(b)fluoranthene	-		
Benzo(g,h,i)perylene	-		
Benzo(k)fluoranthene	-		
Benzoic acid	-		
Benzyl Alcohol	-		
Bis(2-chloro-1-methylethyl) ether	-		
Bis(2-chloroethoxy)methane	-		
Bis(2-chloroethyl)ether	-		
Bis(2-ethylhexyl)phthalate	-		
Butyl benzyl phthalate	-		
Carbazole	-		
Chrysene	-		
Di-n-butyl phthalate	-		
Di-n-octyl phthalate	-		
Dibenz(a,h)anthracene	-		
Dibenzofuran	-		
Diethyl phthalate	-		
Dimethyl phthalate	-		
Fluoranthene	-		
Fluorene	-		
Hexachlorobenzene	-		
Hexachlorobutadiene	-		
Hexachloroethane	-		
Indeno(1,2,3-cd)pyrene	-		
Isophorone	-		
n-Nitrosodimethylamine	-		
n-Nitroso-di-n-propylamine	-		
n-Nitrosodiphenylamine	-		
Naphthalene	-		
Nitrobenzene	-		
Pentachlorophenol	-		
Phenanthrene	-		
Phenol	-		
Pyrene	-		
Explosives (mg/kg)			
1,3,5-Trinitrobenzene	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	UJ
2,4,6-Trinitrotoluene	0.075	0.075	UJ
2,4-Dinitrotoluene	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	UJ
2-Nitrotoluene	0.075	0.075	UJ
3-Nitrotoluene	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	0.075	0.075	UJ
4-Nitrotoluene	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	UJ
Nitroglycerin	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)			
Aroclor 1016	-		
Aroclor 1221	-		
Aroclor 1232	-		
Aroclor 1242	-		
Aroclor 1248	-		
Aroclor 1254	-		
Aroclor 1260	-		
Dioxins/Furans (mg/kg)			
Octachlorodibenzofuran (OCDF)	-		
Octachlorodibenzo-p-dioxin (OCDD)	-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	-		

TABLE B-AC25
ANALYTICAL RESULTS FOR GRID AC25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AC25		
Sample Name	P3IF-SS-IS-SO-AC625		
Date Collected	June 20, 2023		
	Result	LOD	Qual
Metals (mg/kg)			
Aluminum	20000	4	
Antimony	0.1	0.15	J
Arsenic	1.5	0.3	
Barium	250	0.2	
Beryllium	1.3	0.3	
Cadmium	0.59	0.08	
Calcium (Ca)	17000	15	J
Chromium	15	0.2	
Cobalt	4.9	0.08	
Copper	80	0.2	
Iron (Fe)	13000	8	
Lead	13	0.05	
Magnesium (Mg)	6500	5	
Manganese (Mn)	600	0.08	
Mercury	0.022	0.047	J
Nickel	12	0.2	
Potassium (K)	1600	8	
Selenium	1.6	0.1	
Silver	0.15	0.05	
Sodium (Na)	49	8	
Thallium	0.067	0.05	J
Vanadium	15	0.1	
Zinc	30	1.5	
Other Parameters (mg/kg)			
Cyanide (CN-)	-		
Nitrate	-		
Perchlorate	-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-AD25
ANALYTICAL RESULTS FOR GRID AD25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AD25			AD25			AD25		
Sample Name	P3IF-BA-GRID-AD025			P3IF-SS-IS-SO-AD025			P3IF-SS-IS-SO-AD525		
Date Collected	June 20, 2023			June 20, 2023			June 20, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)									
1,1,1,2-Tetrachloroethane	0.0021	0.0021	U	-			-		
1,1,1-Trichloroethane	0.0021	0.0021	U	-			-		
1,1,2,2-Tetrachloroethane	0.0021	0.0021	U	-			-		
1,1,2-Trichloroethane	0.0021	0.0021	U	-			-		
1,1-Dichloroethane	0.0021	0.0021	U	-			-		
1,1-Dichloroethene	0.0021	0.0021	U	-			-		
1,1-Dichloropropene	0.0021	0.0021	U	-			-		
1,2,3-Trichlorobenzene	0.0021	0.0021	U	-			-		
1,2,3-Trichloropropane	0.0052	0.0052	U	-			-		
1,2,4-Trichlorobenzene	0.0021	0.0021	U	-			-		
1,2,4-Trimethylbenzene	0.0021	0.0021	U	-			-		
1,2-Dibromo-3-chloropropane	0.0052	0.0052	U	-			-		
1,2-Dibromoethane	0.0021	0.0021	U	-			-		
1,2-Dichlorobenzene	0.0021	0.0021	U	-			-		
1,2-Dichloroethane	0.0021	0.0021	U	-			-		
1,2-Dichloropropane	0.0021	0.0021	U	-			-		
1,3,5-Trimethylbenzene	0.0021	0.0021	U	-			-		
1,3-Dichlorobenzene	0.0021	0.0021	U	-			-		
1,3-Dichloropropane	0.0021	0.0021	U	-			-		
1,4-Dichlorobenzene	0.0021	0.0021	U	-			-		
2,2-Dichloropropane	0.0021	0.0021	U	-			-		
2-Butanone	0.017	0.0031	J	-			-		
2-Chlorotoluene	0.0021	0.0021	U	-			-		
2-Hexanone	0.0021	0.0021	U	-			-		
4-Chlorotoluene	0.0021	0.0021	U	-			-		
4-Methyl-2-pentanone	0.0021	0.0021	U	-			-		
Acetone	0.35	0.0052	J	-			-		
Benzene	0.0021	0.0021	U	-			-		
Bromobenzene	0.0021	0.0021	U	-			-		
Bromochloromethane	0.0021	0.0021	U	-			-		
Bromodichloromethane	0.0021	0.0021	U	-			-		
Bromoform	0.0021	0.0021	U	-			-		
Bromomethane	0.0021	0.0021	U	-			-		
Carbon disulfide	0.0021	0.0021	U	-			-		
Carbon tetrachloride	0.0021	0.0021	U	-			-		
Chlorobenzene	0.0021	0.0021	U	-			-		
Chloroethane	0.0021	0.0021	U	-			-		
Chloroform	0.0021	0.0021	U	-			-		
Chloromethane	0.0052	0.0052	U	-			-		
cis-1,2-Dichloroethene	0.0021	0.0021	U	-			-		
cis-1,3-Dichloropropene	0.0021	0.0021	U	-			-		
Dibromochloromethane	0.0021	0.0021	U	-			-		
Dibromomethane	0.0021	0.0021	U	-			-		
Dichlorodifluoromethane	0.0021	0.0021	U	-			-		
Ethylbenzene	0.0021	0.0021	U	-			-		
Hexachlorobutadiene	0.0021	0.0021	U	-			-		
Isopropylbenzene	0.0021	0.0021	U	-			-		
m+p-Xylene	0.0052	0.0052	U	-			-		
Methyl Tertiary Butyl Ether	0.0021	0.0021	U	-			-		
Methylene chloride	0.01	0.01	U	-			-		
n-Butylbenzene	0.0021	0.0021	U	-			-		
n-Propylbenzene	0.0021	0.0021	U	-			-		
Naphthalene	0.0021	0.0021	U	-			-		
o-Xylene	0.0026	0.0026	U	-			-		
4-Isopropyltoluene	0.0021	0.0021	U	-			-		
sec-Butylbenzene	0.0021	0.0021	U	-			-		
Styrene	0.0021	0.0021	U	-			-		
tert-Butylbenzene	0.0021	0.0021	U	-			-		
Tetrachloroethene	0.0021	0.0021	U	-			-		
Toluene	0.0025	0.0021	J	-			-		
trans-1,2-Dichloroethene	0.0021	0.0021	U	-			-		
trans-1,3-Dichloropropene	0.0021	0.0021	U	-			-		
Trichloroethene	0.0021	0.0021	U	-			-		
Trichlorofluoromethane	0.0021	0.0021	U	-			-		
Vinyl chloride	0.0021	0.0021	U	-			-		
Semivolatile Organic Compounds (mg/kg)									
1,2,4-Trichlorobenzene	0.17	0.17	U	-			-		
1,2-Dichlorobenzene	0.17	0.17	U	-			-		
1,3-Dichlorobenzene	0.17	0.17	U	-			-		
1,4-Dichlorobenzene	0.17	0.17	U	-			-		
2,4,5-Trichlorophenol	0.17	0.17	U	-			-		
2,4,6-Trichlorophenol	0.17	0.17	U	-			-		
2,4-Dichlorophenol	0.17	0.17	U	-			-		
2,4-Dimethylphenol	0.17	0.17	U	-			-		
2,4-Dinitrophenol	0.17	0.17	U	-			-		
2,4-Dinitrotoluene	0.17	0.17	U	-			-		
2,6-Dinitrotoluene	0.17	0.17	U	-			-		
2-Chloronaphthalene	0.17	0.17	U	-			-		
2-Chlorophenol	0.17	0.17	U	-			-		
2-Methylnaphthalene	0.17	0.17	U	-			-		
2-Methylphenol	0.17	0.17	U	-			-		
2-Nitroaniline	0.17	0.17	U	-			-		
2-Nitrophenol	0.17	0.17	U	-			-		
3,3-Dichlorobenzidine	0.17	0.17	U	-			-		
3-Nitroaniline	0.17	0.17	U	-			-		
4,6-Dinitro-2-methylphenol	0.17	0.17	U	-			-		
4-Bromophenyl-phenylether	0.17	0.17	U	-			-		
4-Chloro-3-methylphenol	0.17	0.17	U	-			-		
4-Chloroaniline	0.17	0.17	U	-			-		

TABLE B-AD25
ANALYTICAL RESULTS FOR GRID AD25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AD25			AD25			AD25		
Sample Name	P3IF-BA-GRID-AD025			P3IF-SS-IS-SO-AD025			P3IF-SS-IS-SO-AD525		
Date Collected	June 20, 2023			June 20, 2023			June 20, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Semivolatile Organic Compounds (mg/kg), continued									
4-Chlorophenyl-phenylether	0.17	0.17	U	-			-		
4-Nitroaniline	0.17	0.17	U	-			-		
4-Nitrophenol	0.17	0.17	U	-			-		
Acenaphthene	0.17	0.17	U	-			-		
Acenaphthylene	0.17	0.17	U	-			-		
Anthracene	0.17	0.17	U	-			-		
Benzo(a)anthracene	0.17	0.17	U	-			-		
Benzo(a)pyrene	0.13	0.13	U	-			-		
Benzo(b)fluoranthene	0.17	0.17	U	-			-		
Benzo(g,h,i)perylene	0.17	0.17	U	-			-		
Benzo(k)fluoranthene	0.17	0.17	U	-			-		
Benzoic acid	0.17	0.17	U	-			-		
Benzyl Alcohol	0.17	0.17	U	-			-		
Bis(2-chloro-1-methylethyl) ether	0.17	0.17	U	-			-		
Bis(2-chloroethoxy)methane	0.17	0.17	U	-			-		
Bis(2-chloroethyl)ether	0.17	0.17	U	-			-		
Bis(2-ethylhexyl)phthalate	0.17	0.17	U	-			-		
Butyl benzyl phthalate	0.17	0.17	U	-			-		
Carbazole	0.17	0.17	U	-			-		
Chrysene	0.17	0.17	U	-			-		
Di-n-butyl phthalate	0.17	0.17	U	-			-		
Di-n-octyl phthalate	0.17	0.17	U	-			-		
Dibenz(a,h)anthracene	0.13	0.13	U	-			-		
Dibenzofuran	0.17	0.17	U	-			-		
Diethyl phthalate	0.17	0.17	U	-			-		
Dimethyl phthalate	0.17	0.17	U	-			-		
Fluoranthene	0.17	0.17	U	-			-		
Fluorene	0.17	0.17	U	-			-		
Hexachlorobenzene	0.17	0.17	U	-			-		
Hexachlorobutadiene	0.17	0.17	U	-			-		
Hexachloroethane	0.17	0.17	U	-			-		
Indeno(1,2,3-cd)pyrene	0.17	0.17	U	-			-		
Isophorone	0.17	0.17	U	-			-		
n-Nitrosodimethylamine	0.02	0.02	UJ	-			-		
n-Nitroso-di-n-propylamine	0.17	0.17	U	-			-		
n-Nitrosodiphenylamine	0.17	0.17	U	-			-		
Naphthalene	0.17	0.17	U	-			-		
Nitrobenzene	0.17	0.17	U	-			-		
Pentachlorophenol	0.17	0.17	U	-			-		
Phenanthrene	0.17	0.17	U	-			-		
Phenol	0.17	0.17	U	-			-		
Pyrene	0.17	0.17	U	-			-		
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
1,3-Dinitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,4,6-Trinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,4-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,6-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
3-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
4-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	-			0.075	0.075	UJ	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	-			0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
Nitroglycerin	-			0.15	0.15	UJ	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	-			0.075	0.075	UJ	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	-			0.25	0.25	UJ	0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)									
Aroclor 1016	0.02	0.02	U	-			-		
Aroclor 1221	0.02	0.02	U	-			-		
Aroclor 1232	0.01	0.01	U	-			-		
Aroclor 1242	0.01	0.01	U	-			-		
Aroclor 1248	0.01	0.01	U	-			-		
Aroclor 1254	0.01	0.01	U	-			-		
Aroclor 1260	0.01	0.01	U	-			-		
Dioxins/Furans (mg/kg)									
Octachlorodibenzofuran (OCDF)	0.000000095	0.000000095	U	-			-		
Octachlorodibenzo-p-dioxin (OCDD)	0.0000047	0.0000047	J	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.00000017	0.00000017	U	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	0.00000072	0.00000072	U	-			-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.000000058	0.000000058	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000054	0.000000054	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000013	0.00000013	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.00000005	0.00000005	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000049	0.000000049	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.000000066	0.000000066	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000076	0.000000076	U	-			-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.000000093	0.000000093	U	-			-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.000000052	0.000000052	U	-			-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000055	0.000000055	U	-			-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.000000078	0.000000078	U	-			-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.00000027	0.00000027	U	-			-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.000000069	0.000000069	U	-			-		

TABLE B-AD25
ANALYTICAL RESULTS FOR GRID AD25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AD25			AD25			AD25		
Sample Name	P3IF-BA-GRID-AD025			P3IF-SS-IS-SO-AD025			P3IF-SS-IS-SO-AD525		
Date Collected	June 20, 2023			June 20, 2023			June 20, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Metals (mg/kg)									
Aluminum	-			15000	4		16000	4	
Antimony	-			0.1	0.15	J	0.15	0.15	U
Arsenic	-			0.79	0.3		0.97	0.3	
Barium	-			350	0.2		360	0.2	
Beryllium	-			1	0.3		0.83	0.3	J
Cadmium	-			0.63	0.08	J	0.34	0.08	J
Calcium (Ca)	-			22000	15		23000	15	
Chromium	-			11	0.2		10	0.2	
Cobalt	-			4.8	0.08		4.6	0.08	
Copper	-			45	0.2		52	0.2	
Iron (Fe)	-			7900	8		8700	8	
Lead	-			10	0.05		10	0.05	
Magnesium (Mg)	-			6100	5		6100	5	
Manganese (Mn)	-			690	0.08		500	0.08	
Mercury	-			0.023	0.043	J	0.019	0.04	J
Nickel	-			12	0.2		10	0.2	
Potassium (K)	-			1500	8		1100	8	
Selenium	-			1.5	0.1		1.4	0.1	
Silver	-			0.088	0.05	J	0.085	0.05	J
Sodium (Na)	-			41	8		46	8	
Thallium	-			0.052	0.05	J	0.064	0.05	J
Vanadium	-			7.7	0.1	J	11	0.1	
Zinc	-			25	1.5		23	1.5	
Other Parameters (mg/kg)									
Cyanide (CN-)	0.31	0.31	U	-			-		
Nitrate	2.6	2	J	-			-		
Perchlorate	0.002	0.002	U	-			-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-AD25
ANALYTICAL RESULTS FOR GRID AD25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AD25		
Sample Name	P3IF-SS-IS-SO-AD625		
Date Collected	June 20, 2023		
	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)			
1,1,1,2-Tetrachloroethane	-		
1,1,1-Trichloroethane	-		
1,1,2,2-Tetrachloroethane	-		
1,1,2-Trichloroethane	-		
1,1-Dichloroethane	-		
1,1-Dichloroethene	-		
1,1-Dichloropropene	-		
1,2,3-Trichlorobenzene	-		
1,2,3-Trichloropropane	-		
1,2,4-Trichlorobenzene	-		
1,2,4-Trimethylbenzene	-		
1,2-Dibromo-3-chloropropane	-		
1,2-Dibromoethane	-		
1,2-Dichlorobenzene	-		
1,2-Dichloroethane	-		
1,2-Dichloropropane	-		
1,3,5-Trimethylbenzene	-		
1,3-Dichlorobenzene	-		
1,3-Dichloropropane	-		
1,4-Dichlorobenzene	-		
2,2-Dichloropropane	-		
2-Butanone	-		
2-Chlorotoluene	-		
2-Hexanone	-		
4-Chlorotoluene	-		
4-Methyl-2-pentanone	-		
Acetone	-		
Benzene	-		
Bromobenzene	-		
Bromochloromethane	-		
Bromodichloromethane	-		
Bromoform	-		
Bromomethane	-		
Carbon disulfide	-		
Carbon tetrachloride	-		
Chlorobenzene	-		
Chloroethane	-		
Chloroform	-		
Chloromethane	-		
cis-1,2-Dichloroethene	-		
cis-1,3-Dichloropropene	-		
Dibromochloromethane	-		
Dibromomethane	-		
Dichlorodifluoromethane	-		
Ethylbenzene	-		
Hexachlorobutadiene	-		
Isopropylbenzene	-		
m+p-Xylene	-		
Methyl Tertiary Butyl Ether	-		
Methylene chloride	-		
n-Butylbenzene	-		
n-Propylbenzene	-		
Naphthalene	-		
o-Xylene	-		
4-Isopropyltoluene	-		
sec-Butylbenzene	-		
Styrene	-		
tert-Butylbenzene	-		
Tetrachloroethene	-		
Toluene	-		
trans-1,2-Dichloroethene	-		
trans-1,3-Dichloropropene	-		
Trichloroethene	-		
Trichlorofluoromethane	-		
Vinyl chloride	-		
Semivolatile Organic Compounds (mg/kg)			
1,2,4-Trichlorobenzene	-		
1,2-Dichlorobenzene	-		
1,3-Dichlorobenzene	-		
1,4-Dichlorobenzene	-		
2,4,5-Trichlorophenol	-		
2,4,6-Trichlorophenol	-		
2,4-Dichlorophenol	-		
2,4-Dimethylphenol	-		
2,4-Dinitrophenol	-		
2,4-Dinitrotoluene	-		
2,6-Dinitrotoluene	-		
2-Chloronaphthalene	-		
2-Chlorophenol	-		
2-Methylnaphthalene	-		
2-Methylphenol	-		
2-Nitroaniline	-		
2-Nitrophenol	-		
3,3-Dichlorobenzidine	-		
3-Nitroaniline	-		
4,6-Dinitro-2-methylphenol	-		
4-Bromophenyl-phenylether	-		
4-Chloro-3-methylphenol	-		
4-Chloroaniline	-		

TABLE B-AD25
ANALYTICAL RESULTS FOR GRID AD25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AD25		
Sample Name	P3IF-SS-IS-SO-AD625		
Date Collected	June 20, 2023		
	Result	LOD	Qual
Semivolatile Organic Compounds (mg/kg), continued			
4-Chlorophenyl-phenylether	-		
4-Nitroaniline	-		
4-Nitrophenol	-		
Acenaphthene	-		
Acenaphthylene	-		
Anthracene	-		
Benzo(a)anthracene	-		
Benzo(a)pyrene	-		
Benzo(b)fluoranthene	-		
Benzo(g,h,i)perylene	-		
Benzo(k)fluoranthene	-		
Benzoic acid	-		
Benzyl Alcohol	-		
Bis(2-chloro-1-methylethyl) ether	-		
Bis(2-chloroethoxy)methane	-		
Bis(2-chloroethyl)ether	-		
Bis(2-ethylhexyl)phthalate	-		
Butyl benzyl phthalate	-		
Carbazole	-		
Chrysene	-		
Di-n-butyl phthalate	-		
Di-n-octyl phthalate	-		
Dibenz(a,h)anthracene	-		
Dibenzofuran	-		
Diethyl phthalate	-		
Dimethyl phthalate	-		
Fluoranthene	-		
Fluorene	-		
Hexachlorobenzene	-		
Hexachlorobutadiene	-		
Hexachloroethane	-		
Indeno(1,2,3-cd)pyrene	-		
Isophorone	-		
n-Nitrosodimethylamine	-		
n-Nitroso-di-n-propylamine	-		
n-Nitrosodiphenylamine	-		
Naphthalene	-		
Nitrobenzene	-		
Pentachlorophenol	-		
Phenanthrene	-		
Phenol	-		
Pyrene	-		
Explosives (mg/kg)			
1,3,5-Trinitrobenzene	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	UJ
2,4,6-Trinitrotoluene	0.075	0.075	UJ
2,4-Dinitrotoluene	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	UJ
2-Nitrotoluene	0.075	0.075	UJ
3-Nitrotoluene	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	0.075	0.075	UJ
4-Nitrotoluene	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	UJ
Nitroglycerin	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)			
Aroclor 1016	-		
Aroclor 1221	-		
Aroclor 1232	-		
Aroclor 1242	-		
Aroclor 1248	-		
Aroclor 1254	-		
Aroclor 1260	-		
Dioxins/Furans (mg/kg)			
Octachlorodibenzofuran (OCDF)	-		
Octachlorodibenzo-p-dioxin (OCDD)	-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	-		

TABLE B-AD25
ANALYTICAL RESULTS FOR GRID AD25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AD25		
Sample Name	P3IF-SS-IS-SO-AD625		
Date Collected	June 20, 2023		
	Result	LOD	Qual
Metals (mg/kg)			
Aluminum	18000	4	
Antimony	0.15	0.15	U
Arsenic	1	0.3	
Barium	350	0.2	
Beryllium	0.88	0.3	J
Cadmium	0.3	0.08	J
Calcium (Ca)	28000	15	
Chromium	12	0.2	
Cobalt	4.9	0.08	
Copper	48	0.2	
Iron (Fe)	9700	8	
Lead	10	0.05	
Magnesium (Mg)	6900	5	
Manganese (Mn)	560	0.08	
Mercury	0.019	0.041	J
Nickel	11	0.2	
Potassium (K)	1200	8	
Selenium	1.4	0.1	
Silver	0.072	0.05	J
Sodium (Na)	45	8	
Thallium	0.037	0.05	J
Vanadium	13	0.1	J
Zinc	23	1.5	
Other Parameters (mg/kg)			
Cyanide (CN-)	-		
Nitrate	-		
Perchlorate	-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-AE25
ANALYTICAL RESULTS FOR GRID AE25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AE25			AE25			AE25		
Sample Name	P3IF-BA-GRID-AE025			P3IF-BA-GRID-AE525			P3IF-SS-IS-SO-AE025		
Date Collected	June 20, 2023			June 20, 2023			June 20, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)									
1,1,1,2-Tetrachloroethane	0.0018	0.0018	U	0.0019	0.0019	U	-		
1,1,1-Trichloroethane	0.0018	0.0018	U	0.0019	0.0019	U	-		
1,1,2,2-Tetrachloroethane	0.0018	0.0018	U	0.0019	0.0019	U	-		
1,1,2-Trichloroethane	0.0018	0.0018	U	0.0019	0.0019	U	-		
1,1-Dichloroethane	0.0018	0.0018	U	0.0019	0.0019	U	-		
1,1-Dichloroethene	0.0018	0.0018	U	0.0019	0.0019	U	-		
1,1-Dichloropropene	0.0018	0.0018	U	0.0019	0.0019	U	-		
1,2,3-Trichlorobenzene	0.0018	0.0018	U	0.0019	0.0019	U	-		
1,2,3-Trichloropropane	0.0046	0.0046	U	0.0046	0.0046	U	-		
1,2,4-Trichlorobenzene	0.0018	0.0018	U	0.0019	0.0019	U	-		
1,2,4-Trimethylbenzene	0.0018	0.0018	U	0.0019	0.0019	U	-		
1,2-Dibromo-3-chloropropane	0.0046	0.0046	U	0.0046	0.0046	U	-		
1,2-Dibromoethane	0.0018	0.0018	U	0.0019	0.0019	U	-		
1,2-Dichlorobenzene	0.0018	0.0018	U	0.0019	0.0019	U	-		
1,2-Dichloroethane	0.0018	0.0018	U	0.0019	0.0019	U	-		
1,2-Dichloropropane	0.0018	0.0018	U	0.0019	0.0019	U	-		
1,3,5-Trimethylbenzene	0.0018	0.0018	U	0.0019	0.0019	U	-		
1,3-Dichlorobenzene	0.0018	0.0018	U	0.0019	0.0019	U	-		
1,3-Dichloropropane	0.0018	0.0018	U	0.0019	0.0019	U	-		
1,4-Dichlorobenzene	0.0018	0.0018	U	0.0019	0.0019	U	-		
2,2-Dichloropropane	0.0018	0.0018	U	0.0019	0.0019	U	-		
2-Butanone	0.0028	0.0028	U	0.0028	0.0028	U	-		
2-Chlorotoluene	0.0018	0.0018	U	0.0019	0.0019	U	-		
2-Hexanone	0.0018	0.0018	U	0.0019	0.0019	U	-		
4-Chlorotoluene	0.0018	0.0018	U	0.0019	0.0019	U	-		
4-Methyl-2-pentanone	0.0018	0.0018	U	0.0019	0.0019	U	-		
Acetone	0.063	0.0046		0.095	0.0046		-		
Benzene	0.0018	0.0018	U	0.0019	0.0019	U	-		
Bromobenzene	0.0018	0.0018	U	0.0019	0.0019	U	-		
Bromochloromethane	0.0018	0.0018	U	0.0019	0.0019	U	-		
Bromodichloromethane	0.0018	0.0018	U	0.0019	0.0019	U	-		
Bromoform	0.0018	0.0018	U	0.0019	0.0019	U	-		
Bromomethane	0.0018	0.0018	U	0.0019	0.0019	U	-		
Carbon disulfide	0.0018	0.0018	U	0.0019	0.0019	U	-		
Carbon tetrachloride	0.0018	0.0018	U	0.0019	0.0019	U	-		
Chlorobenzene	0.0018	0.0018	U	0.0019	0.0019	U	-		
Chloroethane	0.0018	0.0018	U	0.0019	0.0019	U	-		
Chloroform	0.0018	0.0018	U	0.0019	0.0019	U	-		
Chloromethane	0.0046	0.0046	U	0.0046	0.0046	U	-		
cis-1,2-Dichloroethene	0.0018	0.0018	U	0.0019	0.0019	U	-		
cis-1,3-Dichloropropene	0.0018	0.0018	U	0.0019	0.0019	U	-		
Dibromochloromethane	0.0018	0.0018	U	0.0019	0.0019	U	-		
Dibromomethane	0.0018	0.0018	U	0.0019	0.0019	U	-		
Dichlorodifluoromethane	0.0018	0.0018	U	0.0019	0.0019	U	-		
Ethylbenzene	0.0018	0.0018	U	0.0019	0.0019	U	-		
Hexachlorobutadiene	0.0018	0.0018	U	0.0019	0.0019	U	-		
Isopropylbenzene	0.0018	0.0018	U	0.0019	0.0019	U	-		
m+p-Xylene	0.0046	0.0046	U	0.0046	0.0046	U	-		
Methyl Tertiary Butyl Ether	0.0018	0.0018	U	0.0019	0.0019	U	-		
Methylene chloride	0.0092	0.0092	U	0.0093	0.0093	U	-		
n-Butylbenzene	0.0018	0.0018	U	0.0019	0.0019	U	-		
n-Propylbenzene	0.0018	0.0018	U	0.0019	0.0019	U	-		
Naphthalene	0.0018	0.0018	U	0.0019	0.0019	U	-		
o-Xylene	0.0023	0.0023	U	0.0023	0.0023	U	-		
4-Isopropyltoluene	0.0018	0.0018	U	0.0019	0.0019	U	-		
sec-Butylbenzene	0.0018	0.0018	U	0.0019	0.0019	U	-		
Styrene	0.0018	0.0018	U	0.0019	0.0019	U	-		
tert-Butylbenzene	0.0018	0.0018	U	0.0019	0.0019	U	-		
Tetrachloroethene	0.0018	0.0018	U	0.0019	0.0019	U	-		
Toluene	0.0018	0.0018	U	0.0019	0.0019	U	-		
trans-1,2-Dichloroethene	0.0018	0.0018	U	0.0019	0.0019	U	-		
trans-1,3-Dichloropropene	0.0018	0.0018	U	0.0019	0.0019	U	-		
Trichloroethene	0.0018	0.0018	U	0.0019	0.0019	U	-		
Trichlorofluoromethane	0.0018	0.0018	U	0.0019	0.0019	U	-		
Vinyl chloride	0.0018	0.0018	U	0.0019	0.0019	U	-		
Semivolatile Organic Compounds (mg/kg)									
1,2,4-Trichlorobenzene	0.18	0.18	U	0.18	0.18	UJ	-		
1,2-Dichlorobenzene	0.18	0.18	U	0.18	0.18	UJ	-		
1,3-Dichlorobenzene	0.18	0.18	U	0.18	0.18	UJ	-		
1,4-Dichlorobenzene	0.18	0.18	U	0.18	0.18	UJ	-		
2,4,5-Trichlorophenol	0.18	0.18	U	0.18	0.18	UJ	-		
2,4,6-Trichlorophenol	0.18	0.18	U	0.18	0.18	UJ	-		
2,4-Dichlorophenol	0.18	0.18	U	0.18	0.18	UJ	-		
2,4-Dimethylphenol	0.18	0.18	U	0.18	0.18	UJ	-		
2,4-Dinitrophenol	0.18	0.18	U	0.18	0.18	UJ	-		
2,4-Dinitrotoluene	0.18	0.18	U	0.18	0.18	UJ	-		
2,6-Dinitrotoluene	0.18	0.18	U	0.18	0.18	UJ	-		
2-Chloronaphthalene	0.18	0.18	U	0.18	0.18	UJ	-		
2-Chlorophenol	0.18	0.18	U	0.18	0.18	UJ	-		
2-Methylnaphthalene	0.18	0.18	U	0.18	0.18	UJ	-		
2-Methylphenol	0.18	0.18	U	0.18	0.18	UJ	-		
2-Nitroaniline	0.18	0.18	U	0.18	0.18	UJ	-		
2-Nitrophenol	0.18	0.18	U	0.18	0.18	UJ	-		
3,3-Dichlorobenzidine	0.18	0.18	U	0.18	0.18	UJ	-		
3-Nitroaniline	0.18	0.18	U	0.18	0.18	UJ	-		
4,6-Dinitro-2-methylphenol	0.18	0.18	U	0.18	0.18	UJ	-		
4-Bromophenyl-phenylether	0.18	0.18	U	0.18	0.18	UJ	-		
4-Chloro-3-methylphenol	0.18	0.18	U	0.18	0.18	UJ	-		
4-Chloroaniline	0.18	0.18	U	0.18	0.18	UJ	-		

TABLE B-AE25
ANALYTICAL RESULTS FOR GRID AE25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AE25			AE25			AE25		
Sample Name	P3IF-BA-GRID-AE025			P3IF-BA-GRID-AE525			P3IF-SS-IS-SO-AE025		
Date Collected	June 20, 2023			June 20, 2023			June 20, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Semivolatile Organic Compounds (mg/kg), continued									
4-Chlorophenyl-phenylether	0.18	0.18	U	0.18	0.18	UJ	-		
4-Nitroaniline	0.18	0.18	U	0.18	0.18	UJ	-		
4-Nitrophenol	0.18	0.18	U	0.18	0.18	UJ	-		
Acenaphthene	0.18	0.18	U	0.18	0.18	UJ	-		
Acenaphthylene	0.18	0.18	U	0.18	0.18	UJ	-		
Anthracene	0.18	0.18	U	0.18	0.18	UJ	-		
Benzo(a)anthracene	0.18	0.18	U	0.18	0.18	UJ	-		
Benzo(a)pyrene	0.14	0.14	U	0.14	0.14	UJ	-		
Benzo(b)fluoranthene	0.18	0.18	U	0.18	0.18	UJ	-		
Benzo(g,h,i)perylene	0.18	0.18	U	0.18	0.18	UJ	-		
Benzo(k)fluoranthene	0.18	0.18	U	0.18	0.18	UJ	-		
Benzoic acid	0.18	0.18	U	0.18	0.18	UJ	-		
Benzyl Alcohol	0.18	0.18	U	0.18	0.18	UJ	-		
Bis(2-chloro-1-methylethyl) ether	0.18	0.18	U	0.18	0.18	UJ	-		
Bis(2-chloroethoxy)methane	0.18	0.18	U	0.18	0.18	UJ	-		
Bis(2-chloroethyl)ether	0.18	0.18	U	0.18	0.18	UJ	-		
Bis(2-ethylhexyl)phthalate	0.18	0.18	U	0.18	0.18	UJ	-		
Butyl benzyl phthalate	0.18	0.18	U	0.18	0.18	UJ	-		
Carbazole	0.18	0.18	U	0.18	0.18	UJ	-		
Chrysene	0.18	0.18	U	0.18	0.18	UJ	-		
Di-n-butyl phthalate	0.18	0.18	U	0.18	0.18	UJ	-		
Di-n-octyl phthalate	0.18	0.18	U	0.18	0.18	UJ	-		
Dibenz(a,h)anthracene	0.14	0.14	U	0.14	0.14	UJ	-		
Dibenzofuran	0.18	0.18	U	0.18	0.18	UJ	-		
Diethyl phthalate	0.18	0.18	U	0.18	0.18	UJ	-		
Dimethyl phthalate	0.18	0.18	U	0.18	0.18	UJ	-		
Fluoranthene	0.18	0.18	U	0.18	0.18	UJ	-		
Fluorene	0.18	0.18	U	0.18	0.18	UJ	-		
Hexachlorobenzene	0.18	0.18	U	0.18	0.18	UJ	-		
Hexachlorobutadiene	0.18	0.18	U	0.18	0.18	UJ	-		
Hexachloroethane	0.18	0.18	U	0.18	0.18	UJ	-		
Indeno(1,2,3-cd)pyrene	0.18	0.18	U	0.18	0.18	UJ	-		
Isophorone	0.18	0.18	U	0.18	0.18	UJ	-		
n-Nitrosodimethylamine	0.021	0.021	UJ	0.022	0.022	UJ	-		
n-Nitroso-di-n-propylamine	0.18	0.18	U	0.18	0.18	UJ	-		
n-Nitrosodiphenylamine	0.18	0.18	U	0.18	0.18	UJ	-		
Naphthalene	0.18	0.18	U	0.18	0.18	UJ	-		
Nitrobenzene	0.18	0.18	U	0.18	0.18	UJ	-		
Pentachlorophenol	0.18	0.18	U	0.18	0.18	UJ	-		
Phenanthrene	0.18	0.18	U	0.18	0.18	UJ	-		
Phenol	0.18	0.18	U	0.18	0.18	UJ	-		
Pyrene	0.18	0.18	U	0.18	0.18	UJ	-		
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	-			-			0.075	0.075	UJ
1,3-Dinitrobenzene	-			-			0.075	0.075	UJ
2,4,6-Trinitrotoluene	-			-			0.075	0.075	UJ
2,4-Dinitrotoluene	-			-			0.075	0.075	UJ
2,6-Dinitrotoluene	-			-			0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	-			-			0.075	0.075	UJ
2-Nitrotoluene	-			-			0.075	0.075	UJ
3-Nitrotoluene	-			-			0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	-			-			0.075	0.075	UJ
4-Nitrotoluene	-			-			0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	-			-			0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	-			-			0.075	0.075	UJ
Nitrobenzene	-			-			0.075	0.075	UJ
Nitroglycerin	-			-			0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	-			-			0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	-			-			0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)									
Aroclor 1016	0.021	0.021	UJ	0.021	0.021	U	-		
Aroclor 1221	0.021	0.021	UJ	0.021	0.021	U	-		
Aroclor 1232	0.011	0.011	UJ	0.01	0.01	U	-		
Aroclor 1242	0.011	0.011	UJ	0.01	0.01	U	-		
Aroclor 1248	0.011	0.011	UJ	0.01	0.01	U	-		
Aroclor 1254	0.011	0.011	UJ	0.01	0.01	U	-		
Aroclor 1260	0.011	0.011	UJ	0.01	0.01	U	-		
Dioxins/Furans (mg/kg)									
Octachlorodibenzofuran (OCDF)	0.00000028	0.00000028	U	0.00000027	0.00000027	UJ	-		
Octachlorodibenzo-p-dioxin (OCDD)	0.0000025	0.0000025	U	0.0000026	0.0000026	J	-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.00000014	0.00000014	J	0.00000006	0.00000006	UJ	-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	0.00000036	0.00000036	U	0.00000047	0.00000047	J	-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.000000086	0.000000086	U	7.8E-08	7.8E-08	UJ	-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000034	0.000000034	U	0.0000001	0.0000001	J	-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000049	0.000000049	U	7.6E-08	7.6E-08	UJ	-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000031	0.000000031	U	8.2E-08	8.2E-08	UJ	-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000045	0.000000045	U	0.00000007	0.00000007	UJ	-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.000000041	0.000000041	U	0.00000011	0.00000011	UJ	-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000077	0.000000077	U	7.4E-08	7.4E-08	UJ	-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.000000069	0.000000069	U	0.00000016	0.00000016	UJ	-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.000000048	0.000000048	U	0.0000001	0.0000001	UJ	-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000034	0.000000034	U	0.00000009	0.00000009	UJ	-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.000000053	0.000000053	U	0.00000016	0.00000016	UJ	-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.00000024	0.00000024	U	0.0000006	0.0000006	J	-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.000000071	0.000000071	U	0.0000001	0.0000001	UJ	-		

TABLE B-AE25
ANALYTICAL RESULTS FOR GRID AE25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AE25			AE25			AE25		
Sample Name	P3IF-BA-GRID-AE025			P3IF-BA-GRID-AE525			P3IF-SS-IS-SO-AE025		
Date Collected	June 20, 2023			June 20, 2023			June 20, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Metals (mg/kg)									
Aluminum	-			-			13000	4	
Antimony	-			-			0.15	0.15	U
Arsenic	-			-			1.2	0.3	
Barium	-			-			490	0.2	
Beryllium	-			-			0.9	0.3	J
Cadmium	-			-			0.35	0.08	
Calcium (Ca)	-			-			19000	15	
Chromium	-			-			8.3	0.2	
Cobalt	-			-			3.7	0.08	
Copper	-			-			59	0.2	
Iron (Fe)	-			-			6700	8	
Lead	-			-			10	0.05	J
Magnesium (Mg)	-			-			4500	5	
Manganese (Mn)	-			-			370	0.08	
Mercury	-			-			0.037	0.042	J
Nickel	-			-			9.5	0.2	
Potassium (K)	-			-			1200	8	
Selenium	-			-			1.4	0.1	
Silver	-			-			0.083	0.05	J
Sodium (Na)	-			-			43	8	
Thallium	-			-			0.04	0.05	J
Vanadium	-			-			7.2	0.1	
Zinc	-			-			24	1.5	J
Other Parameters (mg/kg)									
Cyanide (CN-)	0.32	0.32	U	0.34	0.34	U	-		
Nitrate	1.9	2	J	1.4	2.2	J	-		
Perchlorate	0.0021	0.0021	U	0.002	0.002	UJ	-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-AE25
ANALYTICAL RESULTS FOR GRID AE25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AE25			AE25		
Sample Name	P3IF-SS-IS-SO-AE525			P3IF-SS-IS-SO-AE625		
Date Collected	June 20, 2023			June 20, 2023		
	Result	LOD	Qual	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)						
1,1,1,2-Tetrachloroethane	-			-		
1,1,1-Trichloroethane	-			-		
1,1,2,2-Tetrachloroethane	-			-		
1,1,2-Trichloroethane	-			-		
1,1-Dichloroethane	-			-		
1,1-Dichloroethene	-			-		
1,1-Dichloropropene	-			-		
1,2,3-Trichlorobenzene	-			-		
1,2,3-Trichloropropane	-			-		
1,2,4-Trichlorobenzene	-			-		
1,2,4-Trimethylbenzene	-			-		
1,2-Dibromo-3-chloropropane	-			-		
1,2-Dibromoethane	-			-		
1,2-Dichlorobenzene	-			-		
1,2-Dichloroethane	-			-		
1,2-Dichloropropane	-			-		
1,3,5-Trimethylbenzene	-			-		
1,3-Dichlorobenzene	-			-		
1,3-Dichloropropane	-			-		
1,4-Dichlorobenzene	-			-		
2,2-Dichloropropane	-			-		
2-Butanone	-			-		
2-Chlorotoluene	-			-		
2-Hexanone	-			-		
4-Chlorotoluene	-			-		
4-Methyl-2-pentanone	-			-		
Acetone	-			-		
Benzene	-			-		
Bromobenzene	-			-		
Bromochloromethane	-			-		
Bromodichloromethane	-			-		
Bromoform	-			-		
Bromomethane	-			-		
Carbon disulfide	-			-		
Carbon tetrachloride	-			-		
Chlorobenzene	-			-		
Chloroethane	-			-		
Chloroform	-			-		
Chloromethane	-			-		
cis-1,2-Dichloroethene	-			-		
cis-1,3-Dichloropropene	-			-		
Dibromochloromethane	-			-		
Dibromomethane	-			-		
Dichlorodifluoromethane	-			-		
Ethylbenzene	-			-		
Hexachlorobutadiene	-			-		
Isopropylbenzene	-			-		
m+p-Xylene	-			-		
Methyl Tertiary Butyl Ether	-			-		
Methylene chloride	-			-		
n-Butylbenzene	-			-		
n-Propylbenzene	-			-		
Naphthalene	-			-		
o-Xylene	-			-		
4-Isopropyltoluene	-			-		
sec-Butylbenzene	-			-		
Styrene	-			-		
tert-Butylbenzene	-			-		
Tetrachloroethene	-			-		
Toluene	-			-		
trans-1,2-Dichloroethene	-			-		
trans-1,3-Dichloropropene	-			-		
Trichloroethene	-			-		
Trichlorofluoromethane	-			-		
Vinyl chloride	-			-		
Semivolatile Organic Compounds (mg/kg)						
1,2,4-Trichlorobenzene	-			-		
1,2-Dichlorobenzene	-			-		
1,3-Dichlorobenzene	-			-		
1,4-Dichlorobenzene	-			-		
2,4,5-Trichlorophenol	-			-		
2,4,6-Trichlorophenol	-			-		
2,4-Dichlorophenol	-			-		
2,4-Dimethylphenol	-			-		
2,4-Dinitrophenol	-			-		
2,4-Dinitrotoluene	-			-		
2,6-Dinitrotoluene	-			-		
2-Chloronaphthalene	-			-		
2-Chlorophenol	-			-		
2-Methylnaphthalene	-			-		
2-Methylphenol	-			-		
2-Nitroaniline	-			-		
2-Nitrophenol	-			-		
3,3-Dichlorobenzidine	-			-		
3-Nitroaniline	-			-		
4,6-Dinitro-2-methylphenol	-			-		
4-Bromophenyl-phenylether	-			-		
4-Chloro-3-methylphenol	-			-		
4-Chloroaniline	-			-		

TABLE B-AE25
ANALYTICAL RESULTS FOR GRID AE25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AE25			AE25		
Sample Name	P3IF-SS-IS-SO-AE525			P3IF-SS-IS-SO-AE625		
Date Collected	June 20, 2023			June 20, 2023		
	Result	LOD	Qual	Result	LOD	Qual
Semivolatile Organic Compounds (mg/kg), continued						
4-Chlorophenyl-phenylether	-			-		
4-Nitroaniline	-			-		
4-Nitrophenol	-			-		
Acenaphthene	-			-		
Acenaphthylene	-			-		
Anthracene	-			-		
Benzo(a)anthracene	-			-		
Benzo(a)pyrene	-			-		
Benzo(b)fluoranthene	-			-		
Benzo(g,h,i)perylene	-			-		
Benzo(k)fluoranthene	-			-		
Benzoic acid	-			-		
Benzyl Alcohol	-			-		
Bis(2-chloro-1-methylethyl) ether	-			-		
Bis(2-chloroethoxy)methane	-			-		
Bis(2-chloroethyl)ether	-			-		
Bis(2-ethylhexyl)phthalate	-			-		
Butyl benzyl phthalate	-			-		
Carbazole	-			-		
Chrysene	-			-		
Di-n-butyl phthalate	-			-		
Di-n-octyl phthalate	-			-		
Dibenz(a,h)anthracene	-			-		
Dibenzofuran	-			-		
Diethyl phthalate	-			-		
Dimethyl phthalate	-			-		
Fluoranthene	-			-		
Fluorene	-			-		
Hexachlorobenzene	-			-		
Hexachlorobutadiene	-			-		
Hexachloroethane	-			-		
Indeno(1,2,3-cd)pyrene	-			-		
Isophorone	-			-		
n-Nitrosodimethylamine	-			-		
n-Nitroso-di-n-propylamine	-			-		
n-Nitrosodiphenylamine	-			-		
Naphthalene	-			-		
Nitrobenzene	-			-		
Pentachlorophenol	-			-		
Phenanthrene	-			-		
Phenol	-			-		
Pyrene	-			-		
Explosives (mg/kg)						
1,3,5-Trinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ
2,4,6-Trinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ
2,4-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ
2-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ
3-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ
4-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	UJ	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ
Nitroglycerin	0.15	0.15	UJ	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	UJ	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.25	0.25	UJ	0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)						
Aroclor 1016	-			-		
Aroclor 1221	-			-		
Aroclor 1232	-			-		
Aroclor 1242	-			-		
Aroclor 1248	-			-		
Aroclor 1254	-			-		
Aroclor 1260	-			-		
Dioxins/Furans (mg/kg)						
Octachlorodibenzofuran (OCDF)	-			-		
Octachlorodibenzo-p-dioxin (OCDD)	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	-			-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	-			-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	-			-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-			-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	-			-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-			-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	-			-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	-			-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	-			-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	-			-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	-			-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	-			-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	-			-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	-			-		

TABLE B-AE25
ANALYTICAL RESULTS FOR GRID AE25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AE25			AE25		
Sample Name	P3IF-SS-IS-SO-AE525			P3IF-SS-IS-SO-AE625		
Date Collected	June 20, 2023			June 20, 2023		
	Result	LOD	Qual	Result	LOD	Qual
Metals (mg/kg)						
Aluminum	14000	4		14000	4	
Antimony	0.15	0.15	U	0.15	0.15	U
Arsenic	1.4	0.3		1.3	0.3	
Barium	520	0.2		470	0.2	
Beryllium	0.93	0.3	J	0.96	0.3	J
Cadmium	0.3	0.08		0.38	0.08	
Calcium (Ca)	23000	15		21000	15	
Chromium	8.7	0.2		8.8	0.2	
Cobalt	3.8	0.08		4.1	0.08	
Copper	50	0.2		89	0.2	
Iron (Fe)	7000	8		6800	8	
Lead	9.4	0.05		21	0.05	J
Magnesium (Mg)	4900	5		5200	5	
Manganese (Mn)	390	0.08		360	0.08	
Mercury	0.028	0.041	J	0.025	0.042	J
Nickel	9.6	0.2		10	0.2	
Potassium (K)	1300	8		1400	8	
Selenium	1.8	0.1		1.4	0.1	
Silver	0.058	0.05	J	0.077	0.05	J
Sodium (Na)	48	8		50	8	
Thallium	0.041	0.05	J	0.047	0.05	J
Vanadium	7.9	0.1		7.3	0.1	
Zinc	22	1.5		48	1.5	J
Other Parameters (mg/kg)						
Cyanide (CN-)	-			-		
Nitrate	-			-		
Perchlorate	-			-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-AF25
ANALYTICAL RESULTS FOR GRID AF25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AF25			AF25			AF25		
Sample Name	P3IF-BA-GRID-AF025			P3IF-SS-IS-SO-AF025			P3IF-SS-IS-SO-AF525		
Date Collected	June 21, 2023			June 21, 2023			June 21, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)									
1,1,1,2-Tetrachloroethane	0.0017	0.0017	UJ	-			-		
1,1,1-Trichloroethane	0.0017	0.0017	UJ	-			-		
1,1,2,2-Tetrachloroethane	0.0017	0.0017	U	-			-		
1,1,2-Trichloroethane	0.0017	0.0017	UJ	-			-		
1,1-Dichloroethane	0.0017	0.0017	UJ	-			-		
1,1-Dichloroethene	0.0017	0.0017	UJ	-			-		
1,1-Dichloropropene	0.0017	0.0017	UJ	-			-		
1,2,3-Trichlorobenzene	0.0017	0.0017	U	-			-		
1,2,3-Trichloropropane	0.0043	0.0043	U	-			-		
1,2,4-Trichlorobenzene	0.0017	0.0017	U	-			-		
1,2,4-Trimethylbenzene	0.0017	0.0017	U	-			-		
1,2-Dibromo-3-chloropropane	0.0043	0.0043	U	-			-		
1,2-Dibromoethane	0.0017	0.0017	UJ	-			-		
1,2-Dichlorobenzene	0.0017	0.0017	U	-			-		
1,2-Dichloroethane	0.0017	0.0017	UJ	-			-		
1,2-Dichloropropane	0.0017	0.0017	UJ	-			-		
1,3,5-Trimethylbenzene	0.0017	0.0017	U	-			-		
1,3-Dichlorobenzene	0.0017	0.0017	U	-			-		
1,3-Dichloropropane	0.0017	0.0017	UJ	-			-		
1,4-Dichlorobenzene	0.0017	0.0017	U	-			-		
2,2-Dichloropropane	0.0017	0.0017	UJ	-			-		
2-Butanone	0.0026	0.0026	UJ	-			-		
2-Chlorotoluene	0.0017	0.0017	U	-			-		
2-Hexanone	0.0017	0.0017	UJ	-			-		
4-Chlorotoluene	0.0017	0.0017	U	-			-		
4-Methyl-2-pentanone	0.0017	0.0017	UJ	-			-		
Acetone	0.11	0.0043	J	-			-		
Benzene	0.0017	0.0017	UJ	-			-		
Bromobenzene	0.0017	0.0017	U	-			-		
Bromochloromethane	0.0017	0.0017	UJ	-			-		
Bromodichloromethane	0.0017	0.0017	UJ	-			-		
Bromoform	0.0017	0.0017	UJ	-			-		
Bromomethane	0.0017	0.0017	UJ	-			-		
Carbon disulfide	0.0017	0.0017	UJ	-			-		
Carbon tetrachloride	0.0017	0.0017	UJ	-			-		
Chlorobenzene	0.0017	0.0017	UJ	-			-		
Chloroethane	0.0017	0.0017	UJ	-			-		
Chloroform	0.0017	0.0017	UJ	-			-		
Chloromethane	0.0043	0.0043	UJ	-			-		
cis-1,2-Dichloroethene	0.0017	0.0017	UJ	-			-		
cis-1,3-Dichloropropene	0.0017	0.0017	UJ	-			-		
Dibromochloromethane	0.0017	0.0017	UJ	-			-		
Dibromomethane	0.0017	0.0017	UJ	-			-		
Dichlorodifluoromethane	0.0017	0.0017	UJ	-			-		
Ethylbenzene	0.0017	0.0017	UJ	-			-		
Hexachlorobutadiene	0.0017	0.0017	U	-			-		
Isopropylbenzene	0.0017	0.0017	U	-			-		
m+p-Xylene	0.0043	0.0043	UJ	-			-		
Methyl Tertiary Butyl Ether	0.0017	0.0017	UJ	-			-		
Methylene chloride	0.0086	0.0086	UJ	-			-		
n-Butylbenzene	0.0017	0.0017	U	-			-		
n-Propylbenzene	0.0017	0.0017	U	-			-		
Naphthalene	0.0017	0.0017	U	-			-		
o-Xylene	0.0021	0.0021	UJ	-			-		
4-Isopropyltoluene	0.0017	0.0017	U	-			-		
sec-Butylbenzene	0.0017	0.0017	U	-			-		
Styrene	0.0017	0.0017	UJ	-			-		
tert-Butylbenzene	0.0017	0.0017	U	-			-		
Tetrachloroethene	0.0017	0.0017	UJ	-			-		
Toluene	0.0017	0.0017	UJ	-			-		
trans-1,2-Dichloroethene	0.0017	0.0017	UJ	-			-		
trans-1,3-Dichloropropene	0.0017	0.0017	UJ	-			-		
Trichloroethene	0.0017	0.0017	UJ	-			-		
Trichlorofluoromethane	0.0017	0.0017	UJ	-			-		
Vinyl chloride	0.0017	0.0017	UJ	-			-		
Semivolatile Organic Compounds (mg/kg)									
1,2,4-Trichlorobenzene	0.17	0.17	UJ	-			-		
1,2-Dichlorobenzene	0.17	0.17	UJ	-			-		
1,3-Dichlorobenzene	0.17	0.17	UJ	-			-		
1,4-Dichlorobenzene	0.17	0.17	UJ	-			-		
2,4,5-Trichlorophenol	0.17	0.17	UJ	-			-		
2,4,6-Trichlorophenol	0.17	0.17	UJ	-			-		
2,4-Dichlorophenol	0.17	0.17	UJ	-			-		
2,4-Dimethylphenol	0.17	0.17	UJ	-			-		
2,4-Dinitrophenol	0.17	0.17	UJ	-			-		
2,4-Dinitrotoluene	0.17	0.17	UJ	-			-		
2,6-Dinitrotoluene	0.17	0.17	UJ	-			-		
2-Chloronaphthalene	0.17	0.17	UJ	-			-		
2-Chlorophenol	0.17	0.17	UJ	-			-		
2-Methylnaphthalene	0.17	0.17	UJ	-			-		
2-Methylphenol	0.17	0.17	UJ	-			-		
2-Nitroaniline	0.17	0.17	UJ	-			-		
2-Nitrophenol	0.17	0.17	UJ	-			-		
3,3-Dichlorobenzidine	0.17	0.17	UJ	-			-		
3-Nitroaniline	0.17	0.17	UJ	-			-		
4,6-Dinitro-2-methylphenol	0.17	0.17	UJ	-			-		
4-Bromophenyl-phenylether	0.17	0.17	UJ	-			-		
4-Chloro-3-methylphenol	0.17	0.17	UJ	-			-		
4-Chloroaniline	0.17	0.17	UJ	-			-		

TABLE B-AF25
ANALYTICAL RESULTS FOR GRID AF25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AF25			AF25			AF25		
Sample Name	P3IF-BA-GRID-AF025			P3IF-SS-IS-SO-AF025			P3IF-SS-IS-SO-AF525		
Date Collected	June 21, 2023			June 21, 2023			June 21, 2023		
Semivolatile Organic Compounds (mg/kg), continued									
4-Chlorophenyl-phenylether	0.17	0.17	UJ	-			-		
4-Nitroaniline	0.17	0.17	UJ	-			-		
4-Nitrophenol	0.17	0.17	UJ	-			-		
Acenaphthene	0.17	0.17	UJ	-			-		
Acenaphthylene	0.17	0.17	UJ	-			-		
Anthracene	0.17	0.17	UJ	-			-		
Benzo(a)anthracene	0.17	0.17	UJ	-			-		
Benzo(a)pyrene	0.14	0.14	UJ	-			-		
Benzo(b)fluoranthene	0.17	0.17	UJ	-			-		
Benzo(g,h,i)perylene	0.17	0.17	UJ	-			-		
Benzo(k)fluoranthene	0.17	0.17	UJ	-			-		
Benzoic acid	0.17	0.17	UJ	-			-		
Benzyl Alcohol	0.17	0.17	UJ	-			-		
Bis(2-chloro-1-methylethyl) ether	0.17	0.17	UJ	-			-		
Bis(2-chloroethoxy)methane	0.17	0.17	UJ	-			-		
Bis(2-chloroethyl)ether	0.17	0.17	UJ	-			-		
Bis(2-ethylhexyl)phthalate	0.17	0.17	UJ	-			-		
Butyl benzyl phthalate	0.17	0.17	UJ	-			-		
Carbazole	0.17	0.17	UJ	-			-		
Chrysene	0.17	0.17	UJ	-			-		
Di-n-butyl phthalate	0.17	0.17	UJ	-			-		
Di-n-octyl phthalate	0.17	0.17	UJ	-			-		
Dibenz(a,h)anthracene	0.14	0.14	UJ	-			-		
Dibenzofuran	0.17	0.17	UJ	-			-		
Diethyl phthalate	0.17	0.17	UJ	-			-		
Dimethyl phthalate	0.17	0.17	UJ	-			-		
Fluoranthene	0.17	0.17	UJ	-			-		
Fluorene	0.17	0.17	UJ	-			-		
Hexachlorobenzene	0.17	0.17	UJ	-			-		
Hexachlorobutadiene	0.17	0.17	UJ	-			-		
Hexachloroethane	0.17	0.17	UJ	-			-		
Indeno(1,2,3-cd)pyrene	0.17	0.17	UJ	-			-		
Isophorone	0.17	0.17	UJ	-			-		
n-Nitroso-di-n-propylamine	0.17	0.17	UJ	-			-		
n-Nitrosodimethylamine	0.021	0.021	UJ	-			-		
n-Nitrosodiphenylamine	0.17	0.17	UJ	-			-		
Naphthalene	0.17	0.17	UJ	-			-		
Nitrobenzene	0.17	0.17	UJ	-			-		
Pentachlorophenol	0.17	0.17	UJ	-			-		
Phenanthrene	0.17	0.17	UJ	-			-		
Phenol	0.17	0.17	UJ	-			-		
Pyrene	0.17	0.17	UJ	-			-		
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
1,3-Dinitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,4,6-Trinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,4-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,6-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
3-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
4-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	-			0.075	0.075	UJ	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	-			0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
Nitroglycerin	-			0.15	0.15	UJ	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	-			0.075	0.075	UJ	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	-			0.25	0.25	UJ	0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)									
Aroclor 1016	0.019	0.019	U	-			-		
Aroclor 1221	0.019	0.019	U	-			-		
Aroclor 1232	0.0095	0.0095	U	-			-		
Aroclor 1242	0.0095	0.0095	U	-			-		
Aroclor 1248	0.0095	0.0095	U	-			-		
Aroclor 1254	0.0095	0.0095	U	-			-		
Aroclor 1260	0.0095	0.0095	U	-			-		
Dioxins/Furans (mg/kg)									
Octachlorodibenzofuran (OCDF)	0.0000004	0.0000004	J	-			-		
Octachlorodibenzo-p-dioxin (OCDD)	0.000011	0.000011	J	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.00000033	0.00000033	U	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	0.0000016	0.0000016	J	-			-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.00000011	0.00000011	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.00000012	0.00000012	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000074	0.000000074	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.00000011	0.00000011	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000068	0.000000068	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.00000014	0.00000014	UJ	-			-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000071	0.000000071	U	-			-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000022	0.00000022	U	-			-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.000000067	0.000000067	U	-			-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.00000015	0.00000015	U	-			-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000022	0.00000022	U	-			-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.00000018	0.00000018	U	-			-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.000000096	0.000000096	U	-			-		

TABLE B-AF25
ANALYTICAL RESULTS FOR GRID AF25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AF25			AF25			AF25		
Sample Name	P3IF-BA-GRID-AF025			P3IF-SS-IS-SO-AF025			P3IF-SS-IS-SO-AF525		
Date Collected	June 21, 2023			June 21, 2023			June 21, 2023		
Metals (mg/kg)									
Aluminum	-			15000	4		12000	4	
Antimony	-			0.15	0.15	U	0.097	0.15	J
Arsenic	-			1.2	0.3		1.1	0.3	
Barium	-			230	0.2		210	0.2	
Beryllium	-			0.56	0.3	J	0.43	0.3	J
Cadmium	-			0.4	0.08	J	0.61	0.08	J
Calcium (Ca)	-			3100	15		3100	15	
Chromium	-			11	0.2		10	0.2	
Cobalt	-			5	0.08		4.3	0.08	
Copper	-			68	0.2		100	0.2	
Iron (Fe)	-			9200	8		8300	8	
Lead	-			12	0.05		13	0.05	
Magnesium (Mg)	-			6400	5		5200	5	
Manganese (Mn)	-			240	0.08		240	0.08	
Mercury	-			0.023	0.04	J	0.03	0.041	J
Nickel	-			8.9	0.2		8.6	0.2	
Potassium (K)	-			870	8		830	8	
Selenium	-			0.82	0.1		0.84	0.1	
Silver	-			0.054	0.05	J	0.097	0.05	J
Sodium (Na)	-			62	8		58	8	
Thallium	-			0.045	0.05	J	0.038	0.05	J
Vanadium	-			19	0.1		15	0.1	
Zinc	-			37	1.5		36	1.5	
Other Parameters (mg/kg)									
Cyanide (CN-)	0.33	0.33	U	-			-		
Nitrate	4.5	2	J	-			-		
Perchlorate	0.0017	0.0017	UJ	-			-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-AF25
ANALYTICAL RESULTS FOR GRID AF25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AF25		
Sample Name	P3IF-SS-IS-SO-AF625		
Date Collected	June 21, 2023		
	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)			
1,1,1,2-Tetrachloroethane	-		
1,1,1-Trichloroethane	-		
1,1,2,2-Tetrachloroethane	-		
1,1,2-Trichloroethane	-		
1,1-Dichloroethane	-		
1,1-Dichloroethene	-		
1,1-Dichloropropene	-		
1,2,3-Trichlorobenzene	-		
1,2,3-Trichloropropane	-		
1,2,4-Trichlorobenzene	-		
1,2,4-Trimethylbenzene	-		
1,2-Dibromo-3-chloropropane	-		
1,2-Dibromoethane	-		
1,2-Dichlorobenzene	-		
1,2-Dichloroethane	-		
1,2-Dichloropropane	-		
1,3,5-Trimethylbenzene	-		
1,3-Dichlorobenzene	-		
1,3-Dichloropropane	-		
1,4-Dichlorobenzene	-		
2,2-Dichloropropane	-		
2-Butanone	-		
2-Chlorotoluene	-		
2-Hexanone	-		
4-Chlorotoluene	-		
4-Methyl-2-pentanone	-		
Acetone	-		
Benzene	-		
Bromobenzene	-		
Bromochloromethane	-		
Bromodichloromethane	-		
Bromoform	-		
Bromomethane	-		
Carbon disulfide	-		
Carbon tetrachloride	-		
Chlorobenzene	-		
Chloroethane	-		
Chloroform	-		
Chloromethane	-		
cis-1,2-Dichloroethene	-		
cis-1,3-Dichloropropene	-		
Dibromochloromethane	-		
Dibromomethane	-		
Dichlorodifluoromethane	-		
Ethylbenzene	-		
Hexachlorobutadiene	-		
Isopropylbenzene	-		
m+p-Xylene	-		
Methyl Tertiary Butyl Ether	-		
Methylene chloride	-		
n-Butylbenzene	-		
n-Propylbenzene	-		
Naphthalene	-		
o-Xylene	-		
4-Isopropyltoluene	-		
sec-Butylbenzene	-		
Styrene	-		
tert-Butylbenzene	-		
Tetrachloroethene	-		
Toluene	-		
trans-1,2-Dichloroethene	-		
trans-1,3-Dichloropropene	-		
Trichloroethene	-		
Trichlorofluoromethane	-		
Vinyl chloride	-		
Semivolatile Organic Compounds (mg/kg)			
1,2,4-Trichlorobenzene	-		
1,2-Dichlorobenzene	-		
1,3-Dichlorobenzene	-		
1,4-Dichlorobenzene	-		
2,4,5-Trichlorophenol	-		
2,4,6-Trichlorophenol	-		
2,4-Dichlorophenol	-		
2,4-Dimethylphenol	-		
2,4-Dinitrophenol	-		
2,4-Dinitrotoluene	-		
2,6-Dinitrotoluene	-		
2-Chloronaphthalene	-		
2-Chlorophenol	-		
2-Methylnaphthalene	-		
2-Methylphenol	-		
2-Nitroaniline	-		
2-Nitrophenol	-		
3,3-Dichlorobenzidine	-		
3-Nitroaniline	-		
4,6-Dinitro-2-methylphenol	-		
4-Bromophenyl-phenylether	-		
4-Chloro-3-methylphenol	-		
4-Chloroaniline	-		

TABLE B-AF25
ANALYTICAL RESULTS FOR GRID AF25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AF25		
Sample Name	P3IF-SS-IS-SO-AF625		
Date Collected	June 21, 2023		
Semivolatile Organic Compounds (mg/kg), continued			
4-Chlorophenyl-phenylether	-		
4-Nitroaniline	-		
4-Nitrophenol	-		
Acenaphthene	-		
Acenaphthylene	-		
Anthracene	-		
Benzo(a)anthracene	-		
Benzo(a)pyrene	-		
Benzo(b)fluoranthene	-		
Benzo(g,h,i)perylene	-		
Benzo(k)fluoranthene	-		
Benzoic acid	-		
Benzyl Alcohol	-		
Bis(2-chloro-1-methylethyl) ether	-		
Bis(2-chloroethoxy)methane	-		
Bis(2-chloroethyl)ether	-		
Bis(2-ethylhexyl)phthalate	-		
Butyl benzyl phthalate	-		
Carbazole	-		
Chrysene	-		
Di-n-butyl phthalate	-		
Di-n-octyl phthalate	-		
Dibenz(a,h)anthracene	-		
Dibenzofuran	-		
Diethyl phthalate	-		
Dimethyl phthalate	-		
Fluoranthene	-		
Fluorene	-		
Hexachlorobenzene	-		
Hexachlorobutadiene	-		
Hexachloroethane	-		
Indeno(1,2,3-cd)pyrene	-		
Isophorone	-		
n-Nitroso-di-n-propylamine	-		
n-Nitrosodimethylamine	-		
n-Nitrosodiphenylamine	-		
Naphthalene	-		
Nitrobenzene	-		
Pentachlorophenol	-		
Phenanthrene	-		
Phenol	-		
Pyrene	-		
Explosives (mg/kg)			
1,3,5-Trinitrobenzene	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	UJ
2,4,6-Trinitrotoluene	0.075	0.075	UJ
2,4-Dinitrotoluene	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	UJ
2-Nitrotoluene	0.075	0.075	UJ
3-Nitrotoluene	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	0.075	0.075	UJ
4-Nitrotoluene	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	UJ
Nitroglycerin	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)			
Aroclor 1016	-		
Aroclor 1221	-		
Aroclor 1232	-		
Aroclor 1242	-		
Aroclor 1248	-		
Aroclor 1254	-		
Aroclor 1260	-		
Dioxins/Furans (mg/kg)			
Octachlorodibenzofuran (OCDF)	-		
Octachlorodibenzo-p-dioxin (OCDD)	-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	-		

TABLE B-AF25
ANALYTICAL RESULTS FOR GRID AF25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AF25		
Sample Name	P3IF-SS-IS-SO-AF625		
Date Collected	June 21, 2023		
Metals (mg/kg)			
Aluminum	12000	4	
Antimony	0.085	0.15	J
Arsenic	1.1	0.3	
Barium	220	0.2	
Beryllium	0.44	0.3	J
Cadmium	0.68	0.08	J
Calcium (Ca)	3500	15	
Chromium	10	0.2	
Cobalt	4.4	0.08	
Copper	110	0.2	
Iron (Fe)	8200	8	
Lead	12	0.05	
Magnesium (Mg)	5100	5	
Manganese (Mn)	250	0.08	
Mercury	0.022	0.041	J
Nickel	8.6	0.2	
Potassium (K)	900	8	
Selenium	0.79	0.1	
Silver	0.11	0.05	
Sodium (Na)	59	8	
Thallium	0.042	0.05	J
Vanadium	15	0.1	
Zinc	34	1.5	
Other Parameters (mg/kg)			
Cyanide (CN-)	-		
Nitrate	-		
Perchlorate	-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-AG25
ANALYTICAL RESULTS FOR GRID AG25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AG25			AG25			AG25		
Sample Name	P3IF-BA-GRID-AG025			P3IF-SS-IS-SO-AG025			P3IF-SS-IS-SO-AG525		
Date Collected	June 21, 2023			June 21, 2023			June 21, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)									
1,1,1,2-Tetrachloroethane	0.0021	0.0021	U	-			-		
1,1,1-Trichloroethane	0.0021	0.0021	U	-			-		
1,1,2,2-Tetrachloroethane	0.0021	0.0021	U	-			-		
1,1,2-Trichloroethane	0.0021	0.0021	U	-			-		
1,1-Dichloroethane	0.0021	0.0021	U	-			-		
1,1-Dichloroethene	0.0021	0.0021	U	-			-		
1,1-Dichloropropene	0.0021	0.0021	U	-			-		
1,2,3-Trichlorobenzene	0.0021	0.0021	U	-			-		
1,2,3-Trichloropropane	0.0052	0.0052	U	-			-		
1,2,4-Trichlorobenzene	0.0021	0.0021	U	-			-		
1,2,4-Trimethylbenzene	0.0021	0.0021	U	-			-		
1,2-Dibromo-3-chloropropane	0.0052	0.0052	U	-			-		
1,2-Dibromoethane	0.0021	0.0021	U	-			-		
1,2-Dichlorobenzene	0.0021	0.0021	U	-			-		
1,2-Dichloroethane	0.0021	0.0021	U	-			-		
1,2-Dichloropropane	0.0021	0.0021	U	-			-		
1,3,5-Trimethylbenzene	0.0021	0.0021	U	-			-		
1,3-Dichlorobenzene	0.0021	0.0021	U	-			-		
1,3-Dichloropropane	0.0021	0.0021	U	-			-		
1,4-Dichlorobenzene	0.0021	0.0021	U	-			-		
2,2-Dichloropropane	0.0021	0.0021	U	-			-		
2-Butanone	0.0031	0.0031	U	-			-		
2-Chlorotoluene	0.0021	0.0021	U	-			-		
2-Hexanone	0.0021	0.0021	U	-			-		
4-Chlorotoluene	0.0021	0.0021	U	-			-		
4-Methyl-2-pentanone	0.0021	0.0021	U	-			-		
Acetone	0.3	0.0052		-			-		
Benzene	0.0021	0.0021	U	-			-		
Bromobenzene	0.0021	0.0021	U	-			-		
Bromochloromethane	0.0021	0.0021	U	-			-		
Bromodichloromethane	0.0021	0.0021	U	-			-		
Bromoform	0.0021	0.0021	U	-			-		
Bromomethane	0.0021	0.0021	U	-			-		
Carbon disulfide	0.0021	0.0021	U	-			-		
Carbon tetrachloride	0.0021	0.0021	U	-			-		
Chlorobenzene	0.0021	0.0021	U	-			-		
Chloroethane	0.0021	0.0021	U	-			-		
Chloroform	0.0021	0.0021	U	-			-		
Chloromethane	0.0052	0.0052	U	-			-		
cis-1,2-Dichloroethene	0.0021	0.0021	U	-			-		
cis-1,3-Dichloropropene	0.0021	0.0021	U	-			-		
Dibromochloromethane	0.0021	0.0021	U	-			-		
Dibromomethane	0.0021	0.0021	U	-			-		
Dichlorodifluoromethane	0.0021	0.0021	U	-			-		
Ethylbenzene	0.0021	0.0021	U	-			-		
Hexachlorobutadiene	0.0021	0.0021	U	-			-		
Isopropylbenzene	0.0021	0.0021	U	-			-		
m+p-Xylene	0.0052	0.0052	U	-			-		
Methyl Tertiary Butyl Ether	0.0021	0.0021	U	-			-		
Methylene chloride	0.01	0.01	U	-			-		
n-Butylbenzene	0.0021	0.0021	U	-			-		
n-Propylbenzene	0.0021	0.0021	U	-			-		
Naphthalene	0.0021	0.0021	U	-			-		
o-Xylene	0.0026	0.0026	U	-			-		
4-Isopropyltoluene	0.0021	0.0021	U	-			-		
sec-Butylbenzene	0.0021	0.0021	U	-			-		
Styrene	0.0021	0.0021	U	-			-		
tert-Butylbenzene	0.0021	0.0021	U	-			-		
Tetrachloroethene	0.0021	0.0021	U	-			-		
Toluene	0.0021	0.0021	U	-			-		
trans-1,2-Dichloroethene	0.0021	0.0021	U	-			-		
trans-1,3-Dichloropropene	0.0021	0.0021	U	-			-		
Trichloroethene	0.0021	0.0021	U	-			-		
Trichlorofluoromethane	0.0021	0.0021	U	-			-		
Vinyl chloride	0.0021	0.0021	U	-			-		
Semivolatile Organic Compounds (mg/kg)									
1,2,4-Trichlorobenzene	0.17	0.17	UJ	-			-		
1,2-Dichlorobenzene	0.17	0.17	UJ	-			-		
1,3-Dichlorobenzene	0.17	0.17	UJ	-			-		
1,4-Dichlorobenzene	0.17	0.17	UJ	-			-		
2,4,5-Trichlorophenol	0.17	0.17	UJ	-			-		
2,4,6-Trichlorophenol	0.17	0.17	UJ	-			-		
2,4-Dichlorophenol	0.17	0.17	UJ	-			-		
2,4-Dimethylphenol	0.17	0.17	UJ	-			-		
2,4-Dinitrophenol	0.17	0.17	UJ	-			-		
2,4-Dinitrotoluene	0.17	0.17	UJ	-			-		
2,6-Dinitrotoluene	0.17	0.17	UJ	-			-		
2-Chloronaphthalene	0.17	0.17	UJ	-			-		
2-Chlorophenol	0.17	0.17	UJ	-			-		
2-Methylnaphthalene	0.17	0.17	UJ	-			-		
2-Methylphenol	0.17	0.17	UJ	-			-		
2-Nitroaniline	0.17	0.17	UJ	-			-		
2-Nitrophenol	0.17	0.17	UJ	-			-		
3,3-Dichlorobenzidine	0.17	0.17	UJ	-			-		
3-Nitroaniline	0.17	0.17	UJ	-			-		
4,6-Dinitro-2-methylphenol	0.17	0.17	UJ	-			-		
4-Bromophenyl-phenylether	0.17	0.17	UJ	-			-		
4-Chloro-3-methylphenol	0.17	0.17	UJ	-			-		
4-Chloroaniline	0.17	0.17	UJ	-			-		

TABLE B-AG25
ANALYTICAL RESULTS FOR GRID AG25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AG25			AG25			AG25		
Sample Name	P3IF-BA-GRID-AG025			P3IF-SS-IS-SO-AG025			P3IF-SS-IS-SO-AG525		
Date Collected	June 21, 2023			June 21, 2023			June 21, 2023		
Semivolatile Organic Compounds (mg/kg), continued									
4-Chlorophenyl-phenylether	0.17	0.17	UJ	-			-		
4-Nitroaniline	0.17	0.17	UJ	-			-		
4-Nitrophenol	0.17	0.17	UJ	-			-		
Acenaphthene	0.17	0.17	UJ	-			-		
Acenaphthylene	0.17	0.17	UJ	-			-		
Anthracene	0.17	0.17	UJ	-			-		
Benzo(a)anthracene	0.17	0.17	UJ	-			-		
Benzo(a)pyrene	0.13	0.13	UJ	-			-		
Benzo(b)fluoranthene	0.17	0.17	UJ	-			-		
Benzo(g,h,i)perylene	0.17	0.17	UJ	-			-		
Benzo(k)fluoranthene	0.17	0.17	UJ	-			-		
Benzoic acid	0.17	0.17	UJ	-			-		
Benzyl Alcohol	0.17	0.17	UJ	-			-		
Bis(2-chloro-1-methylethyl) ether	0.17	0.17	UJ	-			-		
Bis(2-chloroethoxy)methane	0.17	0.17	UJ	-			-		
Bis(2-chloroethyl)ether	0.17	0.17	UJ	-			-		
Bis(2-ethylhexyl)phthalate	0.17	0.17	UJ	-			-		
Butyl benzyl phthalate	0.17	0.17	UJ	-			-		
Carbazole	0.17	0.17	UJ	-			-		
Chrysene	0.17	0.17	UJ	-			-		
Di-n-butyl phthalate	0.17	0.17	UJ	-			-		
Di-n-octyl phthalate	0.17	0.17	UJ	-			-		
Dibenz(a,h)anthracene	0.13	0.13	UJ	-			-		
Dibenzofuran	0.17	0.17	UJ	-			-		
Diethyl phthalate	0.17	0.17	UJ	-			-		
Dimethyl phthalate	0.17	0.17	UJ	-			-		
Fluoranthene	0.17	0.17	UJ	-			-		
Fluorene	0.17	0.17	UJ	-			-		
Hexachlorobenzene	0.17	0.17	UJ	-			-		
Hexachlorobutadiene	0.17	0.17	UJ	-			-		
Hexachloroethane	0.17	0.17	UJ	-			-		
Indeno(1,2,3-cd)pyrene	0.17	0.17	UJ	-			-		
Isophorone	0.17	0.17	UJ	-			-		
n-Nitroso-di-n-propylamine	0.17	0.17	UJ	-			-		
n-Nitrosodimethylamine	0.02	0.02	UJ	-			-		
n-Nitrosodiphenylamine	0.17	0.17	UJ	-			-		
Naphthalene	0.17	0.17	UJ	-			-		
Nitrobenzene	0.17	0.17	UJ	-			-		
Pentachlorophenol	0.17	0.17	UJ	-			-		
Phenanthrene	0.17	0.17	UJ	-			-		
Phenol	0.17	0.17	UJ	-			-		
Pyrene	0.17	0.17	UJ	-			-		
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
1,3-Dinitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,4,6-Trinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,4-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,6-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
3-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
4-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	-			0.075	0.075	UJ	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	-			0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
Nitroglycerin	-			0.15	0.15	UJ	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	-			0.075	0.075	UJ	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	-			0.25	0.25	UJ	0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)									
Aroclor 1016	0.02	0.02	U	-			-		
Aroclor 1221	0.02	0.02	U	-			-		
Aroclor 1232	0.01	0.01	U	-			-		
Aroclor 1242	0.01	0.01	U	-			-		
Aroclor 1248	0.01	0.01	U	-			-		
Aroclor 1254	0.01	0.01	U	-			-		
Aroclor 1260	0.01	0.01	U	-			-		
Dioxins/Furans (mg/kg)									
Octachlorodibenzofuran (OCDF)	0.00000039	0.00000039	J	-			-		
Octachlorodibenzo-p-dioxin (OCDD)	0.0000083	0.0000083	J	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.00000034	0.00000034	U	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	0.0000011	0.0000011	U	-			-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.000000093	0.000000093	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000098	0.000000098	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000015	0.00000015	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000091	0.000000091	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000014	0.00000014	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.00000012	0.00000012	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000022	0.00000022	U	-			-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000011	0.00000011	U	-			-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.000000067	0.000000067	U	-			-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.00000017	0.00000017	U	-			-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000011	0.00000011	U	-			-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.00000029	0.00000029	U	-			-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.000000051	0.000000051	U	-			-		

TABLE B-AG25
ANALYTICAL RESULTS FOR GRID AG25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AG25			AG25			AG25		
Sample Name	P3IF-BA-GRID-AG025			P3IF-SS-IS-SO-AG025			P3IF-SS-IS-SO-AG525		
Date Collected	June 21, 2023			June 21, 2023			June 21, 2023		
Metals (mg/kg)									
Aluminum	-			19000	4		18000	4	
Antimony	-			0.24	0.15		0.23	0.15	
Arsenic	-			1	0.3		1.1	0.3	
Barium	-			200	0.2		210	0.2	
Beryllium	-			0.4	0.3	J	0.44	0.3	J
Cadmium	-			0.58	0.08		0.4	0.08	
Calcium (Ca)	-			2700	15		2800	15	
Chromium	-			15	0.2		14	0.2	
Cobalt	-			5.6	0.08		5.4	0.08	
Copper	-			72	0.2		69	0.2	
Iron (Fe)	-			11000	8		12000	8	
Lead	-			12	0.05		13	0.05	
Magnesium (Mg)	-			7700	5		7200	5	
Manganese (Mn)	-			330	0.08		330	0.08	
Mercury	-			0.027	0.039	J	0.024	0.04	J
Nickel	-			10	0.2		10	0.2	
Potassium (K)	-			1100	8		1100	8	
Selenium	-			0.81	0.1		0.89	0.1	
Silver	-			0.089	0.05	J	0.09	0.05	J
Sodium (Na)	-			66	8		69	8	
Thallium	-			0.055	0.05	J	0.051	0.05	J
Vanadium	-			23	0.1		23	0.1	
Zinc	-			33	1.5		35	1.5	
Other Parameters (mg/kg)									
Cyanide (CN-)	0.32	0.32	UJ	-			-		
Nitrate	4.8	2.1	J	-			-		
Perchlorate	0.0017	0.0017	UJ	-			-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-AG25
ANALYTICAL RESULTS FOR GRID AG25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AG25		
Sample Name	P3IF-SS-IS-SO-AG625		
Date Collected	June 21, 2023		
	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)			
1,1,1,2-Tetrachloroethane	-		
1,1,1-Trichloroethane	-		
1,1,2,2-Tetrachloroethane	-		
1,1,2-Trichloroethane	-		
1,1-Dichloroethane	-		
1,1-Dichloroethene	-		
1,1-Dichloropropene	-		
1,2,3-Trichlorobenzene	-		
1,2,3-Trichloropropane	-		
1,2,4-Trichlorobenzene	-		
1,2,4-Trimethylbenzene	-		
1,2-Dibromo-3-chloropropane	-		
1,2-Dibromoethane	-		
1,2-Dichlorobenzene	-		
1,2-Dichloroethane	-		
1,2-Dichloropropane	-		
1,3,5-Trimethylbenzene	-		
1,3-Dichlorobenzene	-		
1,3-Dichloropropane	-		
1,4-Dichlorobenzene	-		
2,2-Dichloropropane	-		
2-Butanone	-		
2-Chlorotoluene	-		
2-Hexanone	-		
4-Chlorotoluene	-		
4-Methyl-2-pentanone	-		
Acetone	-		
Benzene	-		
Bromobenzene	-		
Bromochloromethane	-		
Bromodichloromethane	-		
Bromoform	-		
Bromomethane	-		
Carbon disulfide	-		
Carbon tetrachloride	-		
Chlorobenzene	-		
Chloroethane	-		
Chloroform	-		
Chloromethane	-		
cis-1,2-Dichloroethene	-		
cis-1,3-Dichloropropene	-		
Dibromochloromethane	-		
Dibromomethane	-		
Dichlorodifluoromethane	-		
Ethylbenzene	-		
Hexachlorobutadiene	-		
Isopropylbenzene	-		
m+p-Xylene	-		
Methyl Tertiary Butyl Ether	-		
Methylene chloride	-		
n-Butylbenzene	-		
n-Propylbenzene	-		
Naphthalene	-		
o-Xylene	-		
4-Isopropyltoluene	-		
sec-Butylbenzene	-		
Styrene	-		
tert-Butylbenzene	-		
Tetrachloroethene	-		
Toluene	-		
trans-1,2-Dichloroethene	-		
trans-1,3-Dichloropropene	-		
Trichloroethene	-		
Trichlorofluoromethane	-		
Vinyl chloride	-		
Semivolatile Organic Compounds (mg/kg)			
1,2,4-Trichlorobenzene	-		
1,2-Dichlorobenzene	-		
1,3-Dichlorobenzene	-		
1,4-Dichlorobenzene	-		
2,4,5-Trichlorophenol	-		
2,4,6-Trichlorophenol	-		
2,4-Dichlorophenol	-		
2,4-Dimethylphenol	-		
2,4-Dinitrophenol	-		
2,4-Dinitrotoluene	-		
2,6-Dinitrotoluene	-		
2-Chloronaphthalene	-		
2-Chlorophenol	-		
2-Methylnaphthalene	-		
2-Methylphenol	-		
2-Nitroaniline	-		
2-Nitrophenol	-		
3,3-Dichlorobenzidine	-		
3-Nitroaniline	-		
4,6-Dinitro-2-methylphenol	-		
4-Bromophenyl-phenylether	-		
4-Chloro-3-methylphenol	-		
4-Chloroaniline	-		

TABLE B-AG25
ANALYTICAL RESULTS FOR GRID AG25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AG25		
Sample Name	P3IF-SS-IS-SO-AG625		
Date Collected	June 21, 2023		
Semivolatile Organic Compounds (mg/kg), continued			
4-Chlorophenyl-phenylether	-		
4-Nitroaniline	-		
4-Nitrophenol	-		
Acenaphthene	-		
Acenaphthylene	-		
Anthracene	-		
Benzo(a)anthracene	-		
Benzo(a)pyrene	-		
Benzo(b)fluoranthene	-		
Benzo(g,h,i)perylene	-		
Benzo(k)fluoranthene	-		
Benzoic acid	-		
Benzyl Alcohol	-		
Bis(2-chloro-1-methylethyl) ether	-		
Bis(2-chloroethoxy)methane	-		
Bis(2-chloroethyl)ether	-		
Bis(2-ethylhexyl)phthalate	-		
Butyl benzyl phthalate	-		
Carbazole	-		
Chrysene	-		
Di-n-butyl phthalate	-		
Di-n-octyl phthalate	-		
Dibenz(a,h)anthracene	-		
Dibenzofuran	-		
Diethyl phthalate	-		
Dimethyl phthalate	-		
Fluoranthene	-		
Fluorene	-		
Hexachlorobenzene	-		
Hexachlorobutadiene	-		
Hexachloroethane	-		
Indeno(1,2,3-cd)pyrene	-		
Isophorone	-		
n-Nitroso-di-n-propylamine	-		
n-Nitrosodimethylamine	-		
n-Nitrosodiphenylamine	-		
Naphthalene	-		
Nitrobenzene	-		
Pentachlorophenol	-		
Phenanthrene	-		
Phenol	-		
Pyrene	-		
Explosives (mg/kg)			
1,3,5-Trinitrobenzene	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	UJ
2,4,6-Trinitrotoluene	0.075	0.075	UJ
2,4-Dinitrotoluene	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	UJ
2-Nitrotoluene	0.075	0.075	UJ
3-Nitrotoluene	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	0.075	0.075	UJ
4-Nitrotoluene	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	UJ
Nitroglycerin	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)			
Aroclor 1016	-		
Aroclor 1221	-		
Aroclor 1232	-		
Aroclor 1242	-		
Aroclor 1248	-		
Aroclor 1254	-		
Aroclor 1260	-		
Dioxins/Furans (mg/kg)			
Octachlorodibenzofuran (OCDF)	-		
Octachlorodibenzo-p-dioxin (OCDD)	-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	-		

TABLE B-AG25
ANALYTICAL RESULTS FOR GRID AG25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AG25		
Sample Name	P3IF-SS-IS-SO-AG625		
Date Collected	June 21, 2023		
Metals (mg/kg)			
Aluminum	19000	4	
Antimony	0.16	0.15	J
Arsenic	1.1	0.3	
Barium	210	0.2	
Beryllium	0.46	0.3	J
Cadmium	0.47	0.08	
Calcium (Ca)	3000	15	
Chromium	15	0.2	
Cobalt	5.7	0.08	
Copper	79	0.2	
Iron (Fe)	12000	8	
Lead	13	0.05	
Magnesium (Mg)	7800	5	
Manganese (Mn)	340	0.08	
Mercury	0.024	0.04	J
Nickel	11	0.2	
Potassium (K)	1100	8	
Selenium	1	0.1	
Silver	0.1	0.05	
Sodium (Na)	67	8	
Thallium	0.057	0.05	J
Vanadium	25	0.1	
Zinc	34	1.5	
Other Parameters (mg/kg)			
Cyanide (CN-)	-		
Nitrate	-		
Perchlorate	-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-AH24
ANALYTICAL RESULTS FOR GRID AH24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AH24			AH24			AH24		
Sample Name	P3IF-BA-GRID-AH024			P3IF-SS-IS-SO-AH024			P3IF-SS-IS-SO-AH524		
Date Collected	June 21, 2023			June 21, 2023			June 21, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)									
1,1,1,2-Tetrachloroethane	0.0016	0.0016	U	-			-		
1,1,1-Trichloroethane	0.0016	0.0016	U	-			-		
1,1,2,2-Tetrachloroethane	0.0016	0.0016	U	-			-		
1,1,2-Trichloroethane	0.0016	0.0016	U	-			-		
1,1-Dichloroethane	0.0016	0.0016	U	-			-		
1,1-Dichloroethene	0.0016	0.0016	U	-			-		
1,1-Dichloropropene	0.0016	0.0016	U	-			-		
1,2,3-Trichlorobenzene	0.0016	0.0016	U	-			-		
1,2,3-Trichloropropane	0.0041	0.0041	U	-			-		
1,2,4-Trichlorobenzene	0.0016	0.0016	U	-			-		
1,2,4-Trimethylbenzene	0.0016	0.0016	U	-			-		
1,2-Dibromo-3-chloropropane	0.0041	0.0041	U	-			-		
1,2-Dibromoethane	0.0016	0.0016	U	-			-		
1,2-Dichlorobenzene	0.0016	0.0016	U	-			-		
1,2-Dichloroethane	0.0016	0.0016	U	-			-		
1,2-Dichloropropane	0.0016	0.0016	U	-			-		
1,3,5-Trimethylbenzene	0.0016	0.0016	U	-			-		
1,3-Dichlorobenzene	0.0016	0.0016	U	-			-		
1,3-Dichloropropane	0.0016	0.0016	U	-			-		
1,4-Dichlorobenzene	0.0016	0.0016	U	-			-		
2,2-Dichloropropane	0.0016	0.0016	U	-			-		
2-Butanone	0.0025	0.0025	U	-			-		
2-Chlorotoluene	0.0016	0.0016	U	-			-		
2-Hexanone	0.0016	0.0016	U	-			-		
4-Chlorotoluene	0.0016	0.0016	U	-			-		
4-Methyl-2-pentanone	0.0016	0.0016	U	-			-		
Acetone	0.17	0.0041		-			-		
Benzene	0.0016	0.0016	U	-			-		
Bromobenzene	0.0016	0.0016	U	-			-		
Bromochloromethane	0.0016	0.0016	U	-			-		
Bromodichloromethane	0.0016	0.0016	U	-			-		
Bromoform	0.0016	0.0016	U	-			-		
Bromomethane	0.0059	0.0016		-			-		
Carbon disulfide	0.0016	0.0016	U	-			-		
Carbon tetrachloride	0.0016	0.0016	U	-			-		
Chlorobenzene	0.0016	0.0016	U	-			-		
Chloroethane	0.0016	0.0016	U	-			-		
Chloroform	0.0016	0.0016	U	-			-		
Chloromethane	0.0041	0.0041	U	-			-		
cis-1,2-Dichloroethene	0.0016	0.0016	U	-			-		
cis-1,3-Dichloropropene	0.0016	0.0016	U	-			-		
Dibromochloromethane	0.0016	0.0016	U	-			-		
Dibromomethane	0.0016	0.0016	U	-			-		
Dichlorodifluoromethane	0.0016	0.0016	U	-			-		
Ethylbenzene	0.0016	0.0016	U	-			-		
Hexachlorobutadiene	0.0016	0.0016	U	-			-		
Isopropylbenzene	0.0016	0.0016	U	-			-		
m+p-Xylene	0.0041	0.0041	U	-			-		
Methyl Tertiary Butyl Ether	0.0016	0.0016	U	-			-		
Methylene chloride	0.0082	0.0082	U	-			-		
n-Butylbenzene	0.0016	0.0016	U	-			-		
n-Propylbenzene	0.0016	0.0016	U	-			-		
Naphthalene	0.0016	0.0016	U	-			-		
o-Xylene	0.0021	0.0021	U	-			-		
4-Isopropyltoluene	0.0016	0.0016	U	-			-		
sec-Butylbenzene	0.0016	0.0016	U	-			-		
Styrene	0.0016	0.0016	U	-			-		
tert-Butylbenzene	0.0016	0.0016	U	-			-		
Tetrachloroethene	0.0016	0.0016	U	-			-		
Toluene	0.0016	0.0016	U	-			-		
trans-1,2-Dichloroethene	0.0016	0.0016	U	-			-		
trans-1,3-Dichloropropene	0.0016	0.0016	U	-			-		
Trichloroethene	0.0016	0.0016	U	-			-		
Trichlorofluoromethane	0.0016	0.0016	U	-			-		
Vinyl chloride	0.0016	0.0016	U	-			-		
Semivolatile Organic Compounds (mg/kg)									
1,2,4-Trichlorobenzene	0.17	0.17	UJ	-			-		
1,2-Dichlorobenzene	0.17	0.17	UJ	-			-		
1,3-Dichlorobenzene	0.17	0.17	UJ	-			-		
1,4-Dichlorobenzene	0.17	0.17	UJ	-			-		
2,4,5-Trichlorophenol	0.17	0.17	UJ	-			-		
2,4,6-Trichlorophenol	0.17	0.17	UJ	-			-		
2,4-Dichlorophenol	0.17	0.17	UJ	-			-		
2,4-Dimethylphenol	0.17	0.17	UJ	-			-		
2,4-Dinitrophenol	0.17	0.17	UJ	-			-		
2,4-Dinitrotoluene	0.17	0.17	UJ	-			-		
2,6-Dinitrotoluene	0.17	0.17	UJ	-			-		
2-Chloronaphthalene	0.17	0.17	UJ	-			-		
2-Chlorophenol	0.17	0.17	UJ	-			-		
2-Methylnaphthalene	0.17	0.17	UJ	-			-		
2-Methylphenol	0.17	0.17	UJ	-			-		
2-Nitroaniline	0.17	0.17	UJ	-			-		
2-Nitrophenol	0.17	0.17	UJ	-			-		
3,3-Dichlorobenzidine	0.17	0.17	UJ	-			-		
3-Nitroaniline	0.17	0.17	UJ	-			-		
4,6-Dinitro-2-methylphenol	0.17	0.17	UJ	-			-		
4-Bromophenyl-phenylether	0.17	0.17	UJ	-			-		
4-Chloro-3-methylphenol	0.17	0.17	UJ	-			-		
4-Chloroaniline	0.17	0.17	UJ	-			-		

TABLE B-AH24
ANALYTICAL RESULTS FOR GRID AH24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AH24			AH24			AH24		
Sample Name	P3IF-BA-GRID-AH024			P3IF-SS-IS-SO-AH024			P3IF-SS-IS-SO-AH524		
Date Collected	June 21, 2023			June 21, 2023			June 21, 2023		
Semivolatile Organic Compounds (mg/kg), continued									
4-Chlorophenyl-phenylether	0.17	0.17	UJ	-			-		
4-Nitroaniline	0.17	0.17	UJ	-			-		
4-Nitrophenol	0.17	0.17	UJ	-			-		
Acenaphthene	0.17	0.17	UJ	-			-		
Acenaphthylene	0.17	0.17	UJ	-			-		
Anthracene	0.17	0.17	UJ	-			-		
Benzo(a)anthracene	0.17	0.17	UJ	-			-		
Benzo(a)pyrene	0.13	0.13	UJ	-			-		
Benzo(b)fluoranthene	0.17	0.17	UJ	-			-		
Benzo(g,h,i)perylene	0.17	0.17	UJ	-			-		
Benzo(k)fluoranthene	0.17	0.17	UJ	-			-		
Benzoic acid	0.17	0.17	UJ	-			-		
Benzyl Alcohol	0.17	0.17	UJ	-			-		
Bis(2-chloro-1-methylethyl) ether	0.17	0.17	UJ	-			-		
Bis(2-chloroethoxy)methane	0.17	0.17	UJ	-			-		
Bis(2-chloroethyl)ether	0.17	0.17	UJ	-			-		
Bis(2-ethylhexyl)phthalate	0.17	0.17	UJ	-			-		
Butyl benzyl phthalate	0.17	0.17	UJ	-			-		
Carbazole	0.17	0.17	UJ	-			-		
Chrysene	0.17	0.17	UJ	-			-		
Di-n-butyl phthalate	0.17	0.17	UJ	-			-		
Di-n-octyl phthalate	0.17	0.17	UJ	-			-		
Dibenz(a,h)anthracene	0.13	0.13	UJ	-			-		
Dibenzofuran	0.17	0.17	UJ	-			-		
Diethyl phthalate	0.17	0.17	UJ	-			-		
Dimethyl phthalate	0.17	0.17	UJ	-			-		
Fluoranthene	0.17	0.17	UJ	-			-		
Fluorene	0.17	0.17	UJ	-			-		
Hexachlorobenzene	0.17	0.17	UJ	-			-		
Hexachlorobutadiene	0.17	0.17	UJ	-			-		
Hexachloroethane	0.17	0.17	UJ	-			-		
Indeno(1,2,3-cd)pyrene	0.17	0.17	UJ	-			-		
Isophorone	0.17	0.17	UJ	-			-		
n-Nitroso-di-n-propylamine	0.17	0.17	UJ	-			-		
n-Nitrosodimethylamine	0.02	0.02	UJ	-			-		
n-Nitrosodiphenylamine	0.17	0.17	UJ	-			-		
Naphthalene	0.17	0.17	UJ	-			-		
Nitrobenzene	0.17	0.17	UJ	-			-		
Pentachlorophenol	0.17	0.17	UJ	-			-		
Phenanthrene	0.17	0.17	UJ	-			-		
Phenol	0.17	0.17	UJ	-			-		
Pyrene	0.17	0.17	UJ	-			-		
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
1,3-Dinitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,4,6-Trinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,4-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,6-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
3-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
4-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	-			0.075	0.075	UJ	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	-			0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
Nitroglycerin	-			0.15	0.15	UJ	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	-			0.075	0.075	UJ	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	-			0.25	0.25	UJ	0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)									
Aroclor 1016	0.019	0.019	U	-			-		
Aroclor 1221	0.019	0.019	U	-			-		
Aroclor 1232	0.0093	0.0093	U	-			-		
Aroclor 1242	0.0093	0.0093	U	-			-		
Aroclor 1248	0.0093	0.0093	U	-			-		
Aroclor 1254	0.0093	0.0093	U	-			-		
Aroclor 1260	0.0093	0.0093	U	-			-		
Dioxins/Furans (mg/kg)									
Octachlorodibenzofuran (OCDF)	0.00000072	0.00000072	U	-			-		
Octachlorodibenzo-p-dioxin (OCDD)	0.000012	0.000012	J	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.00000041	0.00000041	J	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	0.000002	0.000002	J	-			-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.00000017	0.00000017	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000049	0.000000049	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000066	0.000000066	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000058	0.000000058	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000006	0.00000006	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.000000076	0.000000076	UJ	-			-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000071	0.000000071	U	-			-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000011	0.00000011	U	-			-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.00000012	0.00000012	U	-			-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.00000024	0.00000024	U	-			-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000012	0.00000012	U	-			-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.00000022	0.00000022	U	-			-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.000000064	0.000000064	U	-			-		

TABLE B-AH24
ANALYTICAL RESULTS FOR GRID AH24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AH24			AH24			AH24		
Sample Name	P3IF-BA-GRID-AH024			P3IF-SS-IS-SO-AH024			P3IF-SS-IS-SO-AH524		
Date Collected	June 21, 2023			June 21, 2023			June 21, 2023		
Metals (mg/kg)									
Aluminum	-			14000	4		13000	4	
Antimony	-			0.1	0.15	J	0.11	0.15	J
Arsenic	-			1.2	0.3		1.2	0.3	
Barium	-			180	0.2		180	0.2	
Beryllium	-			0.54	0.3	J	0.56	0.3	J
Cadmium	-			0.44	0.08		0.33	0.08	
Calcium (Ca)	-			3400	15		3300	15	
Chromium	-			11	0.2		10	0.2	
Cobalt	-			4.7	0.08		4.6	0.08	
Copper	-			74	0.2		58	0.2	
Iron (Fe)	-			9000	8		8700	8	
Lead	-			13	0.05		12	0.05	
Magnesium (Mg)	-			5800	5		5500	5	
Manganese (Mn)	-			320	0.08		290	0.08	
Mercury	-			0.022	0.04	J	0.024	0.04	J
Nickel	-			8.9	0.2		8.4	0.2	
Potassium (K)	-			960	8		950	8	
Selenium	-			0.9	0.1		0.82	0.1	
Silver	-			0.071	0.05	J	0.062	0.05	J
Sodium (Na)	-			55	8		55	8	
Thallium	-			0.044	0.05	J	0.042	0.05	J
Vanadium	-			16	0.1		16	0.1	
Zinc	-			32	1.5		30	1.5	
Other Parameters (mg/kg)									
Cyanide (CN-)	0.31	0.31	U	-			-		
Nitrate	3.7	2.1	J	-			-		
Perchlorate	0.0016	0.0016	UJ	-			-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-AH24
ANALYTICAL RESULTS FOR GRID AH24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AH24		
Sample Name	P3IF-SS-IS-SO-AH624		
Date Collected	June 21, 2023		
	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)			
1,1,1,2-Tetrachloroethane	-		
1,1,1-Trichloroethane	-		
1,1,2,2-Tetrachloroethane	-		
1,1,2-Trichloroethane	-		
1,1-Dichloroethane	-		
1,1-Dichloroethene	-		
1,1-Dichloropropene	-		
1,2,3-Trichlorobenzene	-		
1,2,3-Trichloropropane	-		
1,2,4-Trichlorobenzene	-		
1,2,4-Trimethylbenzene	-		
1,2-Dibromo-3-chloropropane	-		
1,2-Dibromoethane	-		
1,2-Dichlorobenzene	-		
1,2-Dichloroethane	-		
1,2-Dichloropropane	-		
1,3,5-Trimethylbenzene	-		
1,3-Dichlorobenzene	-		
1,3-Dichloropropane	-		
1,4-Dichlorobenzene	-		
2,2-Dichloropropane	-		
2-Butanone	-		
2-Chlorotoluene	-		
2-Hexanone	-		
4-Chlorotoluene	-		
4-Methyl-2-pentanone	-		
Acetone	-		
Benzene	-		
Bromobenzene	-		
Bromochloromethane	-		
Bromodichloromethane	-		
Bromoform	-		
Bromomethane	-		
Carbon disulfide	-		
Carbon tetrachloride	-		
Chlorobenzene	-		
Chloroethane	-		
Chloroform	-		
Chloromethane	-		
cis-1,2-Dichloroethene	-		
cis-1,3-Dichloropropene	-		
Dibromochloromethane	-		
Dibromomethane	-		
Dichlorodifluoromethane	-		
Ethylbenzene	-		
Hexachlorobutadiene	-		
Isopropylbenzene	-		
m+p-Xylene	-		
Methyl Tertiary Butyl Ether	-		
Methylene chloride	-		
n-Butylbenzene	-		
n-Propylbenzene	-		
Naphthalene	-		
o-Xylene	-		
4-Isopropyltoluene	-		
sec-Butylbenzene	-		
Styrene	-		
tert-Butylbenzene	-		
Tetrachloroethene	-		
Toluene	-		
trans-1,2-Dichloroethene	-		
trans-1,3-Dichloropropene	-		
Trichloroethene	-		
Trichlorofluoromethane	-		
Vinyl chloride	-		
Semivolatile Organic Compounds (mg/kg)			
1,2,4-Trichlorobenzene	-		
1,2-Dichlorobenzene	-		
1,3-Dichlorobenzene	-		
1,4-Dichlorobenzene	-		
2,4,5-Trichlorophenol	-		
2,4,6-Trichlorophenol	-		
2,4-Dichlorophenol	-		
2,4-Dimethylphenol	-		
2,4-Dinitrophenol	-		
2,4-Dinitrotoluene	-		
2,6-Dinitrotoluene	-		
2-Chloronaphthalene	-		
2-Chlorophenol	-		
2-Methylnaphthalene	-		
2-Methylphenol	-		
2-Nitroaniline	-		
2-Nitrophenol	-		
3,3-Dichlorobenzidine	-		
3-Nitroaniline	-		
4,6-Dinitro-2-methylphenol	-		
4-Bromophenyl-phenylether	-		
4-Chloro-3-methylphenol	-		
4-Chloroaniline	-		

TABLE B-AH24
ANALYTICAL RESULTS FOR GRID AH24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AH24		
Sample Name	P3IF-SS-IS-SO-AH624		
Date Collected	June 21, 2023		
Semivolatile Organic Compounds (mg/kg), continued			
4-Chlorophenyl-phenylether	-		
4-Nitroaniline	-		
4-Nitrophenol	-		
Acenaphthene	-		
Acenaphthylene	-		
Anthracene	-		
Benzo(a)anthracene	-		
Benzo(a)pyrene	-		
Benzo(b)fluoranthene	-		
Benzo(g,h,i)perylene	-		
Benzo(k)fluoranthene	-		
Benzoic acid	-		
Benzyl Alcohol	-		
Bis(2-chloro-1-methylethyl) ether	-		
Bis(2-chloroethoxy)methane	-		
Bis(2-chloroethyl)ether	-		
Bis(2-ethylhexyl)phthalate	-		
Butyl benzyl phthalate	-		
Carbazole	-		
Chrysene	-		
Di-n-butyl phthalate	-		
Di-n-octyl phthalate	-		
Dibenz(a,h)anthracene	-		
Dibenzofuran	-		
Diethyl phthalate	-		
Dimethyl phthalate	-		
Fluoranthene	-		
Fluorene	-		
Hexachlorobenzene	-		
Hexachlorobutadiene	-		
Hexachloroethane	-		
Indeno(1,2,3-cd)pyrene	-		
Isophorone	-		
n-Nitroso-di-n-propylamine	-		
n-Nitrosodimethylamine	-		
n-Nitrosodiphenylamine	-		
Naphthalene	-		
Nitrobenzene	-		
Pentachlorophenol	-		
Phenanthrene	-		
Phenol	-		
Pyrene	-		
Explosives (mg/kg)			
1,3,5-Trinitrobenzene	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	UJ
2,4,6-Trinitrotoluene	0.075	0.075	UJ
2,4-Dinitrotoluene	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	UJ
2-Nitrotoluene	0.075	0.075	UJ
3-Nitrotoluene	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	0.075	0.075	UJ
4-Nitrotoluene	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	UJ
Nitroglycerin	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)			
Aroclor 1016	-		
Aroclor 1221	-		
Aroclor 1232	-		
Aroclor 1242	-		
Aroclor 1248	-		
Aroclor 1254	-		
Aroclor 1260	-		
Dioxins/Furans (mg/kg)			
Octachlorodibenzofuran (OCDF)	-		
Octachlorodibenzo-p-dioxin (OCDD)	-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	-		

TABLE B-AH24
ANALYTICAL RESULTS FOR GRID AH24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AH24		
Sample Name	P3IF-SS-IS-SO-AH624		
Date Collected	June 21, 2023		
Metals (mg/kg)			
Aluminum	10000	4	
Antimony	0.078	0.15	J
Arsenic	1.2	0.3	
Barium	170	0.2	
Beryllium	0.49	0.3	J
Cadmium	0.39	0.08	
Calcium (Ca)	3300	15	
Chromium	8.7	0.2	
Cobalt	4.1	0.08	
Copper	66	0.2	J
Iron (Fe)	7800	8	
Lead	11	0.05	J
Magnesium (Mg)	4400	5	J
Manganese (Mn)	290	0.08	
Mercury	0.022	0.041	J
Nickel	7.7	0.2	
Potassium (K)	840	8	J
Selenium	0.92	0.1	J
Silver	0.071	0.05	J
Sodium (Na)	52	8	
Thallium	0.043	0.05	J
Vanadium	15	0.1	J
Zinc	35	1.5	
Other Parameters (mg/kg)			
Cyanide (CN-)	-		
Nitrate	-		
Perchlorate	-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-AI23
ANALYTICAL RESULTS FOR GRID AI23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AI23			AI23			AI23		
Sample Name	P3IF-BA-GRID-AI023			P3IF-SS-IS-SO-AI023			P3IF-SS-IS-SO-AI523		
Date Collected	June 21, 2023			June 21, 2023			June 21, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)									
1,1,1,2-Tetrachloroethane	0.0013	0.0013	U	-			-		
1,1,1-Trichloroethane	0.0013	0.0013	U	-			-		
1,1,2,2-Tetrachloroethane	0.0013	0.0013	U	-			-		
1,1,2-Trichloroethane	0.0013	0.0013	U	-			-		
1,1-Dichloroethane	0.0013	0.0013	U	-			-		
1,1-Dichloroethene	0.0013	0.0013	U	-			-		
1,1-Dichloropropene	0.0013	0.0013	U	-			-		
1,2,3-Trichlorobenzene	0.0013	0.0013	U	-			-		
1,2,3-Trichloropropane	0.0033	0.0033	U	-			-		
1,2,4-Trichlorobenzene	0.0013	0.0013	U	-			-		
1,2,4-Trimethylbenzene	0.0013	0.0013	U	-			-		
1,2-Dibromo-3-chloropropane	0.0033	0.0033	U	-			-		
1,2-Dibromoethane	0.0013	0.0013	U	-			-		
1,2-Dichlorobenzene	0.0013	0.0013	U	-			-		
1,2-Dichloroethane	0.0013	0.0013	U	-			-		
1,2-Dichloropropane	0.0013	0.0013	U	-			-		
1,3,5-Trimethylbenzene	0.0013	0.0013	U	-			-		
1,3-Dichlorobenzene	0.0013	0.0013	U	-			-		
1,3-Dichloropropane	0.0013	0.0013	U	-			-		
1,4-Dichlorobenzene	0.0013	0.0013	U	-			-		
2,2-Dichloropropane	0.0013	0.0013	U	-			-		
2-Butanone	0.002	0.002	U	-			-		
2-Chlorotoluene	0.0013	0.0013	U	-			-		
2-Hexanone	0.0013	0.0013	U	-			-		
4-Chlorotoluene	0.0013	0.0013	U	-			-		
4-Methyl-2-pentanone	0.0013	0.0013	U	-			-		
Acetone	0.12	0.0033		-			-		
Benzene	0.0013	0.0013	U	-			-		
Bromobenzene	0.0013	0.0013	U	-			-		
Bromochloromethane	0.0013	0.0013	U	-			-		
Bromodichloromethane	0.0013	0.0013	U	-			-		
Bromoform	0.0013	0.0013	U	-			-		
Bromomethane	0.0013	0.0013	U	-			-		
Carbon disulfide	0.0013	0.0013	U	-			-		
Carbon tetrachloride	0.0013	0.0013	U	-			-		
Chlorobenzene	0.0013	0.0013	U	-			-		
Chloroethane	0.0013	0.0013	U	-			-		
Chloroform	0.0013	0.0013	U	-			-		
Chloromethane	0.0033	0.0033	U	-			-		
cis-1,2-Dichloroethene	0.0013	0.0013	U	-			-		
cis-1,3-Dichloropropene	0.0013	0.0013	U	-			-		
Dibromochloromethane	0.0013	0.0013	U	-			-		
Dibromomethane	0.0013	0.0013	U	-			-		
Dichlorodifluoromethane	0.0013	0.0013	U	-			-		
Ethylbenzene	0.0013	0.0013	U	-			-		
Hexachlorobutadiene	0.0013	0.0013	U	-			-		
Isopropylbenzene	0.0013	0.0013	U	-			-		
m+p-Xylene	0.0033	0.0033	U	-			-		
Methyl Tertiary Butyl Ether	0.0013	0.0013	U	-			-		
Methylene chloride	0.0066	0.0066	U	-			-		
n-Butylbenzene	0.0013	0.0013	U	-			-		
n-Propylbenzene	0.0013	0.0013	U	-			-		
Naphthalene	0.0013	0.0013	U	-			-		
o-Xylene	0.0016	0.0016	U	-			-		
4-Isopropyltoluene	0.0013	0.0013	U	-			-		
sec-Butylbenzene	0.0013	0.0013	U	-			-		
Styrene	0.0013	0.0013	U	-			-		
tert-Butylbenzene	0.0013	0.0013	U	-			-		
Tetrachloroethene	0.0013	0.0013	U	-			-		
Toluene	0.0013	0.0013	U	-			-		
trans-1,2-Dichloroethene	0.0013	0.0013	U	-			-		
trans-1,3-Dichloropropene	0.0013	0.0013	U	-			-		
Trichloroethene	0.0013	0.0013	U	-			-		
Trichlorofluoromethane	0.0013	0.0013	U	-			-		
Vinyl chloride	0.0013	0.0013	U	-			-		
Semivolatile Organic Compounds (mg/kg)									
1,2,4-Trichlorobenzene	0.17	0.17	UJ	-			-		
1,2-Dichlorobenzene	0.17	0.17	UJ	-			-		
1,3-Dichlorobenzene	0.17	0.17	UJ	-			-		
1,4-Dichlorobenzene	0.17	0.17	UJ	-			-		
2,4,5-Trichlorophenol	0.17	0.17	UJ	-			-		
2,4,6-Trichlorophenol	0.17	0.17	UJ	-			-		
2,4-Dichlorophenol	0.17	0.17	UJ	-			-		
2,4-Dimethylphenol	0.17	0.17	UJ	-			-		
2,4-Dinitrophenol	0.17	0.17	UJ	-			-		
2,4-Dinitrotoluene	0.17	0.17	UJ	-			-		
2,6-Dinitrotoluene	0.17	0.17	UJ	-			-		
2-Chloronaphthalene	0.17	0.17	UJ	-			-		
2-Chlorophenol	0.17	0.17	UJ	-			-		
2-Methylnaphthalene	0.17	0.17	UJ	-			-		
2-Methylphenol	0.17	0.17	UJ	-			-		
2-Nitroaniline	0.17	0.17	UJ	-			-		
2-Nitrophenol	0.17	0.17	UJ	-			-		
3,3-Dichlorobenzidine	0.17	0.17	UJ	-			-		
3-Nitroaniline	0.17	0.17	UJ	-			-		
4,6-Dinitro-2-methylphenol	0.17	0.17	UJ	-			-		
4-Bromophenyl-phenylether	0.17	0.17	UJ	-			-		
4-Chloro-3-methylphenol	0.17	0.17	UJ	-			-		
4-Chloroaniline	0.17	0.17	UJ	-			-		

TABLE B-AI23
ANALYTICAL RESULTS FOR GRID AI23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AI23			AI23			AI23		
Sample Name	P3IF-BA-GRID-AI023			P3IF-SS-IS-SO-AI023			P3IF-SS-IS-SO-AI523		
Date Collected	June 21, 2023			June 21, 2023			June 21, 2023		
Semivolatile Organic Compounds (mg/kg), continued									
4-Chlorophenyl-phenylether	0.17	0.17	UJ	-			-		
4-Nitroaniline	0.17	0.17	UJ	-			-		
4-Nitrophenol	0.17	0.17	UJ	-			-		
Acenaphthene	0.17	0.17	UJ	-			-		
Acenaphthylene	0.17	0.17	UJ	-			-		
Anthracene	0.17	0.17	UJ	-			-		
Benzo(a)anthracene	0.17	0.17	UJ	-			-		
Benzo(a)pyrene	0.13	0.13	UJ	-			-		
Benzo(b)fluoranthene	0.17	0.17	UJ	-			-		
Benzo(g,h,i)perylene	0.17	0.17	UJ	-			-		
Benzo(k)fluoranthene	0.17	0.17	UJ	-			-		
Benzoic acid	0.17	0.17	UJ	-			-		
Benzyl Alcohol	0.17	0.17	UJ	-			-		
Bis(2-chloro-1-methylethyl) ether	0.17	0.17	UJ	-			-		
Bis(2-chloroethoxy)methane	0.17	0.17	UJ	-			-		
Bis(2-chloroethyl)ether	0.17	0.17	UJ	-			-		
Bis(2-ethylhexyl)phthalate	0.17	0.17	UJ	-			-		
Butyl benzyl phthalate	0.17	0.17	UJ	-			-		
Carbazole	0.17	0.17	UJ	-			-		
Chrysene	0.17	0.17	UJ	-			-		
Di-n-butyl phthalate	0.17	0.17	UJ	-			-		
Di-n-octyl phthalate	0.17	0.17	UJ	-			-		
Dibenz(a,h)anthracene	0.13	0.13	UJ	-			-		
Dibenzofuran	0.17	0.17	UJ	-			-		
Diethyl phthalate	0.17	0.17	UJ	-			-		
Dimethyl phthalate	0.17	0.17	UJ	-			-		
Fluoranthene	0.17	0.17	UJ	-			-		
Fluorene	0.17	0.17	UJ	-			-		
Hexachlorobenzene	0.17	0.17	UJ	-			-		
Hexachlorobutadiene	0.17	0.17	UJ	-			-		
Hexachloroethane	0.17	0.17	UJ	-			-		
Indeno(1,2,3-cd)pyrene	0.17	0.17	UJ	-			-		
Isophorone	0.17	0.17	UJ	-			-		
n-Nitroso-di-n-propylamine	0.17	0.17	UJ	-			-		
n-Nitrosodimethylamine	0.021	0.021	UJ	-			-		
n-Nitrosodiphenylamine	0.17	0.17	UJ	-			-		
Naphthalene	0.17	0.17	UJ	-			-		
Nitrobenzene	0.17	0.17	UJ	-			-		
Pentachlorophenol	0.17	0.17	UJ	-			-		
Phenanthrene	0.17	0.17	UJ	-			-		
Phenol	0.17	0.17	UJ	-			-		
Pyrene	0.17	0.17	UJ	-			-		
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
1,3-Dinitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,4,6-Trinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,4-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,6-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
3-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
4-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	-			0.075	0.075	UJ	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	-			0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
Nitroglycerin	-			0.15	0.15	UJ	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	-			0.075	0.075	UJ	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	-			0.25	0.25	UJ	0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)									
Aroclor 1016	0.02	0.02	U	-			-		
Aroclor 1221	0.02	0.02	U	-			-		
Aroclor 1232	0.01	0.01	U	-			-		
Aroclor 1242	0.01	0.01	U	-			-		
Aroclor 1248	0.01	0.01	U	-			-		
Aroclor 1254	0.01	0.01	U	-			-		
Aroclor 1260	0.01	0.01	U	-			-		
Dioxins/Furans (mg/kg)									
Octachlorodibenzofuran (OCDF)	0.0000007	0.0000007	U	-			-		
Octachlorodibenzo-p-dioxin (OCDD)	0.000021	0.000021	J	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.00000064	0.00000064	U	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	0.0000021	0.0000021	U	-			-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.0000002	0.0000002	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000083	0.000000083	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000018	0.00000018	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.00000011	0.00000011	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.0000001	0.0000001	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.0000002	0.0000002	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000018	0.00000018	U	-			-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.0000002	0.0000002	U	-			-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.000000055	0.000000055	U	-			-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000054	0.000000054	U	-			-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000021	0.00000021	U	-			-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.00000018	0.00000018	U	-			-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.000000082	0.000000082	U	-			-		

TABLE B-AI23
ANALYTICAL RESULTS FOR GRID AI23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AI23			AI23			AI23		
Sample Name	P3IF-BA-GRID-AI023			P3IF-SS-IS-SO-AI023			P3IF-SS-IS-SO-AI523		
Date Collected	June 21, 2023			June 21, 2023			June 21, 2023		
Metals (mg/kg)									
Aluminum	-			22000	4		20000	4	
Antimony	-			0.11	0.15	J	0.15	0.15	U
Arsenic	-			1.2	0.3		1.2	0.3	
Barium	-			150	0.2		140	0.2	
Beryllium	-			0.52	0.3	J	0.49	0.3	J
Cadmium	-			1	0.08	J	0.44	0.08	J
Calcium (Ca)	-			3300	15	J	3100	15	
Chromium	-			15	0.2		14	0.2	
Cobalt	-			6	0.08		5.6	0.08	
Copper	-			70	0.2		63	0.2	
Iron (Fe)	-			12000	8		11000	8	
Lead	-			13	0.05		12	0.05	
Magnesium (Mg)	-			9500	5		8900	5	
Manganese (Mn)	-			320	0.08		300	0.08	
Mercury	-			0.02	0.04	J	0.018	0.041	J
Nickel	-			11	0.2		10	0.2	
Potassium (K)	-			1000	8		940	8	
Selenium	-			1	0.1		1.1	0.1	
Silver	-			0.087	0.05	J	0.068	0.05	J
Sodium (Na)	-			72	8		71	8	
Thallium	-			0.052	0.05	J	0.042	0.05	J
Vanadium	-			23	0.1		24	0.1	
Zinc	-			39	1.5		36	1.5	
Other Parameters (mg/kg)									
Cyanide (CN-)	0.33	0.33	U	-			-		
Nitrate	6.8	2.1	J	-			-		
Perchlorate	0.0018	0.0018	UJ	-			-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-AI23
ANALYTICAL RESULTS FOR GRID AI23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AI23		
Sample Name	P3IF-SS-IS-SO-AI623		
Date Collected	June 19, 2023		
	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)			
1,1,1,2-Tetrachloroethane	-		
1,1,1-Trichloroethane	-		
1,1,2,2-Tetrachloroethane	-		
1,1,2-Trichloroethane	-		
1,1-Dichloroethane	-		
1,1-Dichloroethene	-		
1,1-Dichloropropene	-		
1,2,3-Trichlorobenzene	-		
1,2,3-Trichloropropane	-		
1,2,4-Trichlorobenzene	-		
1,2,4-Trimethylbenzene	-		
1,2-Dibromo-3-chloropropane	-		
1,2-Dibromoethane	-		
1,2-Dichlorobenzene	-		
1,2-Dichloroethane	-		
1,2-Dichloropropane	-		
1,3,5-Trimethylbenzene	-		
1,3-Dichlorobenzene	-		
1,3-Dichloropropane	-		
1,4-Dichlorobenzene	-		
2,2-Dichloropropane	-		
2-Butanone	-		
2-Chlorotoluene	-		
2-Hexanone	-		
4-Chlorotoluene	-		
4-Methyl-2-pentanone	-		
Acetone	-		
Benzene	-		
Bromobenzene	-		
Bromochloromethane	-		
Bromodichloromethane	-		
Bromoform	-		
Bromomethane	-		
Carbon disulfide	-		
Carbon tetrachloride	-		
Chlorobenzene	-		
Chloroethane	-		
Chloroform	-		
Chloromethane	-		
cis-1,2-Dichloroethene	-		
cis-1,3-Dichloropropene	-		
Dibromochloromethane	-		
Dibromomethane	-		
Dichlorodifluoromethane	-		
Ethylbenzene	-		
Hexachlorobutadiene	-		
Isopropylbenzene	-		
m+p-Xylene	-		
Methyl Tertiary Butyl Ether	-		
Methylene chloride	-		
n-Butylbenzene	-		
n-Propylbenzene	-		
Naphthalene	-		
o-Xylene	-		
4-Isopropyltoluene	-		
sec-Butylbenzene	-		
Styrene	-		
tert-Butylbenzene	-		
Tetrachloroethene	-		
Toluene	-		
trans-1,2-Dichloroethene	-		
trans-1,3-Dichloropropene	-		
Trichloroethene	-		
Trichlorofluoromethane	-		
Vinyl chloride	-		
Semivolatile Organic Compounds (mg/kg)			
1,2,4-Trichlorobenzene	-		
1,2-Dichlorobenzene	-		
1,3-Dichlorobenzene	-		
1,4-Dichlorobenzene	-		
2,4,5-Trichlorophenol	-		
2,4,6-Trichlorophenol	-		
2,4-Dichlorophenol	-		
2,4-Dimethylphenol	-		
2,4-Dinitrophenol	-		
2,4-Dinitrotoluene	-		
2,6-Dinitrotoluene	-		
2-Chloronaphthalene	-		
2-Chlorophenol	-		
2-Methylnaphthalene	-		
2-Methylphenol	-		
2-Nitroaniline	-		
2-Nitrophenol	-		
3,3-Dichlorobenzidine	-		
3-Nitroaniline	-		
4,6-Dinitro-2-methylphenol	-		
4-Bromophenyl-phenylether	-		
4-Chloro-3-methylphenol	-		
4-Chloroaniline	-		

TABLE B-AI23
ANALYTICAL RESULTS FOR GRID AI23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AI23		
Sample Name	P3IF-SS-IS-SO-AI623		
Date Collected	June 19, 2023		
Semivolatile Organic Compounds (mg/kg), continued			
4-Chlorophenyl-phenylether	-		
4-Nitroaniline	-		
4-Nitrophenol	-		
Acenaphthene	-		
Acenaphthylene	-		
Anthracene	-		
Benzo(a)anthracene	-		
Benzo(a)pyrene	-		
Benzo(b)fluoranthene	-		
Benzo(g,h,i)perylene	-		
Benzo(k)fluoranthene	-		
Benzoic acid	-		
Benzyl Alcohol	-		
Bis(2-chloro-1-methylethyl) ether	-		
Bis(2-chloroethoxy)methane	-		
Bis(2-chloroethyl)ether	-		
Bis(2-ethylhexyl)phthalate	-		
Butyl benzyl phthalate	-		
Carbazole	-		
Chrysene	-		
Di-n-butyl phthalate	-		
Di-n-octyl phthalate	-		
Dibenz(a,h)anthracene	-		
Dibenzofuran	-		
Diethyl phthalate	-		
Dimethyl phthalate	-		
Fluoranthene	-		
Fluorene	-		
Hexachlorobenzene	-		
Hexachlorobutadiene	-		
Hexachloroethane	-		
Indeno(1,2,3-cd)pyrene	-		
Isophorone	-		
n-Nitroso-di-n-propylamine	-		
n-Nitrosodimethylamine	-		
n-Nitrosodiphenylamine	-		
Naphthalene	-		
Nitrobenzene	-		
Pentachlorophenol	-		
Phenanthrene	-		
Phenol	-		
Pyrene	-		
Explosives (mg/kg)			
1,3,5-Trinitrobenzene	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	UJ
2,4,6-Trinitrotoluene	0.075	0.075	UJ
2,4-Dinitrotoluene	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	UJ
2-Nitrotoluene	0.075	0.075	UJ
3-Nitrotoluene	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	0.075	0.075	UJ
4-Nitrotoluene	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	UJ
Nitroglycerin	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)			
Aroclor 1016	-		
Aroclor 1221	-		
Aroclor 1232	-		
Aroclor 1242	-		
Aroclor 1248	-		
Aroclor 1254	-		
Aroclor 1260	-		
Dioxins/Furans (mg/kg)			
Octachlorodibenzofuran (OCDF)	-		
Octachlorodibenzo-p-dioxin (OCDD)	-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	-		

TABLE B-AI23
ANALYTICAL RESULTS FOR GRID AI23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AI23		
Sample Name	P3IF-SS-IS-SO-AI623		
Date Collected	June 19, 2023		
Metals (mg/kg)			
Aluminum	21000	4	
Antimony	0.15	0.15	U
Arsenic	0.97	0.3	
Barium	130	0.2	
Beryllium	0.54	0.3	J
Cadmium	0.3	0.08	J
Calcium (Ca)	1900	15	J
Chromium	14	0.2	
Cobalt	5.7	0.08	
Copper	48	0.2	
Iron (Fe)	12000	8	
Lead	9.4	0.05	
Magnesium (Mg)	9100	5	
Manganese (Mn)	270	0.08	
Mercury	0.012	0.041	J
Nickel	10	0.2	
Potassium (K)	710	8	
Selenium	1.2	0.1	
Silver	0.053	0.05	J
Sodium (Na)	69	8	
Thallium	0.036	0.05	J
Vanadium	21	0.1	
Zinc	32	1.5	
Other Parameters (mg/kg)			
Cyanide (CN-)	-		
Nitrate	-		
Perchlorate	-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-AI24
ANALYTICAL RESULTS FOR GRID AI24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AI24			AI24			AI24		
Sample Name	P3IF-BA-GRID-AI024			P3IF-SS-IS-SO-AI024			P3IF-SS-IS-SO-AI524		
Date Collected	June 21, 2023			June 21, 2023			June 21, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)									
1,1,1,2-Tetrachloroethane	0.0019	0.0019	U	-			-		
1,1,1-Trichloroethane	0.0019	0.0019	U	-			-		
1,1,2,2-Tetrachloroethane	0.0019	0.0019	U	-			-		
1,1,2-Trichloroethane	0.0019	0.0019	U	-			-		
1,1-Dichloroethane	0.0019	0.0019	U	-			-		
1,1-Dichloroethene	0.0019	0.0019	U	-			-		
1,1-Dichloropropene	0.0019	0.0019	U	-			-		
1,2,3-Trichlorobenzene	0.0019	0.0019	U	-			-		
1,2,3-Trichloropropane	0.0047	0.0047	U	-			-		
1,2,4-Trichlorobenzene	0.0019	0.0019	U	-			-		
1,2,4-Trimethylbenzene	0.0019	0.0019	U	-			-		
1,2-Dibromo-3-chloropropane	0.0047	0.0047	U	-			-		
1,2-Dibromoethane	0.0019	0.0019	U	-			-		
1,2-Dichlorobenzene	0.0019	0.0019	U	-			-		
1,2-Dichloroethane	0.0019	0.0019	U	-			-		
1,2-Dichloropropane	0.0019	0.0019	U	-			-		
1,3,5-Trimethylbenzene	0.0019	0.0019	U	-			-		
1,3-Dichlorobenzene	0.0019	0.0019	U	-			-		
1,3-Dichloropropane	0.0019	0.0019	U	-			-		
1,4-Dichlorobenzene	0.0019	0.0019	U	-			-		
2,2-Dichloropropane	0.0019	0.0019	U	-			-		
2-Butanone	0.0028	0.0028	U	-			-		
2-Chlorotoluene	0.0019	0.0019	U	-			-		
2-Hexanone	0.0019	0.0019	U	-			-		
4-Chlorotoluene	0.0019	0.0019	U	-			-		
4-Methyl-2-pentanone	0.0019	0.0019	U	-			-		
Acetone	0.33	0.0047	J	-			-		
Benzene	0.0019	0.0019	U	-			-		
Bromobenzene	0.0019	0.0019	U	-			-		
Bromochloromethane	0.0019	0.0019	U	-			-		
Bromodichloromethane	0.0019	0.0019	U	-			-		
Bromoform	0.0019	0.0019	U	-			-		
Bromomethane	0.0019	0.0019	U	-			-		
Carbon disulfide	0.0019	0.0019	U	-			-		
Carbon tetrachloride	0.0019	0.0019	U	-			-		
Chlorobenzene	0.0019	0.0019	U	-			-		
Chloroethane	0.0019	0.0019	U	-			-		
Chloroform	0.0019	0.0019	U	-			-		
Chloromethane	0.0047	0.0047	U	-			-		
cis-1,2-Dichloroethene	0.0019	0.0019	U	-			-		
cis-1,3-Dichloropropene	0.0019	0.0019	U	-			-		
Dibromochloromethane	0.0019	0.0019	U	-			-		
Dibromomethane	0.0019	0.0019	U	-			-		
Dichlorodifluoromethane	0.0019	0.0019	U	-			-		
Ethylbenzene	0.0019	0.0019	U	-			-		
Hexachlorobutadiene	0.0019	0.0019	U	-			-		
Isopropylbenzene	0.0019	0.0019	U	-			-		
m+p-Xylene	0.0047	0.0047	U	-			-		
Methyl Tertiary Butyl Ether	0.0019	0.0019	U	-			-		
Methylene chloride	0.0094	0.0094	U	-			-		
n-Butylbenzene	0.0019	0.0019	U	-			-		
n-Propylbenzene	0.0019	0.0019	U	-			-		
Naphthalene	0.0019	0.0019	U	-			-		
o-Xylene	0.0023	0.0023	U	-			-		
4-Isopropyltoluene	0.0019	0.0019	U	-			-		
sec-Butylbenzene	0.0019	0.0019	U	-			-		
Styrene	0.0019	0.0019	U	-			-		
tert-Butylbenzene	0.0019	0.0019	U	-			-		
Tetrachloroethene	0.0019	0.0019	U	-			-		
Toluene	0.0019	0.0019	U	-			-		
trans-1,2-Dichloroethene	0.0019	0.0019	U	-			-		
trans-1,3-Dichloropropene	0.0019	0.0019	U	-			-		
Trichloroethene	0.0019	0.0019	U	-			-		
Trichlorofluoromethane	0.0019	0.0019	U	-			-		
Vinyl chloride	0.0019	0.0019	U	-			-		
Semivolatile Organic Compounds (mg/kg)									
1,2,4-Trichlorobenzene	0.17	0.17	UJ	-			-		
1,2-Dichlorobenzene	0.17	0.17	UJ	-			-		
1,3-Dichlorobenzene	0.17	0.17	UJ	-			-		
1,4-Dichlorobenzene	0.17	0.17	UJ	-			-		
2,4,5-Trichlorophenol	0.17	0.17	UJ	-			-		
2,4,6-Trichlorophenol	0.17	0.17	UJ	-			-		
2,4-Dichlorophenol	0.17	0.17	UJ	-			-		
2,4-Dimethylphenol	0.17	0.17	UJ	-			-		
2,4-Dinitrophenol	0.17	0.17	UJ	-			-		
2,4-Dinitrotoluene	0.17	0.17	UJ	-			-		
2,6-Dinitrotoluene	0.17	0.17	UJ	-			-		
2-Chloronaphthalene	0.17	0.17	UJ	-			-		
2-Chlorophenol	0.17	0.17	UJ	-			-		
2-Methylnaphthalene	0.17	0.17	UJ	-			-		
2-Methylphenol	0.17	0.17	UJ	-			-		
2-Nitroaniline	0.17	0.17	UJ	-			-		
2-Nitrophenol	0.17	0.17	UJ	-			-		
3,3-Dichlorobenzidine	0.17	0.17	UJ	-			-		
3-Nitroaniline	0.17	0.17	UJ	-			-		
4,6-Dinitro-2-methylphenol	0.17	0.17	UJ	-			-		
4-Bromophenyl-phenylether	0.17	0.17	UJ	-			-		
4-Chloro-3-methylphenol	0.17	0.17	UJ	-			-		
4-Chloroaniline	0.17	0.17	UJ	-			-		

TABLE B-AI24
ANALYTICAL RESULTS FOR GRID AI24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AI24			AI24			AI24		
Sample Name	P3IF-BA-GRID-AI024			P3IF-SS-IS-SO-AI024			P3IF-SS-IS-SO-AI524		
Date Collected	June 21, 2023			June 21, 2023			June 21, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Semivolatile Organic Compounds (mg/kg), continued									
4-Chlorophenyl-phenylether	0.17	0.17	UJ	-			-		
4-Nitroaniline	0.17	0.17	UJ	-			-		
4-Nitrophenol	0.17	0.17	UJ	-			-		
Acenaphthene	0.17	0.17	UJ	-			-		
Acenaphthylene	0.17	0.17	UJ	-			-		
Anthracene	0.17	0.17	UJ	-			-		
Benzo(a)anthracene	0.17	0.17	UJ	-			-		
Benzo(a)pyrene	0.13	0.13	UJ	-			-		
Benzo(b)fluoranthene	0.17	0.17	UJ	-			-		
Benzo(g,h,i)perylene	0.17	0.17	UJ	-			-		
Benzo(k)fluoranthene	0.17	0.17	UJ	-			-		
Benzoic acid	0.17	0.17	UJ	-			-		
Benzyl Alcohol	0.17	0.17	UJ	-			-		
Bis(2-chloro-1-methylethyl) ether	0.17	0.17	UJ	-			-		
Bis(2-chloroethoxy)methane	0.17	0.17	UJ	-			-		
Bis(2-chloroethyl)ether	0.17	0.17	UJ	-			-		
Bis(2-ethylhexyl)phthalate	0.17	0.17	UJ	-			-		
Butyl benzyl phthalate	0.17	0.17	UJ	-			-		
Carbazole	0.17	0.17	UJ	-			-		
Chrysene	0.17	0.17	UJ	-			-		
Di-n-butyl phthalate	0.17	0.17	UJ	-			-		
Di-n-octyl phthalate	0.17	0.17	UJ	-			-		
Dibenz(a,h)anthracene	0.13	0.13	UJ	-			-		
Dibenzofuran	0.17	0.17	UJ	-			-		
Diethyl phthalate	0.17	0.17	UJ	-			-		
Dimethyl phthalate	0.17	0.17	UJ	-			-		
Fluoranthene	0.17	0.17	UJ	-			-		
Fluorene	0.17	0.17	UJ	-			-		
Hexachlorobenzene	0.17	0.17	UJ	-			-		
Hexachlorobutadiene	0.17	0.17	UJ	-			-		
Hexachloroethane	0.17	0.17	UJ	-			-		
Indeno(1,2,3-cd)pyrene	0.17	0.17	UJ	-			-		
Isophorone	0.17	0.17	UJ	-			-		
n-Nitroso-di-n-propylamine	0.17	0.17	UJ	-			-		
n-Nitrosodimethylamine	0.02	0.02	UJ	-			-		
n-Nitrosodiphenylamine	0.17	0.17	UJ	-			-		
Naphthalene	0.17	0.17	UJ	-			-		
Nitrobenzene	0.17	0.17	UJ	-			-		
Pentachlorophenol	0.17	0.17	UJ	-			-		
Phenanthrene	0.17	0.17	UJ	-			-		
Phenol	0.17	0.17	UJ	-			-		
Pyrene	0.17	0.17	UJ	-			-		
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
1,3-Dinitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,4,6-Trinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,4-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,6-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
3-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
4-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	-			0.075	0.075	UJ	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	-			0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
Nitroglycerin	-			0.15	0.15	UJ	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	-			0.075	0.075	UJ	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	-			0.25	0.25	UJ	0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)									
Aroclor 1016	0.02	0.02	U	-			-		
Aroclor 1221	0.02	0.02	U	-			-		
Aroclor 1232	0.01	0.01	U	-			-		
Aroclor 1242	0.01	0.01	U	-			-		
Aroclor 1248	0.01	0.01	U	-			-		
Aroclor 1254	0.01	0.01	U	-			-		
Aroclor 1260	0.01	0.01	U	-			-		
Dioxins/Furans (mg/kg)									
Octachlorodibenzofuran (OCDF)	0.00000034	0.00000034	U	-			-		
Octachlorodibenzo-p-dioxin (OCDD)	0.000016	0.000016	J	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.0000007	0.0000007	U	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	0.0000035	0.0000035	J	-			-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.00000015	0.00000015	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.00000014	0.00000014	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000014	0.00000014	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.00000013	0.00000013	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000013	0.00000013	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.00000017	0.00000017	UJ	-			-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.0000002	0.0000002	U	-			-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000023	0.00000023	U	-			-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.000000087	0.000000087	U	-			-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.00000038	0.00000038	J	-			-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000023	0.00000023	U	-			-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.0000003	0.0000003	U	-			-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.00000011	0.00000011	U	-			-		

TABLE B-AI24
ANALYTICAL RESULTS FOR GRID AI24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AI24			AI24			AI24		
Sample Name	P3IF-BA-GRID-AI024			P3IF-SS-IS-SO-AI024			P3IF-SS-IS-SO-AI524		
Date Collected	June 21, 2023			June 21, 2023			June 21, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Metals (mg/kg)									
Aluminum	-			13000	4		13000	4	
Antimony	-			0.2	0.15		0.15	0.15	J
Arsenic	-			1.1	0.3		1.2	0.3	
Barium	-			140	0.2		140	0.2	
Beryllium	-			0.44	0.3	J	0.44	0.3	J
Cadmium	-			0.6	0.08		0.47	0.08	
Calcium (Ca)	-			3100	15		3100	15	
Chromium	-			10	0.2		9.2	0.2	
Cobalt	-			4.5	0.08		4.4	0.08	
Copper	-			99	0.2		80	0.2	
Iron (Fe)	-			8300	8		8100	8	
Lead	-			14	0.05		13	0.05	
Magnesium (Mg)	-			6100	5		5800	5	
Manganese (Mn)	-			260	0.08		260	0.08	
Mercury	-			0.029	0.04	J	0.029	0.04	J
Nickel	-			8.8	0.2		8.1	0.2	
Potassium (K)	-			920	8		890	8	
Selenium	-			0.79	0.1		0.93	0.1	
Silver	-			0.16	0.05		0.074	0.05	J
Sodium (Na)	-			59	8	J	59	8	
Thallium	-			0.045	0.05	J	0.039	0.05	J
Vanadium	-			16	0.1		17	0.1	
Zinc	-			43	1.5		43	1.5	
Other Parameters (mg/kg)									
Cyanide (CN-)	0.32	0.32	U	-			-		
Nitrate	4.7	2	J	-			-		
Perchlorate	0.002	0.002	UJ	-			-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-AI24
ANALYTICAL RESULTS FOR GRID AI24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AI24		
Sample Name	P3IF-SS-IS-SO-AI624		
Date Collected	June 21, 2023		
	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)			
1,1,1,2-Tetrachloroethane	-		
1,1,1-Trichloroethane	-		
1,1,2,2-Tetrachloroethane	-		
1,1,2-Trichloroethane	-		
1,1-Dichloroethane	-		
1,1-Dichloroethene	-		
1,1-Dichloropropene	-		
1,2,3-Trichlorobenzene	-		
1,2,3-Trichloropropane	-		
1,2,4-Trichlorobenzene	-		
1,2,4-Trimethylbenzene	-		
1,2-Dibromo-3-chloropropane	-		
1,2-Dibromoethane	-		
1,2-Dichlorobenzene	-		
1,2-Dichloroethane	-		
1,2-Dichloropropane	-		
1,3,5-Trimethylbenzene	-		
1,3-Dichlorobenzene	-		
1,3-Dichloropropane	-		
1,4-Dichlorobenzene	-		
2,2-Dichloropropane	-		
2-Butanone	-		
2-Chlorotoluene	-		
2-Hexanone	-		
4-Chlorotoluene	-		
4-Methyl-2-pentanone	-		
Acetone	-		
Benzene	-		
Bromobenzene	-		
Bromochloromethane	-		
Bromodichloromethane	-		
Bromoform	-		
Bromomethane	-		
Carbon disulfide	-		
Carbon tetrachloride	-		
Chlorobenzene	-		
Chloroethane	-		
Chloroform	-		
Chloromethane	-		
cis-1,2-Dichloroethene	-		
cis-1,3-Dichloropropene	-		
Dibromochloromethane	-		
Dibromomethane	-		
Dichlorodifluoromethane	-		
Ethylbenzene	-		
Hexachlorobutadiene	-		
Isopropylbenzene	-		
m+p-Xylene	-		
Methyl Tertiary Butyl Ether	-		
Methylene chloride	-		
n-Butylbenzene	-		
n-Propylbenzene	-		
Naphthalene	-		
o-Xylene	-		
4-Isopropyltoluene	-		
sec-Butylbenzene	-		
Styrene	-		
tert-Butylbenzene	-		
Tetrachloroethene	-		
Toluene	-		
trans-1,2-Dichloroethene	-		
trans-1,3-Dichloropropene	-		
Trichloroethene	-		
Trichlorofluoromethane	-		
Vinyl chloride	-		
Semivolatile Organic Compounds (mg/kg)			
1,2,4-Trichlorobenzene	-		
1,2-Dichlorobenzene	-		
1,3-Dichlorobenzene	-		
1,4-Dichlorobenzene	-		
2,4,5-Trichlorophenol	-		
2,4,6-Trichlorophenol	-		
2,4-Dichlorophenol	-		
2,4-Dimethylphenol	-		
2,4-Dinitrophenol	-		
2,4-Dinitrotoluene	-		
2,6-Dinitrotoluene	-		
2-Chloronaphthalene	-		
2-Chlorophenol	-		
2-Methylnaphthalene	-		
2-Methylphenol	-		
2-Nitroaniline	-		
2-Nitrophenol	-		
3,3-Dichlorobenzidine	-		
3-Nitroaniline	-		
4,6-Dinitro-2-methylphenol	-		
4-Bromophenyl-phenylether	-		
4-Chloro-3-methylphenol	-		
4-Chloroaniline	-		

TABLE B-AI24
ANALYTICAL RESULTS FOR GRID AI24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AI24		
Sample Name	P3IF-SS-IS-SO-AI624		
Date Collected	June 21, 2023		
	Result	LOD	Qual
Semivolatile Organic Compounds (mg/kg), continued			
4-Chlorophenyl-phenylether	-		
4-Nitroaniline	-		
4-Nitrophenol	-		
Acenaphthene	-		
Acenaphthylene	-		
Anthracene	-		
Benzo(a)anthracene	-		
Benzo(a)pyrene	-		
Benzo(b)fluoranthene	-		
Benzo(g,h,i)perylene	-		
Benzo(k)fluoranthene	-		
Benzoic acid	-		
Benzyl Alcohol	-		
Bis(2-chloro-1-methylethyl) ether	-		
Bis(2-chloroethoxy)methane	-		
Bis(2-chloroethyl)ether	-		
Bis(2-ethylhexyl)phthalate	-		
Butyl benzyl phthalate	-		
Carbazole	-		
Chrysene	-		
Di-n-butyl phthalate	-		
Di-n-octyl phthalate	-		
Dibenz(a,h)anthracene	-		
Dibenzofuran	-		
Diethyl phthalate	-		
Dimethyl phthalate	-		
Fluoranthene	-		
Fluorene	-		
Hexachlorobenzene	-		
Hexachlorobutadiene	-		
Hexachloroethane	-		
Indeno(1,2,3-cd)pyrene	-		
Isophorone	-		
n-Nitroso-di-n-propylamine	-		
n-Nitrosodimethylamine	-		
n-Nitrosodiphenylamine	-		
Naphthalene	-		
Nitrobenzene	-		
Pentachlorophenol	-		
Phenanthrene	-		
Phenol	-		
Pyrene	-		
Explosives (mg/kg)			
1,3,5-Trinitrobenzene	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	UJ
2,4,6-Trinitrotoluene	0.075	0.075	UJ
2,4-Dinitrotoluene	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	UJ
2-Nitrotoluene	0.075	0.075	UJ
3-Nitrotoluene	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	0.075	0.075	UJ
4-Nitrotoluene	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	UJ
Nitroglycerin	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)			
Aroclor 1016	-		
Aroclor 1221	-		
Aroclor 1232	-		
Aroclor 1242	-		
Aroclor 1248	-		
Aroclor 1254	-		
Aroclor 1260	-		
Dioxins/Furans (mg/kg)			
Octachlorodibenzofuran (OCDF)	-		
Octachlorodibenzo-p-dioxin (OCDD)	-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	-		

TABLE B-AI24
ANALYTICAL RESULTS FOR GRID AI24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AI24		
Sample Name	P3IF-SS-IS-SO-AI624		
Date Collected	June 21, 2023		
	Result	LOD	Qual
Metals (mg/kg)			
Aluminum	11000	4	
Antimony	0.14	0.15	J
Arsenic	0.98	0.3	
Barium	130	0.2	
Beryllium	0.39	0.3	J
Cadmium	0.49	0.08	
Calcium (Ca)	2900	15	
Chromium	8.9	0.2	
Cobalt	3.9	0.08	
Copper	89	0.2	
Iron (Fe)	7000	8	
Lead	14	0.05	
Magnesium (Mg)	5100	5	
Manganese (Mn)	240	0.08	
Mercury	0.03	0.04	J
Nickel	7.8	0.2	
Potassium (K)	830	8	
Selenium	0.72	0.1	
Silver	0.094	0.05	J
Sodium (Na)	140	8	J
Thallium	0.037	0.05	J
Vanadium	15	0.1	
Zinc	39	1.5	
Other Parameters (mg/kg)			
Cyanide (CN-)	-		
Nitrate	-		
Perchlorate	-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-AJ23
ANALYTICAL RESULTS FOR GRID AJ23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AJ23			AJ23			AJ23		
Sample Name	P3IF-BA-GRID-AJ023			P3IF-SS-IS-SO-AJ023			P3IF-SS-IS-SO-AJ523		
Date Collected	June 21, 2023			June 21, 2023			June 21, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)									
1,1,1,2-Tetrachloroethane	0.0019	0.0019	U	-			-		
1,1,1-Trichloroethane	0.0019	0.0019	U	-			-		
1,1,2,2-Tetrachloroethane	0.0019	0.0019	U	-			-		
1,1,2-Trichloroethane	0.0019	0.0019	U	-			-		
1,1-Dichloroethane	0.0019	0.0019	U	-			-		
1,1-Dichloroethene	0.0019	0.0019	U	-			-		
1,1-Dichloropropene	0.0019	0.0019	U	-			-		
1,2,3-Trichlorobenzene	0.0019	0.0019	U	-			-		
1,2,3-Trichloropropane	0.0049	0.0049	U	-			-		
1,2,4-Trichlorobenzene	0.0019	0.0019	U	-			-		
1,2,4-Trimethylbenzene	0.0019	0.0019	U	-			-		
1,2-Dibromo-3-chloropropane	0.0049	0.0049	U	-			-		
1,2-Dibromoethane	0.0019	0.0019	U	-			-		
1,2-Dichlorobenzene	0.0019	0.0019	U	-			-		
1,2-Dichloroethane	0.0019	0.0019	U	-			-		
1,2-Dichloropropane	0.0019	0.0019	U	-			-		
1,3,5-Trimethylbenzene	0.0019	0.0019	U	-			-		
1,3-Dichlorobenzene	0.0019	0.0019	U	-			-		
1,3-Dichloropropane	0.0019	0.0019	U	-			-		
1,4-Dichlorobenzene	0.0019	0.0019	U	-			-		
2,2-Dichloropropane	0.0019	0.0019	U	-			-		
2-Butanone	0.0029	0.0029	U	-			-		
2-Chlorotoluene	0.0019	0.0019	U	-			-		
2-Hexanone	0.0019	0.0019	U	-			-		
4-Chlorotoluene	0.0019	0.0019	U	-			-		
4-Methyl-2-pentanone	0.0019	0.0019	U	-			-		
Acetone	0.34	0.0049		-			-		
Benzene	0.0019	0.0019	U	-			-		
Bromobenzene	0.0019	0.0019	U	-			-		
Bromochloromethane	0.0019	0.0019	U	-			-		
Bromodichloromethane	0.0019	0.0019	U	-			-		
Bromoform	0.0019	0.0019	U	-			-		
Bromomethane	0.0019	0.0019	U	-			-		
Carbon disulfide	0.0019	0.0019	U	-			-		
Carbon tetrachloride	0.0019	0.0019	U	-			-		
Chlorobenzene	0.0019	0.0019	U	-			-		
Chloroethane	0.0019	0.0019	U	-			-		
Chloroform	0.0019	0.0019	U	-			-		
Chloromethane	0.0049	0.0049	U	-			-		
cis-1,2-Dichloroethene	0.0019	0.0019	U	-			-		
cis-1,3-Dichloropropene	0.0019	0.0019	U	-			-		
Dibromochloromethane	0.0019	0.0019	U	-			-		
Dibromomethane	0.0019	0.0019	U	-			-		
Dichlorodifluoromethane	0.0019	0.0019	U	-			-		
Ethylbenzene	0.0019	0.0019	U	-			-		
Hexachlorobutadiene	0.0019	0.0019	U	-			-		
Isopropylbenzene	0.0019	0.0019	U	-			-		
m+p-Xylene	0.0049	0.0049	U	-			-		
Methyl Tertiary Butyl Ether	0.0019	0.0019	U	-			-		
Methylene chloride	0.0097	0.0097	U	-			-		
n-Butylbenzene	0.0019	0.0019	U	-			-		
n-Propylbenzene	0.0019	0.0019	U	-			-		
Naphthalene	0.0019	0.0019	U	-			-		
o-Xylene	0.0024	0.0024	U	-			-		
4-Isopropyltoluene	0.0019	0.0019	U	-			-		
sec-Butylbenzene	0.0019	0.0019	U	-			-		
Styrene	0.0019	0.0019	U	-			-		
tert-Butylbenzene	0.0019	0.0019	U	-			-		
Tetrachloroethene	0.0019	0.0019	U	-			-		
Toluene	0.0041	0.0019	J	-			-		
trans-1,2-Dichloroethene	0.0019	0.0019	U	-			-		
trans-1,3-Dichloropropene	0.0019	0.0019	U	-			-		
Trichloroethene	0.0019	0.0019	U	-			-		
Trichlorofluoromethane	0.0019	0.0019	U	-			-		
Vinyl chloride	0.0019	0.0019	U	-			-		
Semivolatile Organic Compounds (mg/kg)									
1,2,4-Trichlorobenzene	0.17	0.17	UJ	-			-		
1,2-Dichlorobenzene	0.17	0.17	UJ	-			-		
1,3-Dichlorobenzene	0.17	0.17	UJ	-			-		
1,4-Dichlorobenzene	0.17	0.17	UJ	-			-		
2,4,5-Trichlorophenol	0.17	0.17	UJ	-			-		
2,4,6-Trichlorophenol	0.17	0.17	UJ	-			-		
2,4-Dichlorophenol	0.17	0.17	UJ	-			-		
2,4-Dimethylphenol	0.17	0.17	UJ	-			-		
2,4-Dinitrophenol	0.17	0.17	UJ	-			-		
2,4-Dinitrotoluene	0.17	0.17	UJ	-			-		
2,6-Dinitrotoluene	0.17	0.17	UJ	-			-		
2-Chloronaphthalene	0.17	0.17	UJ	-			-		
2-Chlorophenol	0.17	0.17	UJ	-			-		
2-Methylnaphthalene	0.17	0.17	UJ	-			-		
2-Methylphenol	0.17	0.17	UJ	-			-		
2-Nitroaniline	0.17	0.17	UJ	-			-		
2-Nitrophenol	0.17	0.17	UJ	-			-		
3,3-Dichlorobenzidine	0.17	0.17	UJ	-			-		
3-Nitroaniline	0.17	0.17	UJ	-			-		
4,6-Dinitro-2-methylphenol	0.17	0.17	UJ	-			-		
4-Bromophenyl-phenylether	0.17	0.17	UJ	-			-		
4-Chloro-3-methylphenol	0.17	0.17	UJ	-			-		
4-Chloroaniline	0.17	0.17	UJ	-			-		

TABLE B-AJ23
ANALYTICAL RESULTS FOR GRID AJ23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AJ23			AJ23			AJ23		
Sample Name	P3IF-BA-GRID-AJ023			P3IF-SS-IS-SO-AJ023			P3IF-SS-IS-SO-AJ523		
Date Collected	June 21, 2023			June 21, 2023			June 21, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Semivolatile Organic Compounds (mg/kg), continued									
4-Chlorophenyl-phenylether	0.17	0.17	UJ	-			-		
4-Nitroaniline	0.17	0.17	UJ	-			-		
4-Nitrophenol	0.17	0.17	UJ	-			-		
Acenaphthene	0.17	0.17	UJ	-			-		
Acenaphthylene	0.17	0.17	UJ	-			-		
Anthracene	0.17	0.17	UJ	-			-		
Benzo(a)anthracene	0.17	0.17	UJ	-			-		
Benzo(a)pyrene	0.13	0.13	UJ	-			-		
Benzo(b)fluoranthene	0.17	0.17	UJ	-			-		
Benzo(g,h,i)perylene	0.17	0.17	UJ	-			-		
Benzo(k)fluoranthene	0.17	0.17	UJ	-			-		
Benzoic acid	0.17	0.17	UJ	-			-		
Benzyl Alcohol	0.17	0.17	UJ	-			-		
Bis(2-chloro-1-methylethyl) ether	0.17	0.17	UJ	-			-		
Bis(2-chloroethoxy)methane	0.17	0.17	UJ	-			-		
Bis(2-chloroethyl)ether	0.17	0.17	UJ	-			-		
Bis(2-ethylhexyl)phthalate	0.17	0.17	UJ	-			-		
Butyl benzyl phthalate	0.17	0.17	UJ	-			-		
Carbazole	0.17	0.17	UJ	-			-		
Chrysene	0.17	0.17	UJ	-			-		
Di-n-butyl phthalate	0.17	0.17	UJ	-			-		
Di-n-octyl phthalate	0.17	0.17	UJ	-			-		
Dibenz(a,h)anthracene	0.13	0.13	UJ	-			-		
Dibenzofuran	0.17	0.17	UJ	-			-		
Diethyl phthalate	0.17	0.17	UJ	-			-		
Dimethyl phthalate	0.17	0.17	UJ	-			-		
Fluoranthene	0.17	0.17	UJ	-			-		
Fluorene	0.17	0.17	UJ	-			-		
Hexachlorobenzene	0.17	0.17	UJ	-			-		
Hexachlorobutadiene	0.17	0.17	UJ	-			-		
Hexachloroethane	0.17	0.17	UJ	-			-		
Indeno(1,2,3-cd)pyrene	0.17	0.17	UJ	-			-		
Isophorone	0.17	0.17	UJ	-			-		
n-Nitroso-di-n-propylamine	0.17	0.17	UJ	-			-		
n-Nitrosodimethylamine	0.020	0.02	UJ	-			-		
n-Nitrosodiphenylamine	0.17	0.17	UJ	-			-		
Naphthalene	0.17	0.17	UJ	-			-		
Nitrobenzene	0.17	0.17	UJ	-			-		
Pentachlorophenol	0.17	0.17	UJ	-			-		
Phenanthrene	0.17	0.17	UJ	-			-		
Phenol	0.17	0.17	UJ	-			-		
Pyrene	0.17	0.17	UJ	-			-		
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
1,3-Dinitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,4,6-Trinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,4-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,6-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
3-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
4-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	-			0.075	0.075	UJ	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	-			0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
Nitroglycerin	-			0.15	0.15	UJ	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	-			0.075	0.075	UJ	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	-			0.25	0.25	UJ	0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)									
Aroclor 1016	0.02	0.02	U	-			-		
Aroclor 1221	0.02	0.02	U	-			-		
Aroclor 1232	0.01	0.01	U	-			-		
Aroclor 1242	0.01	0.01	U	-			-		
Aroclor 1248	0.01	0.01	U	-			-		
Aroclor 1254	0.01	0.01	U	-			-		
Aroclor 1260	0.01	0.01	U	-			-		
Dioxins/Furans (mg/kg)									
Octachlorodibenzofuran (OCDF)	0.00000029	0.00000029	U	-			-		
Octachlorodibenzo-p-dioxin (OCDD)	0.000011	0.000011	J	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.0000015	0.0000015	J	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	0.0000018	0.0000018	U	-			-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.000000059	0.000000059	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000058	0.000000058	J	-			-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000082	0.000000082	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000047	0.000000047	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000075	0.000000075	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.000000061	0.000000061	UJ	-			-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.0000001	0.0000001	U	-			-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.000000076	0.000000076	J	-			-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.000000077	0.000000077	U	-			-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.0000002	0.0000002	U	-			-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000013	0.00000013	U	-			-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.000005	0.000005	U	-			-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.000000058	0.000000058	U	-			-		

TABLE B-AJ23
ANALYTICAL RESULTS FOR GRID AJ23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AJ23			AJ23			AJ23		
Sample Name	P3IF-BA-GRID-AJ023			P3IF-SS-IS-SO-AJ023			P3IF-SS-IS-SO-AJ523		
Date Collected	June 21, 2023			June 21, 2023			June 21, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Metals (mg/kg)									
Aluminum	-			19000	4		18000	4	
Antimony	-			0.15	0.15	U	0.15	0.15	U
Arsenic	-			0.97	0.3		1	0.3	
Barium	-			130	0.2		140	0.2	
Beryllium	-			0.44	0.3	J	0.46	0.3	J
Cadmium	-			0.74	0.08		0.5	0.08	
Calcium (Ca)	-			2600	15		2900	15	
Chromium	-			13	0.2		12	0.2	
Cobalt	-			4.6	0.08		4.7	0.08	
Copper	-			92	0.2		77	0.2	
Iron (Fe)	-			11000	8		11000	8	
Lead	-			13	0.05		13	0.05	
Magnesium (Mg)	-			8500	5		8300	5	
Manganese (Mn)	-			240	0.08		240	0.08	
Mercury	-			0.022	0.04	J	0.024	0.04	J
Nickel	-			9.2	0.2		8.8	0.2	
Potassium (K)	-			800	8		860	8	
Selenium	-			0.71	0.1		0.99	0.1	
Silver	-			0.098	0.05	J	0.08	0.05	J
Sodium (Na)	-			65	8		66	8	
Thallium	-			0.13	0.05		0.052	0.05	J
Vanadium	-			17	0.1		18	0.1	
Zinc	-			43	1.5		48	1.5	
Other Parameters (mg/kg)									
Cyanide (CN-)	0.32	0.32	U	-			-		
Nitrate	2.3	1.9	J	-			-		
Perchlorate	0.0018	0.0018	UJ	-			-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-AJ23
ANALYTICAL RESULTS FOR GRID AJ23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AJ23		
Sample Name	P3IF-SS-IS-SO-AJ623		
Date Collected	June 21, 2023		
	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)			
1,1,1,2-Tetrachloroethane	-		
1,1,1-Trichloroethane	-		
1,1,2,2-Tetrachloroethane	-		
1,1,2-Trichloroethane	-		
1,1-Dichloroethane	-		
1,1-Dichloroethene	-		
1,1-Dichloropropene	-		
1,2,3-Trichlorobenzene	-		
1,2,3-Trichloropropane	-		
1,2,4-Trichlorobenzene	-		
1,2,4-Trimethylbenzene	-		
1,2-Dibromo-3-chloropropane	-		
1,2-Dibromoethane	-		
1,2-Dichlorobenzene	-		
1,2-Dichloroethane	-		
1,2-Dichloropropane	-		
1,3,5-Trimethylbenzene	-		
1,3-Dichlorobenzene	-		
1,3-Dichloropropane	-		
1,4-Dichlorobenzene	-		
2,2-Dichloropropane	-		
2-Butanone	-		
2-Chlorotoluene	-		
2-Hexanone	-		
4-Chlorotoluene	-		
4-Methyl-2-pentanone	-		
Acetone	-		
Benzene	-		
Bromobenzene	-		
Bromochloromethane	-		
Bromodichloromethane	-		
Bromoform	-		
Bromomethane	-		
Carbon disulfide	-		
Carbon tetrachloride	-		
Chlorobenzene	-		
Chloroethane	-		
Chloroform	-		
Chloromethane	-		
cis-1,2-Dichloroethene	-		
cis-1,3-Dichloropropene	-		
Dibromochloromethane	-		
Dibromomethane	-		
Dichlorodifluoromethane	-		
Ethylbenzene	-		
Hexachlorobutadiene	-		
Isopropylbenzene	-		
m+p-Xylene	-		
Methyl Tertiary Butyl Ether	-		
Methylene chloride	-		
n-Butylbenzene	-		
n-Propylbenzene	-		
Naphthalene	-		
o-Xylene	-		
4-Isopropyltoluene	-		
sec-Butylbenzene	-		
Styrene	-		
tert-Butylbenzene	-		
Tetrachloroethene	-		
Toluene	-		
trans-1,2-Dichloroethene	-		
trans-1,3-Dichloropropene	-		
Trichloroethene	-		
Trichlorofluoromethane	-		
Vinyl chloride	-		
Semivolatile Organic Compounds (mg/kg)			
1,2,4-Trichlorobenzene	-		
1,2-Dichlorobenzene	-		
1,3-Dichlorobenzene	-		
1,4-Dichlorobenzene	-		
2,4,5-Trichlorophenol	-		
2,4,6-Trichlorophenol	-		
2,4-Dichlorophenol	-		
2,4-Dimethylphenol	-		
2,4-Dinitrophenol	-		
2,4-Dinitrotoluene	-		
2,6-Dinitrotoluene	-		
2-Chloronaphthalene	-		
2-Chlorophenol	-		
2-Methylnaphthalene	-		
2-Methylphenol	-		
2-Nitroaniline	-		
2-Nitrophenol	-		
3,3-Dichlorobenzidine	-		
3-Nitroaniline	-		
4,6-Dinitro-2-methylphenol	-		
4-Bromophenyl-phenylether	-		
4-Chloro-3-methylphenol	-		
4-Chloroaniline	-		

TABLE B-AJ23
ANALYTICAL RESULTS FOR GRID AJ23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AJ23		
Sample Name	P3IF-SS-IS-SO-AJ623		
Date Collected	June 21, 2023		
	Result	LOD	Qual
Semivolatile Organic Compounds (mg/kg), continued			
4-Chlorophenyl-phenylether	-		
4-Nitroaniline	-		
4-Nitrophenol	-		
Acenaphthene	-		
Acenaphthylene	-		
Anthracene	-		
Benzo(a)anthracene	-		
Benzo(a)pyrene	-		
Benzo(b)fluoranthene	-		
Benzo(g,h,i)perylene	-		
Benzo(k)fluoranthene	-		
Benzoic acid	-		
Benzyl Alcohol	-		
Bis(2-chloro-1-methylethyl) ether	-		
Bis(2-chloroethoxy)methane	-		
Bis(2-chloroethyl)ether	-		
Bis(2-ethylhexyl)phthalate	-		
Butyl benzyl phthalate	-		
Carbazole	-		
Chrysene	-		
Di-n-butyl phthalate	-		
Di-n-octyl phthalate	-		
Dibenz(a,h)anthracene	-		
Dibenzofuran	-		
Diethyl phthalate	-		
Dimethyl phthalate	-		
Fluoranthene	-		
Fluorene	-		
Hexachlorobenzene	-		
Hexachlorobutadiene	-		
Hexachloroethane	-		
Indeno(1,2,3-cd)pyrene	-		
Isophorone	-		
n-Nitroso-di-n-propylamine	-		
n-Nitrosodimethylamine	-		
n-Nitrosodiphenylamine	-		
Naphthalene	-		
Nitrobenzene	-		
Pentachlorophenol	-		
Phenanthrene	-		
Phenol	-		
Pyrene	-		
Explosives (mg/kg)			
1,3,5-Trinitrobenzene	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	UJ
2,4,6-Trinitrotoluene	0.075	0.075	UJ
2,4-Dinitrotoluene	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	UJ
2-Nitrotoluene	0.075	0.075	UJ
3-Nitrotoluene	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	0.075	0.075	UJ
4-Nitrotoluene	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	UJ
Nitroglycerin	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)			
Aroclor 1016	-		
Aroclor 1221	-		
Aroclor 1232	-		
Aroclor 1242	-		
Aroclor 1248	-		
Aroclor 1254	-		
Aroclor 1260	-		
Dioxins/Furans (mg/kg)			
Octachlorodibenzofuran (OCDF)	-		
Octachlorodibenzo-p-dioxin (OCDD)	-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	-		

TABLE B-AJ23
ANALYTICAL RESULTS FOR GRID AJ23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AJ23		
Sample Name	P3IF-SS-IS-SO-AJ623		
Date Collected	June 21, 2023		
	Result	LOD	Qual
Metals (mg/kg)			
Aluminum	17000	4	
Antimony	0.15	0.15	U
Arsenic	1	0.3	
Barium	120	0.2	
Beryllium	0.46	0.3	J
Cadmium	0.57	0.08	
Calcium (Ca)	2800	15	
Chromium	12	0.2	
Cobalt	4.5	0.08	
Copper	87	0.2	
Iron (Fe)	10000	8	
Lead	11	0.05	
Magnesium (Mg)	7800	5	
Manganese (Mn)	240	0.08	
Mercury	0.02	0.04	J
Nickel	8.9	0.2	
Potassium (K)	800	8	
Selenium	1	0.1	
Silver	0.087	0.05	J
Sodium (Na)	61	8	
Thallium	0.038	0.05	J
Vanadium	17	0.1	
Zinc	39	1.5	
Other Parameters (mg/kg)			
Cyanide (CN-)	-		
Nitrate	-		
Perchlorate	-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-AK23
ANALYTICAL RESULTS FOR GRID AK23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AK23			AK23			AK23		
Sample Name	P3IF-BA-GRID-AK023			P3IF-SS-IS-SO-AK023			P3IF-SS-IS-SO-AK523		
Date Collected	June 21, 2023			June 21, 2023			June 21, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)									
1,1,1,2-Tetrachloroethane	0.0022	0.0022	U	-			-		
1,1,1-Trichloroethane	0.0022	0.0022	U	-			-		
1,1,2,2-Tetrachloroethane	0.0022	0.0022	U	-			-		
1,1,2-Trichloroethane	0.0022	0.0022	U	-			-		
1,1-Dichloroethane	0.0022	0.0022	U	-			-		
1,1-Dichloroethene	0.0022	0.0022	U	-			-		
1,1-Dichloropropene	0.0022	0.0022	U	-			-		
1,2,3-Trichlorobenzene	0.0022	0.0022	U	-			-		
1,2,3-Trichloropropane	0.0054	0.0054	U	-			-		
1,2,4-Trichlorobenzene	0.0022	0.0022	U	-			-		
1,2,4-Trimethylbenzene	0.0022	0.0022	U	-			-		
1,2-Dibromo-3-chloropropane	0.0054	0.0054	U	-			-		
1,2-Dibromoethane	0.0022	0.0022	U	-			-		
1,2-Dichlorobenzene	0.0022	0.0022	U	-			-		
1,2-Dichloroethane	0.0022	0.0022	U	-			-		
1,2-Dichloropropane	0.0022	0.0022	U	-			-		
1,3,5-Trimethylbenzene	0.0022	0.0022	U	-			-		
1,3-Dichlorobenzene	0.0022	0.0022	U	-			-		
1,3-Dichloropropane	0.0022	0.0022	U	-			-		
1,4-Dichlorobenzene	0.0022	0.0022	U	-			-		
2,2-Dichloropropane	0.0022	0.0022	U	-			-		
2-Butanone	0.0032	0.0032	U	-			-		
2-Chlorotoluene	0.0022	0.0022	U	-			-		
2-Hexanone	0.0022	0.0022	U	-			-		
4-Chlorotoluene	0.0022	0.0022	U	-			-		
4-Methyl-2-pentanone	0.0022	0.0022	U	-			-		
Acetone	0.24	0.0054		-			-		
Benzene	0.0022	0.0022	U	-			-		
Bromobenzene	0.0022	0.0022	U	-			-		
Bromochloromethane	0.0022	0.0022	U	-			-		
Bromodichloromethane	0.0022	0.0022	U	-			-		
Bromoform	0.0022	0.0022	U	-			-		
Bromomethane	0.0022	0.0022	U	-			-		
Carbon disulfide	0.0022	0.0022	U	-			-		
Carbon tetrachloride	0.0022	0.0022	U	-			-		
Chlorobenzene	0.0022	0.0022	U	-			-		
Chloroethane	0.0022	0.0022	U	-			-		
Chloroform	0.0022	0.0022	U	-			-		
Chloromethane	0.0054	0.0054	U	-			-		
cis-1,2-Dichloroethene	0.0022	0.0022	U	-			-		
cis-1,3-Dichloropropene	0.0022	0.0022	U	-			-		
Dibromochloromethane	0.0022	0.0022	U	-			-		
Dibromomethane	0.0022	0.0022	U	-			-		
Dichlorodifluoromethane	0.0022	0.0022	U	-			-		
Ethylbenzene	0.0022	0.0022	U	-			-		
Hexachlorobutadiene	0.0022	0.0022	U	-			-		
Isopropylbenzene	0.0022	0.0022	U	-			-		
m+p-Xylene	0.0054	0.0054	U	-			-		
Methyl Tertiary Butyl Ether	0.0022	0.0022	U	-			-		
Methylene chloride	0.011	0.011	U	-			-		
n-Butylbenzene	0.0022	0.0022	U	-			-		
n-Propylbenzene	0.0022	0.0022	U	-			-		
Naphthalene	0.0022	0.0022	U	-			-		
o-Xylene	0.0027	0.0027	U	-			-		
4-Isopropyltoluene	0.0022	0.0022	U	-			-		
sec-Butylbenzene	0.0022	0.0022	U	-			-		
Styrene	0.0022	0.0022	U	-			-		
tert-Butylbenzene	0.0022	0.0022	U	-			-		
Tetrachloroethene	0.0022	0.0022	U	-			-		
Toluene	0.0022	0.0022	U	-			-		
trans-1,2-Dichloroethene	0.0022	0.0022	U	-			-		
trans-1,3-Dichloropropene	0.0022	0.0022	U	-			-		
Trichloroethene	0.0022	0.0022	U	-			-		
Trichlorofluoromethane	0.0022	0.0022	U	-			-		
Vinyl chloride	0.0022	0.0022	U	-			-		
Semivolatile Organic Compounds (mg/kg)									
1,2,4-Trichlorobenzene	0.17	0.17	UJ	-			-		
1,2-Dichlorobenzene	0.17	0.17	UJ	-			-		
1,3-Dichlorobenzene	0.17	0.17	UJ	-			-		
1,4-Dichlorobenzene	0.17	0.17	UJ	-			-		
2,4,5-Trichlorophenol	0.17	0.17	UJ	-			-		
2,4,6-Trichlorophenol	0.17	0.17	UJ	-			-		
2,4-Dichlorophenol	0.17	0.17	UJ	-			-		
2,4-Dimethylphenol	0.17	0.17	UJ	-			-		
2,4-Dinitrophenol	0.17	0.17	UJ	-			-		
2,4-Dinitrotoluene	0.17	0.17	UJ	-			-		
2,6-Dinitrotoluene	0.17	0.17	UJ	-			-		
2-Chloronaphthalene	0.17	0.17	UJ	-			-		
2-Chlorophenol	0.17	0.17	UJ	-			-		
2-Methylnaphthalene	0.17	0.17	UJ	-			-		
2-Methylphenol	0.17	0.17	UJ	-			-		
2-Nitroaniline	0.17	0.17	UJ	-			-		
2-Nitrophenol	0.17	0.17	UJ	-			-		
3,3-Dichlorobenzidine	0.17	0.17	UJ	-			-		
3-Nitroaniline	0.17	0.17	UJ	-			-		
4,6-Dinitro-2-methylphenol	0.17	0.17	UJ	-			-		
4-Bromophenyl-phenylether	0.17	0.17	UJ	-			-		
4-Chloro-3-methylphenol	0.17	0.17	UJ	-			-		
4-Chloroaniline	0.17	0.17	UJ	-			-		

TABLE B-AK23
ANALYTICAL RESULTS FOR GRID AK23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AK23			AK23			AK23		
Sample Name	P3IF-BA-GRID-AK023			P3IF-SS-IS-SO-AK023			P3IF-SS-IS-SO-AK523		
Date Collected	June 21, 2023			June 21, 2023			June 21, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Semivolatile Organic Compounds (mg/kg), continued									
4-Chlorophenyl-phenylether	0.17	0.17	UJ	-			-		
4-Nitroaniline	0.17	0.17	UJ	-			-		
4-Nitrophenol	0.17	0.17	UJ	-			-		
Acenaphthene	0.17	0.17	UJ	-			-		
Acenaphthylene	0.17	0.17	UJ	-			-		
Anthracene	0.17	0.17	UJ	-			-		
Benzo(a)anthracene	0.17	0.17	UJ	-			-		
Benzo(a)pyrene	0.13	0.13	UJ	-			-		
Benzo(b)fluoranthene	0.17	0.17	UJ	-			-		
Benzo(g,h,i)perylene	0.17	0.17	UJ	-			-		
Benzo(k)fluoranthene	0.17	0.17	UJ	-			-		
Benzoic acid	0.17	0.17	UJ	-			-		
Benzyl Alcohol	0.17	0.17	UJ	-			-		
Bis(2-chloro-1-methylethyl) ether	0.17	0.17	UJ	-			-		
Bis(2-chloroethoxy)methane	0.17	0.17	UJ	-			-		
Bis(2-chloroethyl)ether	0.17	0.17	UJ	-			-		
Bis(2-ethylhexyl)phthalate	0.17	0.17	UJ	-			-		
Butyl benzyl phthalate	0.17	0.17	UJ	-			-		
Carbazole	0.17	0.17	UJ	-			-		
Chrysene	0.17	0.17	UJ	-			-		
Di-n-butyl phthalate	0.17	0.17	UJ	-			-		
Di-n-octyl phthalate	0.17	0.17	UJ	-			-		
Dibenz(a,h)anthracene	0.13	0.13	UJ	-			-		
Dibenzofuran	0.17	0.17	UJ	-			-		
Diethyl phthalate	0.17	0.17	UJ	-			-		
Dimethyl phthalate	0.17	0.17	UJ	-			-		
Fluoranthene	0.17	0.17	UJ	-			-		
Fluorene	0.17	0.17	UJ	-			-		
Hexachlorobenzene	0.17	0.17	UJ	-			-		
Hexachlorobutadiene	0.17	0.17	UJ	-			-		
Hexachloroethane	0.17	0.17	UJ	-			-		
Indeno(1,2,3-cd)pyrene	0.17	0.17	UJ	-			-		
Isophorone	0.17	0.17	UJ	-			-		
n-Nitroso-di-n-propylamine	0.17	0.17	UJ	-			-		
n-Nitrosodimethylamine	0.021	0.021	UJ	-			-		
n-Nitrosodiphenylamine	0.17	0.17	UJ	-			-		
Naphthalene	0.17	0.17	UJ	-			-		
Nitrobenzene	0.17	0.17	UJ	-			-		
Pentachlorophenol	0.17	0.17	UJ	-			-		
Phenanthrene	0.17	0.17	UJ	-			-		
Phenol	0.17	0.17	UJ	-			-		
Pyrene	0.17	0.17	UJ	-			-		
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
1,3-Dinitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,4,6-Trinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,4-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,6-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
3-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
4-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	-			0.075	0.075	UJ	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	-			0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
Nitroglycerin	-			0.15	0.15	UJ	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	-			0.075	0.075	UJ	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	-			0.25	0.25	UJ	0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)									
Aroclor 1016	0.02	0.02	U	-			-		
Aroclor 1221	0.02	0.02	U	-			-		
Aroclor 1232	0.0098	0.0098	U	-			-		
Aroclor 1242	0.0098	0.0098	U	-			-		
Aroclor 1248	0.0098	0.0098	U	-			-		
Aroclor 1254	0.0098	0.0098	U	-			-		
Aroclor 1260	0.0098	0.0098	U	-			-		
Dioxins/Furans (mg/kg)									
Octachlorodibenzofuran (OCDF)	0.00000039	0.00000039	U	-			-		
Octachlorodibenzo-p-dioxin (OCDD)	0.000012	0.000012	J	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.00000039	0.00000039	U	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	0.0000023	0.0000023	J	-			-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.0000001	0.0000001	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.00000012	0.00000012	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000012	0.00000012	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.00000011	0.00000011	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000011	0.00000011	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.00000014	0.00000014	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000016	0.00000016	U	-			-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000015	0.00000015	U	-			-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.00000017	0.00000017	J	-			-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.00000012	0.00000012	U	-			-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000016	0.00000016	U	-			-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.00000017	0.00000017	U	-			-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.000000068	0.000000068	U	-			-		

TABLE B-AK23
ANALYTICAL RESULTS FOR GRID AK23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AK23			AK23			AK23		
Sample Name	P3IF-BA-GRID-AK023			P3IF-SS-IS-SO-AK023			P3IF-SS-IS-SO-AK523		
Date Collected	June 21, 2023			June 21, 2023			June 21, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Metals (mg/kg)									
Aluminum	-			21000	4		18000	4	
Antimony	-			0.15	0.15	U	0.15	0.15	U
Arsenic	-			1.1	0.3		1	0.3	
Barium	-			190	0.2		180	0.2	
Beryllium	-			0.61	0.3	J	0.55	0.3	J
Cadmium	-			0.57	0.08		0.44	0.08	
Calcium (Ca)	-			3800	15		3200	15	
Chromium	-			14	0.2		12	0.2	
Cobalt	-			5.4	0.08		5.1	0.08	
Copper	-			95	0.2		62	0.2	
Iron (Fe)	-			11000	8		11000	8	
Lead	-			14	0.05		12	0.05	
Magnesium (Mg)	-			8900	5		7700	5	
Manganese (Mn)	-			330	0.08		320	0.08	
Mercury	-			0.032	0.042	J	0.026	0.045	J
Nickel	-			10	0.2		9.2	0.2	
Potassium (K)	-			1100	8		1000	8	
Selenium	-			1.1	0.1		1.1	0.1	
Silver	-			0.16	0.05		0.1	0.05	
Sodium (Na)	-			67	8		62	8	
Thallium	-			0.044	0.05	J	0.042	0.05	J
Vanadium	-			18	0.1		17	0.1	
Zinc	-			42	1.5		36	1.5	
Other Parameters (mg/kg)									
Cyanide (CN-)	0.31	0.31	U	-			-		
Nitrate	6.1	2.1	J	-			-		
Perchlorate	0.002	0.002	UJ	-			-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-AK23
ANALYTICAL RESULTS FOR GRID AK23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AK23		
Sample Name	P3IF-SS-IS-SO-AK623		
Date Collected	June 21, 2023		
	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)			
1,1,1,2-Tetrachloroethane	-		
1,1,1-Trichloroethane	-		
1,1,2,2-Tetrachloroethane	-		
1,1,2-Trichloroethane	-		
1,1-Dichloroethane	-		
1,1-Dichloroethene	-		
1,1-Dichloropropene	-		
1,2,3-Trichlorobenzene	-		
1,2,3-Trichloropropane	-		
1,2,4-Trichlorobenzene	-		
1,2,4-Trimethylbenzene	-		
1,2-Dibromo-3-chloropropane	-		
1,2-Dibromoethane	-		
1,2-Dichlorobenzene	-		
1,2-Dichloroethane	-		
1,2-Dichloropropane	-		
1,3,5-Trimethylbenzene	-		
1,3-Dichlorobenzene	-		
1,3-Dichloropropane	-		
1,4-Dichlorobenzene	-		
2,2-Dichloropropane	-		
2-Butanone	-		
2-Chlorotoluene	-		
2-Hexanone	-		
4-Chlorotoluene	-		
4-Methyl-2-pentanone	-		
Acetone	-		
Benzene	-		
Bromobenzene	-		
Bromochloromethane	-		
Bromodichloromethane	-		
Bromoform	-		
Bromomethane	-		
Carbon disulfide	-		
Carbon tetrachloride	-		
Chlorobenzene	-		
Chloroethane	-		
Chloroform	-		
Chloromethane	-		
cis-1,2-Dichloroethene	-		
cis-1,3-Dichloropropene	-		
Dibromochloromethane	-		
Dibromomethane	-		
Dichlorodifluoromethane	-		
Ethylbenzene	-		
Hexachlorobutadiene	-		
Isopropylbenzene	-		
m+p-Xylene	-		
Methyl Tertiary Butyl Ether	-		
Methylene chloride	-		
n-Butylbenzene	-		
n-Propylbenzene	-		
Naphthalene	-		
o-Xylene	-		
4-Isopropyltoluene	-		
sec-Butylbenzene	-		
Styrene	-		
tert-Butylbenzene	-		
Tetrachloroethene	-		
Toluene	-		
trans-1,2-Dichloroethene	-		
trans-1,3-Dichloropropene	-		
Trichloroethene	-		
Trichlorofluoromethane	-		
Vinyl chloride	-		
Semivolatile Organic Compounds (mg/kg)			
1,2,4-Trichlorobenzene	-		
1,2-Dichlorobenzene	-		
1,3-Dichlorobenzene	-		
1,4-Dichlorobenzene	-		
2,4,5-Trichlorophenol	-		
2,4,6-Trichlorophenol	-		
2,4-Dichlorophenol	-		
2,4-Dimethylphenol	-		
2,4-Dinitrophenol	-		
2,4-Dinitrotoluene	-		
2,6-Dinitrotoluene	-		
2-Chloronaphthalene	-		
2-Chlorophenol	-		
2-Methylnaphthalene	-		
2-Methylphenol	-		
2-Nitroaniline	-		
2-Nitrophenol	-		
3,3-Dichlorobenzidine	-		
3-Nitroaniline	-		
4,6-Dinitro-2-methylphenol	-		
4-Bromophenyl-phenylether	-		
4-Chloro-3-methylphenol	-		
4-Chloroaniline	-		

TABLE B-AK23
ANALYTICAL RESULTS FOR GRID AK23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AK23		
Sample Name	P3IF-SS-IS-SO-AK623		
Date Collected	June 21, 2023		
	Result	LOD	Qual
Semivolatile Organic Compounds (mg/kg), continued			
4-Chlorophenyl-phenylether	-		
4-Nitroaniline	-		
4-Nitrophenol	-		
Acenaphthene	-		
Acenaphthylene	-		
Anthracene	-		
Benzo(a)anthracene	-		
Benzo(a)pyrene	-		
Benzo(b)fluoranthene	-		
Benzo(g,h,i)perylene	-		
Benzo(k)fluoranthene	-		
Benzoic acid	-		
Benzyl Alcohol	-		
Bis(2-chloro-1-methylethyl) ether	-		
Bis(2-chloroethoxy)methane	-		
Bis(2-chloroethyl)ether	-		
Bis(2-ethylhexyl)phthalate	-		
Butyl benzyl phthalate	-		
Carbazole	-		
Chrysene	-		
Di-n-butyl phthalate	-		
Di-n-octyl phthalate	-		
Dibenz(a,h)anthracene	-		
Dibenzofuran	-		
Diethyl phthalate	-		
Dimethyl phthalate	-		
Fluoranthene	-		
Fluorene	-		
Hexachlorobenzene	-		
Hexachlorobutadiene	-		
Hexachloroethane	-		
Indeno(1,2,3-cd)pyrene	-		
Isophorone	-		
n-Nitroso-di-n-propylamine	-		
n-Nitrosodimethylamine	-		
n-Nitrosodiphenylamine	-		
Naphthalene	-		
Nitrobenzene	-		
Pentachlorophenol	-		
Phenanthrene	-		
Phenol	-		
Pyrene	-		
Explosives (mg/kg)			
1,3,5-Trinitrobenzene	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	UJ
2,4,6-Trinitrotoluene	0.075	0.075	UJ
2,4-Dinitrotoluene	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	UJ
2-Nitrotoluene	0.075	0.075	UJ
3-Nitrotoluene	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	0.075	0.075	UJ
4-Nitrotoluene	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	UJ
Nitroglycerin	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)			
Aroclor 1016	-		
Aroclor 1221	-		
Aroclor 1232	-		
Aroclor 1242	-		
Aroclor 1248	-		
Aroclor 1254	-		
Aroclor 1260	-		
Dioxins/Furans (mg/kg)			
Octachlorodibenzofuran (OCDF)	-		
Octachlorodibenzo-p-dioxin (OCDD)	-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	-		

TABLE B-AK23
ANALYTICAL RESULTS FOR GRID AK23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AK23		
Sample Name	P3IF-SS-IS-SO-AK623		
Date Collected	June 21, 2023		
	Result	LOD	Qual
Metals (mg/kg)			
Aluminum	24000	4	J
Antimony	0.077	0.15	J
Arsenic	1.2	0.3	J
Barium	210	0.2	
Beryllium	0.7	0.3	J
Cadmium	0.8	0.08	J
Calcium (Ca)	3800	15	J
Chromium	18	0.2	J
Cobalt	6.3	0.08	J
Copper	120	0.2	J
Iron (Fe)	13000	8	J
Lead	17	0.05	J
Magnesium (Mg)	10000	5	J
Manganese (Mn)	380	0.08	J
Mercury	0.03	0.04	J
Nickel	12	0.2	J
Potassium (K)	1300	8	J
Selenium	1.1	0.1	J
Silver	0.16	0.05	J
Sodium (Na)	75	8	
Thallium	0.051	0.05	J
Vanadium	24	0.1	J
Zinc	49	1.5	J
Other Parameters (mg/kg)			
Cyanide (CN-)	-		
Nitrate	-		
Perchlorate	-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-AL23
ANALYTICAL RESULTS FOR GRID AL23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AL23			AL23			AL23		
Sample Name	P3IF-BA-GRID-AL023			P3IF-SS-IS-SO-AL023			P3IF-SS-IS-SO-AL523		
Date Collected	June 21, 2023			June 21, 2023			June 21, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)									
1,1,1,2-Tetrachloroethane	0.0010	0.001	U	-			-		
1,1,1-Trichloroethane	0.0010	0.001	U	-			-		
1,1,2,2-Tetrachloroethane	0.0010	0.001	U	-			-		
1,1,2-Trichloroethane	0.0010	0.001	U	-			-		
1,1-Dichloroethane	0.0010	0.001	U	-			-		
1,1-Dichloroethene	0.0010	0.001	U	-			-		
1,1-Dichloropropene	0.0010	0.001	U	-			-		
1,2,3-Trichlorobenzene	0.0010	0.001	U	-			-		
1,2,3-Trichloropropane	0.0025	0.0025	U	-			-		
1,2,4-Trichlorobenzene	0.0010	0.001	U	-			-		
1,2,4-Trimethylbenzene	0.0010	0.001	U	-			-		
1,2-Dibromo-3-chloropropane	0.0025	0.0025	U	-			-		
1,2-Dibromoethane	0.0010	0.001	U	-			-		
1,2-Dichlorobenzene	0.0010	0.001	U	-			-		
1,2-Dichloroethane	0.0010	0.001	U	-			-		
1,2-Dichloropropane	0.0010	0.001	U	-			-		
1,3,5-Trimethylbenzene	0.0010	0.001	U	-			-		
1,3-Dichlorobenzene	0.0010	0.001	U	-			-		
1,3-Dichloropropane	0.0010	0.001	U	-			-		
1,4-Dichlorobenzene	0.0010	0.001	U	-			-		
2,2-Dichloropropane	0.0010	0.001	U	-			-		
2-Butanone	0.0015	0.0015	U	-			-		
2-Chlorotoluene	0.0010	0.001	U	-			-		
2-Hexanone	0.0010	0.001	U	-			-		
4-Chlorotoluene	0.0010	0.001	U	-			-		
4-Methyl-2-pentanone	0.0010	0.001	U	-			-		
Acetone	0.095	0.0025		-			-		
Benzene	0.0010	0.001	U	-			-		
Bromobenzene	0.0010	0.001	U	-			-		
Bromochloromethane	0.0010	0.001	U	-			-		
Bromodichloromethane	0.0010	0.001	U	-			-		
Bromoform	0.0010	0.001	U	-			-		
Bromomethane	0.0010	0.001	U	-			-		
Carbon disulfide	0.0010	0.001	U	-			-		
Carbon tetrachloride	0.0010	0.001	U	-			-		
Chlorobenzene	0.0010	0.001	U	-			-		
Chloroethane	0.0010	0.001	U	-			-		
Chloroform	0.0010	0.001	U	-			-		
Chloromethane	0.0025	0.0025	U	-			-		
cis-1,2-Dichloroethene	0.0010	0.001	U	-			-		
cis-1,3-Dichloropropene	0.0010	0.001	U	-			-		
Dibromochloromethane	0.0010	0.001	U	-			-		
Dibromomethane	0.0010	0.001	U	-			-		
Dichlorodifluoromethane	0.0010	0.001	U	-			-		
Ethylbenzene	0.0010	0.001	U	-			-		
Hexachlorobutadiene	0.0010	0.001	U	-			-		
Isopropylbenzene	0.0010	0.001	U	-			-		
m+p-Xylene	0.0025	0.0025	U	-			-		
Methyl Tertiary Butyl Ether	0.0010	0.001	U	-			-		
Methylene chloride	0.0051	0.0051	U	-			-		
n-Butylbenzene	0.0010	0.001	U	-			-		
n-Propylbenzene	0.0010	0.001	U	-			-		
Naphthalene	0.0010	0.001	U	-			-		
o-Xylene	0.0013	0.0013	U	-			-		
4-Isopropyltoluene	0.0010	0.001	U	-			-		
sec-Butylbenzene	0.0010	0.001	U	-			-		
Styrene	0.0010	0.001	U	-			-		
tert-Butylbenzene	0.0010	0.001	U	-			-		
Tetrachloroethene	0.0010	0.001	U	-			-		
Toluene	0.0010	0.001	U	-			-		
trans-1,2-Dichloroethene	0.0010	0.001	U	-			-		
trans-1,3-Dichloropropene	0.0010	0.001	U	-			-		
Trichloroethene	0.0010	0.001	U	-			-		
Trichlorofluoromethane	0.0010	0.001	U	-			-		
Vinyl chloride	0.0010	0.001	U	-			-		
Semivolatile Organic Compounds (mg/kg)									
1,2,4-Trichlorobenzene	0.17	0.17	UJ	-			-		
1,2-Dichlorobenzene	0.17	0.17	UJ	-			-		
1,3-Dichlorobenzene	0.17	0.17	UJ	-			-		
1,4-Dichlorobenzene	0.17	0.17	UJ	-			-		
2,4,5-Trichlorophenol	0.17	0.17	UJ	-			-		
2,4,6-Trichlorophenol	0.17	0.17	UJ	-			-		
2,4-Dichlorophenol	0.17	0.17	UJ	-			-		
2,4-Dimethylphenol	0.17	0.17	UJ	-			-		
2,4-Dinitrophenol	0.17	0.17	UJ	-			-		
2,4-Dinitrotoluene	0.17	0.17	UJ	-			-		
2,6-Dinitrotoluene	0.17	0.17	UJ	-			-		
2-Chloronaphthalene	0.17	0.17	UJ	-			-		
2-Chlorophenol	0.17	0.17	UJ	-			-		
2-Methylnaphthalene	0.17	0.17	UJ	-			-		
2-Methylphenol	0.17	0.17	UJ	-			-		
2-Nitroaniline	0.17	0.17	UJ	-			-		
2-Nitrophenol	0.17	0.17	UJ	-			-		
3,3-Dichlorobenzidine	0.17	0.17	UJ	-			-		
3-Nitroaniline	0.17	0.17	UJ	-			-		
4,6-Dinitro-2-methylphenol	0.17	0.17	UJ	-			-		
4-Bromophenyl-phenylether	0.17	0.17	UJ	-			-		
4-Chloro-3-methylphenol	0.17	0.17	UJ	-			-		
4-Chloroaniline	0.17	0.17	UJ	-			-		

TABLE B-AL23
ANALYTICAL RESULTS FOR GRID AL23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AL23			AL23			AL23		
Sample Name	P3IF-BA-GRID-AL023			P3IF-SS-IS-SO-AL023			P3IF-SS-IS-SO-AL523		
Date Collected	June 21, 2023			June 21, 2023			June 21, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Semivolatile Organic Compounds (mg/kg), continued									
4-Chlorophenyl-phenylether	0.17	0.17	UJ	-			-		
4-Nitroaniline	0.17	0.17	UJ	-			-		
4-Nitrophenol	0.17	0.17	UJ	-			-		
Acenaphthene	0.17	0.17	UJ	-			-		
Acenaphthylene	0.17	0.17	UJ	-			-		
Anthracene	0.17	0.17	UJ	-			-		
Benzo(a)anthracene	0.17	0.17	UJ	-			-		
Benzo(a)pyrene	0.13	0.13	UJ	-			-		
Benzo(b)fluoranthene	0.17	0.17	UJ	-			-		
Benzo(g,h,i)perylene	0.17	0.17	UJ	-			-		
Benzo(k)fluoranthene	0.17	0.17	UJ	-			-		
Benzoic acid	0.17	0.17	UJ	-			-		
Benzyl Alcohol	0.17	0.17	UJ	-			-		
Bis(2-chloro-1-methylethyl) ether	0.17	0.17	UJ	-			-		
Bis(2-chloroethoxy)methane	0.17	0.17	UJ	-			-		
Bis(2-chloroethyl)ether	0.17	0.17	UJ	-			-		
Bis(2-ethylhexyl)phthalate	0.17	0.17	UJ	-			-		
Butyl benzyl phthalate	0.17	0.17	UJ	-			-		
Carbazole	0.17	0.17	UJ	-			-		
Chrysene	0.17	0.17	UJ	-			-		
Di-n-butyl phthalate	0.17	0.17	UJ	-			-		
Di-n-octyl phthalate	0.17	0.17	UJ	-			-		
Dibenz(a,h)anthracene	0.13	0.13	UJ	-			-		
Dibenzofuran	0.17	0.17	UJ	-			-		
Diethyl phthalate	0.17	0.17	UJ	-			-		
Dimethyl phthalate	0.17	0.17	UJ	-			-		
Fluoranthene	0.17	0.17	UJ	-			-		
Fluorene	0.17	0.17	UJ	-			-		
Hexachlorobenzene	0.17	0.17	UJ	-			-		
Hexachlorobutadiene	0.17	0.17	UJ	-			-		
Hexachloroethane	0.17	0.17	UJ	-			-		
Indeno(1,2,3-cd)pyrene	0.17	0.17	UJ	-			-		
Isophorone	0.17	0.17	UJ	-			-		
n-Nitroso-di-n-propylamine	0.17	0.17	UJ	-			-		
n-Nitrosodimethylamine	0.020	0.02	UJ	-			-		
n-Nitrosodiphenylamine	0.17	0.17	UJ	-			-		
Naphthalene	0.17	0.17	UJ	-			-		
Nitrobenzene	0.17	0.17	UJ	-			-		
Pentachlorophenol	0.17	0.17	UJ	-			-		
Phenanthrene	0.17	0.17	UJ	-			-		
Phenol	0.17	0.17	UJ	-			-		
Pyrene	0.17	0.17	UJ	-			-		
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
1,3-Dinitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,4,6-Trinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,4-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,6-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
3-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
4-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	-			0.075	0.075	UJ	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	-			0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
Nitroglycerin	-			0.15	0.15	UJ	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	-			0.075	0.075	UJ	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	-			0.25	0.25	UJ	0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)									
Aroclor 1016	0.019	0.019	U	-			-		
Aroclor 1221	0.019	0.019	U	-			-		
Aroclor 1232	0.0096	0.0096	U	-			-		
Aroclor 1242	0.0096	0.0096	U	-			-		
Aroclor 1248	0.0096	0.0096	U	-			-		
Aroclor 1254	0.0096	0.0096	U	-			-		
Aroclor 1260	0.0096	0.0096	U	-			-		
Dioxins/Furans (mg/kg)									
Octachlorodibenzofuran (OCDF)	0.00000036	0.00000036	U	-			-		
Octachlorodibenzo-p-dioxin (OCDD)	0.0000055	0.0000055	J	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.00000028	0.00000028	U	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	0.0000013	0.0000013	J	-			-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.000000095	0.000000095	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.00000005	0.00000005	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000044	0.000000044	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000049	0.000000049	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000004	0.00000004	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.000000059	0.000000059	J	-			-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000007	0.00000007	U	-			-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.0000001	0.0000001	U	-			-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.000000063	0.000000063	U	-			-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000055	0.000000055	U	-			-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.0000001	0.0000001	U	-			-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.00000021	0.00000021	U	-			-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.000000062	0.000000062	U	-			-		

TABLE B-AL23
ANALYTICAL RESULTS FOR GRID AL23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AL23			AL23			AL23		
Sample Name	P3IF-BA-GRID-AL023			P3IF-SS-IS-SO-AL023			P3IF-SS-IS-SO-AL523		
Date Collected	June 21, 2023			June 21, 2023			June 21, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Metals (mg/kg)									
Aluminum	-			23000	4		17000	4	
Antimony	-			0.15	0.15	U	0.15	0.15	U
Arsenic	-			0.99	0.3		0.95	0.3	
Barium	-			120	0.2		110	0.2	
Beryllium	-			0.5	0.3	J	0.46	0.3	J
Cadmium	-			0.52	0.08		0.51	0.08	
Calcium (Ca)	-			2900	15		3100	15	
Chromium	-			15	0.2		12	0.2	
Cobalt	-			5.5	0.08		4.7	0.08	
Copper	-			90	0.2		89	0.2	
Iron (Fe)	-			11000	8		9700	8	
Lead	-			14	0.05		14	0.05	
Magnesium (Mg)	-			10000	5		7700	5	
Manganese (Mn)	-			270	0.08		250	0.08	
Mercury	-			0.019	0.04	J	0.023	0.04	J
Nickel	-			10	0.2		8.7	0.2	
Potassium (K)	-			1100	8		900	8	
Selenium	-			0.99	0.1		0.96	0.1	
Silver	-			0.12	0.05		0.12	0.05	
Sodium (Na)	-			75	8		62	8	
Thallium	-			0.043	0.05	J	0.035	0.05	J
Vanadium	-			20	0.1		17	0.1	
Zinc	-			48	1.5		38	1.5	
Other Parameters (mg/kg)									
Cyanide (CN-)	0.31	0.31	U	-			-		
Nitrate	2.1	2.1	U	-			-		
Perchlorate	0.002	0.002	UJ	-			-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-AL23
ANALYTICAL RESULTS FOR GRID AL23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AL23		
Sample Name	P3IF-SS-IS-SO-AL623		
Date Collected	June 21, 2023		
	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)			
1,1,1,2-Tetrachloroethane	-		
1,1,1-Trichloroethane	-		
1,1,2,2-Tetrachloroethane	-		
1,1,2-Trichloroethane	-		
1,1-Dichloroethane	-		
1,1-Dichloroethene	-		
1,1-Dichloropropene	-		
1,2,3-Trichlorobenzene	-		
1,2,3-Trichloropropane	-		
1,2,4-Trichlorobenzene	-		
1,2,4-Trimethylbenzene	-		
1,2-Dibromo-3-chloropropane	-		
1,2-Dibromoethane	-		
1,2-Dichlorobenzene	-		
1,2-Dichloroethane	-		
1,2-Dichloropropane	-		
1,3,5-Trimethylbenzene	-		
1,3-Dichlorobenzene	-		
1,3-Dichloropropane	-		
1,4-Dichlorobenzene	-		
2,2-Dichloropropane	-		
2-Butanone	-		
2-Chlorotoluene	-		
2-Hexanone	-		
4-Chlorotoluene	-		
4-Methyl-2-pentanone	-		
Acetone	-		
Benzene	-		
Bromobenzene	-		
Bromochloromethane	-		
Bromodichloromethane	-		
Bromoform	-		
Bromomethane	-		
Carbon disulfide	-		
Carbon tetrachloride	-		
Chlorobenzene	-		
Chloroethane	-		
Chloroform	-		
Chloromethane	-		
cis-1,2-Dichloroethene	-		
cis-1,3-Dichloropropene	-		
Dibromochloromethane	-		
Dibromomethane	-		
Dichlorodifluoromethane	-		
Ethylbenzene	-		
Hexachlorobutadiene	-		
Isopropylbenzene	-		
m+p-Xylene	-		
Methyl Tertiary Butyl Ether	-		
Methylene chloride	-		
n-Butylbenzene	-		
n-Propylbenzene	-		
Naphthalene	-		
o-Xylene	-		
4-Isopropyltoluene	-		
sec-Butylbenzene	-		
Styrene	-		
tert-Butylbenzene	-		
Tetrachloroethene	-		
Toluene	-		
trans-1,2-Dichloroethene	-		
trans-1,3-Dichloropropene	-		
Trichloroethene	-		
Trichlorofluoromethane	-		
Vinyl chloride	-		
Semivolatile Organic Compounds (mg/kg)			
1,2,4-Trichlorobenzene	-		
1,2-Dichlorobenzene	-		
1,3-Dichlorobenzene	-		
1,4-Dichlorobenzene	-		
2,4,5-Trichlorophenol	-		
2,4,6-Trichlorophenol	-		
2,4-Dichlorophenol	-		
2,4-Dimethylphenol	-		
2,4-Dinitrophenol	-		
2,4-Dinitrotoluene	-		
2,6-Dinitrotoluene	-		
2-Chloronaphthalene	-		
2-Chlorophenol	-		
2-Methylnaphthalene	-		
2-Methylphenol	-		
2-Nitroaniline	-		
2-Nitrophenol	-		
3,3-Dichlorobenzidine	-		
3-Nitroaniline	-		
4,6-Dinitro-2-methylphenol	-		
4-Bromophenyl-phenylether	-		
4-Chloro-3-methylphenol	-		
4-Chloroaniline	-		

TABLE B-AL23
ANALYTICAL RESULTS FOR GRID AL23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AL23		
Sample Name	P3IF-SS-IS-SO-AL623		
Date Collected	June 21, 2023		
	Result	LOD	Qual
Semivolatile Organic Compounds (mg/kg), continued			
4-Chlorophenyl-phenylether	-		
4-Nitroaniline	-		
4-Nitrophenol	-		
Acenaphthene	-		
Acenaphthylene	-		
Anthracene	-		
Benzo(a)anthracene	-		
Benzo(a)pyrene	-		
Benzo(b)fluoranthene	-		
Benzo(g,h,i)perylene	-		
Benzo(k)fluoranthene	-		
Benzoic acid	-		
Benzyl Alcohol	-		
Bis(2-chloro-1-methylethyl) ether	-		
Bis(2-chloroethoxy)methane	-		
Bis(2-chloroethyl)ether	-		
Bis(2-ethylhexyl)phthalate	-		
Butyl benzyl phthalate	-		
Carbazole	-		
Chrysene	-		
Di-n-butyl phthalate	-		
Di-n-octyl phthalate	-		
Dibenz(a,h)anthracene	-		
Dibenzofuran	-		
Diethyl phthalate	-		
Dimethyl phthalate	-		
Fluoranthene	-		
Fluorene	-		
Hexachlorobenzene	-		
Hexachlorobutadiene	-		
Hexachloroethane	-		
Indeno(1,2,3-cd)pyrene	-		
Isophorone	-		
n-Nitroso-di-n-propylamine	-		
n-Nitrosodimethylamine	-		
n-Nitrosodiphenylamine	-		
Naphthalene	-		
Nitrobenzene	-		
Pentachlorophenol	-		
Phenanthrene	-		
Phenol	-		
Pyrene	-		
Explosives (mg/kg)			
1,3,5-Trinitrobenzene	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	UJ
2,4,6-Trinitrotoluene	0.075	0.075	UJ
2,4-Dinitrotoluene	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	UJ
2-Nitrotoluene	0.075	0.075	UJ
3-Nitrotoluene	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	0.075	0.075	UJ
4-Nitrotoluene	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	UJ
Nitroglycerin	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)			
Aroclor 1016	-		
Aroclor 1221	-		
Aroclor 1232	-		
Aroclor 1242	-		
Aroclor 1248	-		
Aroclor 1254	-		
Aroclor 1260	-		
Dioxins/Furans (mg/kg)			
Octachlorodibenzofuran (OCDF)	-		
Octachlorodibenzo-p-dioxin (OCDD)	-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	-		

TABLE B-AL23
ANALYTICAL RESULTS FOR GRID AL23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AL23		
Sample Name	P3IF-SS-IS-SO-AL623		
Date Collected	June 21, 2023		
	Result	LOD	Qual
Metals (mg/kg)			
Aluminum	25000	4	
Antimony	0.15	0.15	U
Arsenic	1.2	0.3	
Barium	140	0.2	
Beryllium	0.6	0.3	J
Cadmium	0.66	0.08	
Calcium (Ca)	3700	15	
Chromium	17	0.2	
Cobalt	6.3	0.08	
Copper	96	0.2	
Iron (Fe)	13000	8	
Lead	16	0.05	
Magnesium (Mg)	11000	5	
Manganese (Mn)	330	0.08	
Mercury	0.029	0.04	J
Nickel	11	0.2	
Potassium (K)	1300	8	
Selenium	1.1	0.1	
Silver	0.15	0.05	
Sodium (Na)	82	8	
Thallium	0.051	0.05	J
Vanadium	22	0.1	
Zinc	50	1.5	
Other Parameters (mg/kg)			
Cyanide (CN-)	-		
Nitrate	-		
Perchlorate	-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-AL24
ANALYTICAL RESULTS FOR GRID AL24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AL24			AL24			AL24		
Sample Name	P3IF-BA-GRID-AL024			P3IF-SS-IS-SO-AL024			P3IF-SS-IS-SO-AL524		
Date Collected	June 22, 2023			June 22, 2023			June 22, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)									
1,1,1,2-Tetrachloroethane	0.002	0.002	UJ	-			-		
1,1,1-Trichloroethane	0.002	0.002	U	-			-		
1,1,2,2-Tetrachloroethane	0.002	0.002	U	-			-		
1,1,2-Trichloroethane	0.002	0.002	U	-			-		
1,1-Dichloroethane	0.002	0.002	U	-			-		
1,1-Dichloroethene	0.002	0.002	U	-			-		
1,1-Dichloropropene	0.002	0.002	U	-			-		
1,2,3-Trichlorobenzene	0.002	0.002	U	-			-		
1,2,3-Trichloropropane	0.005	0.005	U	-			-		
1,2,4-Trichlorobenzene	0.002	0.002	U	-			-		
1,2,4-Trimethylbenzene	0.002	0.002	U	-			-		
1,2-Dibromo-3-chloropropane	0.005	0.005	U	-			-		
1,2-Dibromoethane	0.002	0.002	UJ	-			-		
1,2-Dichlorobenzene	0.002	0.002	U	-			-		
1,2-Dichloroethane	0.002	0.002	U	-			-		
1,2-Dichloropropane	0.002	0.002	U	-			-		
1,3,5-Trimethylbenzene	0.002	0.002	U	-			-		
1,3-Dichlorobenzene	0.002	0.002	U	-			-		
1,3-Dichloropropane	0.002	0.002	U	-			-		
1,4-Dichlorobenzene	0.002	0.002	U	-			-		
2,2-Dichloropropane	0.002	0.002	U	-			-		
2-Butanone	0.003	0.003	U	-			-		
2-Chlorotoluene	0.002	0.002	U	-			-		
2-Hexanone	0.002	0.002	U	-			-		
4-Chlorotoluene	0.002	0.002	U	-			-		
4-Methyl-2-pentanone	0.002	0.002	U	-			-		
Acetone	0.1	0.005		-			-		
Benzene	0.002	0.002	U	-			-		
Bromobenzene	0.002	0.002	U	-			-		
Bromochloromethane	0.002	0.002	U	-			-		
Bromodichloromethane	0.002	0.002	U	-			-		
Bromoform	0.002	0.002	UJ	-			-		
Bromomethane	0.002	0.002	U	-			-		
Carbon disulfide	0.002	0.002	U	-			-		
Carbon tetrachloride	0.002	0.002	U	-			-		
Chlorobenzene	0.002	0.002	UJ	-			-		
Chloroethane	0.002	0.002	U	-			-		
Chloroform	0.002	0.002	U	-			-		
Chloromethane	0.005	0.005	U	-			-		
cis-1,2-Dichloroethene	0.002	0.002	U	-			-		
cis-1,3-Dichloropropene	0.002	0.002	U	-			-		
Dibromochloromethane	0.002	0.002	UJ	-			-		
Dibromomethane	0.002	0.002	U	-			-		
Dichlorodifluoromethane	0.002	0.002	U	-			-		
Ethylbenzene	0.002	0.002	UJ	-			-		
Hexachlorobutadiene	0.002	0.002	U	-			-		
Isopropylbenzene	0.002	0.002	U	-			-		
m+p-Xylene	0.005	0.005	UJ	-			-		
Methyl Tertiary Butyl Ether	0.002	0.002	U	-			-		
Methylene chloride	0.01	0.01	U	-			-		
n-Butylbenzene	0.002	0.002	U	-			-		
n-Propylbenzene	0.002	0.002	U	-			-		
Naphthalene	0.002	0.002	U	-			-		
o-Xylene	0.0025	0.0025	UJ	-			-		
4-Isopropyltoluene	0.002	0.002	U	-			-		
sec-Butylbenzene	0.002	0.002	U	-			-		
Styrene	0.002	0.002	UJ	-			-		
tert-Butylbenzene	0.002	0.002	U	-			-		
Tetrachloroethene	0.002	0.002	UJ	-			-		
Toluene	0.002	0.002	U	-			-		
trans-1,2-Dichloroethene	0.002	0.002	U	-			-		
trans-1,3-Dichloropropene	0.002	0.002	U	-			-		
Trichloroethene	0.002	0.002	U	-			-		
Trichlorofluoromethane	0.002	0.002	U	-			-		
Vinyl chloride	0.002	0.002	U	-			-		
Semivolatile Organic Compounds (mg/kg)									
1,2,4-Trichlorobenzene	0.17	0.17	UJ	-			-		
1,2-Dichlorobenzene	0.17	0.17	UJ	-			-		
1,3-Dichlorobenzene	0.17	0.17	UJ	-			-		
1,4-Dichlorobenzene	0.17	0.17	UJ	-			-		
2,4,5-Trichlorophenol	0.17	0.17	UJ	-			-		
2,4,6-Trichlorophenol	0.17	0.17	UJ	-			-		
2,4-Dichlorophenol	0.17	0.17	UJ	-			-		
2,4-Dimethylphenol	0.17	0.17	UJ	-			-		
2,4-Dinitrophenol	0.17	0.17	UJ	-			-		
2,4-Dinitrotoluene	0.17	0.17	UJ	-			-		
2,6-Dinitrotoluene	0.17	0.17	UJ	-			-		
2-Chloronaphthalene	0.17	0.17	UJ	-			-		
2-Chlorophenol	0.17	0.17	UJ	-			-		
2-Methylnaphthalene	0.17	0.17	UJ	-			-		
2-Methylphenol	0.17	0.17	UJ	-			-		
2-Nitroaniline	0.17	0.17	UJ	-			-		
2-Nitrophenol	0.17	0.17	UJ	-			-		
3,3-Dichlorobenzidine	0.17	0.17	UJ	-			-		
3-Nitroaniline	0.17	0.17	UJ	-			-		
4,6-Dinitro-2-methylphenol	0.17	0.17	UJ	-			-		
4-Bromophenyl-phenylether	0.17	0.17	UJ	-			-		
4-Chloro-3-methylphenol	0.17	0.17	UJ	-			-		
4-Chloroaniline	0.17	0.17	UJ	-			-		

TABLE B-AL24
ANALYTICAL RESULTS FOR GRID AL24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AL24			AL24			AL24		
Sample Name	P3IF-BA-GRID-AL024			P3IF-SS-IS-SO-AL024			P3IF-SS-IS-SO-AL524		
Date Collected	June 22, 2023			June 22, 2023			June 22, 2023		
Semivolatile Organic Compounds (mg/kg), continued									
4-Chlorophenyl-phenylether	0.17	0.17	UJ	-			-		
4-Nitroaniline	0.17	0.17	UJ	-			-		
4-Nitrophenol	0.17	0.17	UJ	-			-		
Acenaphthene	0.17	0.17	UJ	-			-		
Acenaphthylene	0.17	0.17	UJ	-			-		
Anthracene	0.17	0.17	UJ	-			-		
Benzo(a)anthracene	0.17	0.17	UJ	-			-		
Benzo(a)pyrene	0.13	0.13	UJ	-			-		
Benzo(b)fluoranthene	0.17	0.17	UJ	-			-		
Benzo(g,h,i)perylene	0.17	0.17	UJ	-			-		
Benzo(k)fluoranthene	0.17	0.17	UJ	-			-		
Benzoic acid	0.17	0.17	UJ	-			-		
Benzyl Alcohol	0.17	0.17	UJ	-			-		
Bis(2-chloro-1-methylethyl) ether	0.17	0.17	UJ	-			-		
Bis(2-chloroethoxy)methane	0.17	0.17	UJ	-			-		
Bis(2-chloroethyl)ether	0.17	0.17	UJ	-			-		
Bis(2-ethylhexyl)phthalate	0.17	0.17	UJ	-			-		
Butyl benzyl phthalate	0.17	0.17	UJ	-			-		
Carbazole	0.17	0.17	UJ	-			-		
Chrysene	0.17	0.17	UJ	-			-		
Di-n-butyl phthalate	0.17	0.17	UJ	-			-		
Di-n-octyl phthalate	0.17	0.17	UJ	-			-		
Dibenz(a,h)anthracene	0.13	0.13	UJ	-			-		
Dibenzofuran	0.17	0.17	UJ	-			-		
Diethyl phthalate	0.17	0.17	UJ	-			-		
Dimethyl phthalate	0.17	0.17	UJ	-			-		
Fluoranthene	0.17	0.17	UJ	-			-		
Fluorene	0.17	0.17	UJ	-			-		
Hexachlorobenzene	0.17	0.17	UJ	-			-		
Hexachlorobutadiene	0.17	0.17	UJ	-			-		
Hexachloroethane	0.17	0.17	UJ	-			-		
Indeno(1,2,3-cd)pyrene	0.17	0.17	UJ	-			-		
Isophorone	0.17	0.17	UJ	-			-		
n-Nitroso-di-n-propylamine	0.17	0.17	UJ	-			-		
n-Nitrosodimethylamine	0.02	0.02	UJ	-			-		
n-Nitrosodiphenylamine	0.17	0.17	UJ	-			-		
Naphthalene	0.17	0.17	UJ	-			-		
Nitrobenzene	0.17	0.17	UJ	-			-		
Pentachlorophenol	0.17	0.17	UJ	-			-		
Phenanthrene	0.17	0.17	UJ	-			-		
Phenol	0.17	0.17	UJ	-			-		
Pyrene	0.17	0.17	UJ	-			-		
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
1,3-Dinitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,4,6-Trinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,4-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,6-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
3-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
4-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	-			0.075	0.075	UJ	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	-			0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
Nitroglycerin	-			0.15	0.15	UJ	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	-			0.075	0.075	UJ	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	-			0.25	0.25	UJ	0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)									
Aroclor 1016	0.019	0.019	U	-			-		
Aroclor 1221	0.019	0.019	U	-			-		
Aroclor 1232	0.0094	0.0094	U	-			-		
Aroclor 1242	0.0094	0.0094	U	-			-		
Aroclor 1248	0.0094	0.0094	U	-			-		
Aroclor 1254	0.0094	0.0094	U	-			-		
Aroclor 1260	0.0094	0.0094	U	-			-		
Dioxins/Furans (mg/kg)									
Octachlorodibenzofuran (OCDF)	0.00000017	0.00000017	U	-			-		
Octachlorodibenzo-p-dioxin (OCDD)	0.000004	0.000004	J	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.000000033	0.000000033	U	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	0.0000005	0.0000005	U	-			-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.00000015	0.00000015	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000051	0.000000051	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000014	0.00000014	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000047	0.000000047	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000013	0.00000013	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.000000062	0.000000062	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000017	0.00000017	U	-			-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000013	0.00000013	U	-			-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.000000046	0.000000046	U	-			-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000052	0.000000052	U	-			-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000013	0.00000013	U	-			-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.00000016	0.00000016	U	-			-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.000000073	0.000000073	U	-			-		

TABLE B-AL24
ANALYTICAL RESULTS FOR GRID AL24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AL24			AL24			AL24		
Sample Name	P3IF-BA-GRID-AL024			P3IF-SS-IS-SO-AL024			P3IF-SS-IS-SO-AL524		
Date Collected	June 22, 2023			June 22, 2023			June 22, 2023		
Metals (mg/kg)									
Aluminum	-			24000	4	J	20000	4	J
Antimony	-			0.15	0.15	U	0.15	0.15	U
Arsenic	-			1.2	0.3		1	0.3	
Barium	-			120	0.2		130	0.2	
Beryllium	-			0.42	0.3	J	0.43	0.3	J
Cadmium	-			0.55	0.08		0.43	0.08	
Calcium (Ca)	-			2200	15		2300	15	
Chromium	-			15	0.2		13	0.2	
Cobalt	-			5.7	0.08		5.3	0.08	
Copper	-			63	0.2		53	0.2	
Iron (Fe)	-			11000	8		11000	8	
Lead	-			14	0.05		13	0.05	
Magnesium (Mg)	-			10000	5		8900	5	
Manganese (Mn)	-			290	0.08		280	0.08	
Mercury	-			0.022	0.04	J	0.02	0.039	J
Nickel	-			10	0.2		9.2	0.2	
Potassium (K)	-			940	8		800	8	
Selenium	-			1.1	0.1		0.88	0.1	
Silver	-			0.12	0.05		0.082	0.05	J
Sodium (Na)	-			78	8		73	8	
Thallium	-			0.052	0.05	J	0.041	0.05	J
Vanadium	-			22	0.1		19	0.1	
Zinc	-			40	1.5		34	1.5	
Other Parameters (mg/kg)									
Cyanide (CN-)	0.31	0.31	U	-			-		
Nitrate	1.8	2.1	J	-			-		
Perchlorate	0.002	0.002	UJ	-			-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-AL24
ANALYTICAL RESULTS FOR GRID AL24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AL24		
Sample Name	P3IF-SS-IS-SO-AL624		
Date Collected	June 22, 2023		
	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)			
1,1,1,2-Tetrachloroethane	-		
1,1,1-Trichloroethane	-		
1,1,2,2-Tetrachloroethane	-		
1,1,2-Trichloroethane	-		
1,1-Dichloroethane	-		
1,1-Dichloroethene	-		
1,1-Dichloropropene	-		
1,2,3-Trichlorobenzene	-		
1,2,3-Trichloropropane	-		
1,2,4-Trichlorobenzene	-		
1,2,4-Trimethylbenzene	-		
1,2-Dibromo-3-chloropropane	-		
1,2-Dibromoethane	-		
1,2-Dichlorobenzene	-		
1,2-Dichloroethane	-		
1,2-Dichloropropane	-		
1,3,5-Trimethylbenzene	-		
1,3-Dichlorobenzene	-		
1,3-Dichloropropane	-		
1,4-Dichlorobenzene	-		
2,2-Dichloropropane	-		
2-Butanone	-		
2-Chlorotoluene	-		
2-Hexanone	-		
4-Chlorotoluene	-		
4-Methyl-2-pentanone	-		
Acetone	-		
Benzene	-		
Bromobenzene	-		
Bromochloromethane	-		
Bromodichloromethane	-		
Bromoform	-		
Bromomethane	-		
Carbon disulfide	-		
Carbon tetrachloride	-		
Chlorobenzene	-		
Chloroethane	-		
Chloroform	-		
Chloromethane	-		
cis-1,2-Dichloroethene	-		
cis-1,3-Dichloropropene	-		
Dibromochloromethane	-		
Dibromomethane	-		
Dichlorodifluoromethane	-		
Ethylbenzene	-		
Hexachlorobutadiene	-		
Isopropylbenzene	-		
m+p-Xylene	-		
Methyl Tertiary Butyl Ether	-		
Methylene chloride	-		
n-Butylbenzene	-		
n-Propylbenzene	-		
Naphthalene	-		
o-Xylene	-		
4-Isopropyltoluene	-		
sec-Butylbenzene	-		
Styrene	-		
tert-Butylbenzene	-		
Tetrachloroethene	-		
Toluene	-		
trans-1,2-Dichloroethene	-		
trans-1,3-Dichloropropene	-		
Trichloroethene	-		
Trichlorofluoromethane	-		
Vinyl chloride	-		
Semivolatile Organic Compounds (mg/kg)			
1,2,4-Trichlorobenzene	-		
1,2-Dichlorobenzene	-		
1,3-Dichlorobenzene	-		
1,4-Dichlorobenzene	-		
2,4,5-Trichlorophenol	-		
2,4,6-Trichlorophenol	-		
2,4-Dichlorophenol	-		
2,4-Dimethylphenol	-		
2,4-Dinitrophenol	-		
2,4-Dinitrotoluene	-		
2,6-Dinitrotoluene	-		
2-Chloronaphthalene	-		
2-Chlorophenol	-		
2-Methylnaphthalene	-		
2-Methylphenol	-		
2-Nitroaniline	-		
2-Nitrophenol	-		
3,3-Dichlorobenzidine	-		
3-Nitroaniline	-		
4,6-Dinitro-2-methylphenol	-		
4-Bromophenyl-phenylether	-		
4-Chloro-3-methylphenol	-		
4-Chloroaniline	-		

TABLE B-AL24
ANALYTICAL RESULTS FOR GRID AL24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AL24		
Sample Name	P3IF-SS-IS-SO-AL624		
Date Collected	June 22, 2023		
Semivolatile Organic Compounds (mg/kg), continued			
4-Chlorophenyl-phenylether	-		
4-Nitroaniline	-		
4-Nitrophenol	-		
Acenaphthene	-		
Acenaphthylene	-		
Anthracene	-		
Benzo(a)anthracene	-		
Benzo(a)pyrene	-		
Benzo(b)fluoranthene	-		
Benzo(g,h,i)perylene	-		
Benzo(k)fluoranthene	-		
Benzoic acid	-		
Benzyl Alcohol	-		
Bis(2-chloro-1-methylethyl) ether	-		
Bis(2-chloroethoxy)methane	-		
Bis(2-chloroethyl)ether	-		
Bis(2-ethylhexyl)phthalate	-		
Butyl benzyl phthalate	-		
Carbazole	-		
Chrysene	-		
Di-n-butyl phthalate	-		
Di-n-octyl phthalate	-		
Dibenz(a,h)anthracene	-		
Dibenzofuran	-		
Diethyl phthalate	-		
Dimethyl phthalate	-		
Fluoranthene	-		
Fluorene	-		
Hexachlorobenzene	-		
Hexachlorobutadiene	-		
Hexachloroethane	-		
Indeno(1,2,3-cd)pyrene	-		
Isophorone	-		
n-Nitroso-di-n-propylamine	-		
n-Nitrosodimethylamine	-		
n-Nitrosodiphenylamine	-		
Naphthalene	-		
Nitrobenzene	-		
Pentachlorophenol	-		
Phenanthrene	-		
Phenol	-		
Pyrene	-		
Explosives (mg/kg)			
1,3,5-Trinitrobenzene	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	UJ
2,4,6-Trinitrotoluene	0.075	0.075	UJ
2,4-Dinitrotoluene	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	UJ
2-Nitrotoluene	0.075	0.075	UJ
3-Nitrotoluene	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	0.075	0.075	UJ
4-Nitrotoluene	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	UJ
Nitroglycerin	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)			
Aroclor 1016	-		
Aroclor 1221	-		
Aroclor 1232	-		
Aroclor 1242	-		
Aroclor 1248	-		
Aroclor 1254	-		
Aroclor 1260	-		
Dioxins/Furans (mg/kg)			
Octachlorodibenzofuran (OCDF)	-		
Octachlorodibenzo-p-dioxin (OCDD)	-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	-		

TABLE B-AL24
ANALYTICAL RESULTS FOR GRID AL24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AL24		
Sample Name	P3IF-SS-IS-SO-AL624		
Date Collected	June 22, 2023		
Metals (mg/kg)			
Aluminum	22000	4	J
Antimony	0.15	0.15	UJ
Arsenic	1.1	0.3	J
Barium	120	0.2	
Beryllium	0.42	0.3	J
Cadmium	0.5	0.08	
Calcium (Ca)	2200	15	J
Chromium	15	0.2	J
Cobalt	5.5	0.08	J
Copper	58	0.2	J
Iron (Fe)	11000	8	
Lead	13	0.05	J
Magnesium (Mg)	9800	5	
Manganese (Mn)	280	0.08	
Mercury	0.021	0.04	J
Nickel	9.9	0.2	J
Potassium (K)	950	8	J
Selenium	0.96	0.1	J
Silver	0.11	0.05	
Sodium (Na)	76	8	
Thallium	0.046	0.05	J
Vanadium	20	0.1	J
Zinc	37	1.5	J
Other Parameters (mg/kg)			
Cyanide (CN-)	-		
Nitrate	-		
Perchlorate	-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-AL25
ANALYTICAL RESULTS FOR GRID AL25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AL25			AL25			AL25		
Sample Name	P3IF-BA-GRID-AL025			P3IF-SS-IS-SO-AL025			P3IF-SS-IS-SO-AL525		
Date Collected	June 22, 2023			June 22, 2023			June 22, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)									
1,1,1,2-Tetrachloroethane	0.0023	0.0023	U	-			-		
1,1,1-Trichloroethane	0.0023	0.0023	U	-			-		
1,1,2,2-Tetrachloroethane	0.0023	0.0023	U	-			-		
1,1,2-Trichloroethane	0.0023	0.0023	U	-			-		
1,1-Dichloroethane	0.0023	0.0023	U	-			-		
1,1-Dichloroethene	0.0023	0.0023	U	-			-		
1,1-Dichloropropene	0.0023	0.0023	U	-			-		
1,2,3-Trichlorobenzene	0.0023	0.0023	U	-			-		
1,2,3-Trichloropropane	0.0058	0.0058	U	-			-		
1,2,4-Trichlorobenzene	0.0023	0.0023	U	-			-		
1,2,4-Trimethylbenzene	0.0023	0.0023	U	-			-		
1,2-Dibromo-3-chloropropane	0.0058	0.0058	U	-			-		
1,2-Dibromoethane	0.0023	0.0023	U	-			-		
1,2-Dichlorobenzene	0.0023	0.0023	U	-			-		
1,2-Dichloroethane	0.0023	0.0023	U	-			-		
1,2-Dichloropropane	0.0023	0.0023	U	-			-		
1,3,5-Trimethylbenzene	0.0023	0.0023	U	-			-		
1,3-Dichlorobenzene	0.0023	0.0023	U	-			-		
1,3-Dichloropropane	0.0023	0.0023	U	-			-		
1,4-Dichlorobenzene	0.0023	0.0023	U	-			-		
2,2-Dichloropropane	0.0023	0.0023	U	-			-		
2-Butanone	0.0035	0.0035	U	-			-		
2-Chlorotoluene	0.0023	0.0023	U	-			-		
2-Hexanone	0.0023	0.0023	U	-			-		
4-Chlorotoluene	0.0023	0.0023	U	-			-		
4-Methyl-2-pentanone	0.0023	0.0023	U	-			-		
Acetone	0.13	0.0058		-			-		
Benzene	0.0023	0.0023	U	-			-		
Bromobenzene	0.0023	0.0023	U	-			-		
Bromochloromethane	0.0023	0.0023	U	-			-		
Bromodichloromethane	0.0023	0.0023	U	-			-		
Bromoform	0.0023	0.0023	U	-			-		
Bromomethane	0.0023	0.0023	U	-			-		
Carbon disulfide	0.0023	0.0023	U	-			-		
Carbon tetrachloride	0.0023	0.0023	U	-			-		
Chlorobenzene	0.0023	0.0023	U	-			-		
Chloroethane	0.0023	0.0023	U	-			-		
Chloroform	0.0023	0.0023	U	-			-		
Chloromethane	0.0058	0.0058	U	-			-		
cis-1,2-Dichloroethene	0.0023	0.0023	U	-			-		
cis-1,3-Dichloropropene	0.0023	0.0023	U	-			-		
Dibromochloromethane	0.0023	0.0023	U	-			-		
Dibromomethane	0.0023	0.0023	U	-			-		
Dichlorodifluoromethane	0.0023	0.0023	U	-			-		
Ethylbenzene	0.0023	0.0023	U	-			-		
Hexachlorobutadiene	0.0023	0.0023	U	-			-		
Isopropylbenzene	0.0023	0.0023	U	-			-		
m+p-Xylene	0.0058	0.0058	U	-			-		
Methyl Tertiary Butyl Ether	0.0023	0.0023	U	-			-		
Methylene chloride	0.012	0.012	U	-			-		
n-Butylbenzene	0.0023	0.0023	U	-			-		
n-Propylbenzene	0.0023	0.0023	U	-			-		
Naphthalene	0.0023	0.0023	U	-			-		
o-Xylene	0.0029	0.0029	U	-			-		
4-Isopropyltoluene	0.0023	0.0023	U	-			-		
sec-Butylbenzene	0.0023	0.0023	U	-			-		
Styrene	0.0023	0.0023	U	-			-		
tert-Butylbenzene	0.0023	0.0023	U	-			-		
Tetrachloroethene	0.0023	0.0023	U	-			-		
Toluene	0.0023	0.0023	U	-			-		
trans-1,2-Dichloroethene	0.0023	0.0023	U	-			-		
trans-1,3-Dichloropropene	0.0023	0.0023	U	-			-		
Trichloroethene	0.0023	0.0023	U	-			-		
Trichlorofluoromethane	0.0023	0.0023	U	-			-		
Vinyl chloride	0.0023	0.0023	U	-			-		
Semivolatile Organic Compounds (mg/kg)									
1,2,4-Trichlorobenzene	0.17	0.17	UJ	-			-		
1,2-Dichlorobenzene	0.17	0.17	UJ	-			-		
1,3-Dichlorobenzene	0.17	0.17	UJ	-			-		
1,4-Dichlorobenzene	0.17	0.17	UJ	-			-		
2,4,5-Trichlorophenol	0.17	0.17	UJ	-			-		
2,4,6-Trichlorophenol	0.17	0.17	UJ	-			-		
2,4-Dichlorophenol	0.17	0.17	UJ	-			-		
2,4-Dimethylphenol	0.17	0.17	UJ	-			-		
2,4-Dinitrophenol	0.17	0.17	UJ	-			-		
2,4-Dinitrotoluene	0.17	0.17	UJ	-			-		
2,6-Dinitrotoluene	0.17	0.17	UJ	-			-		
2-Chloronaphthalene	0.17	0.17	UJ	-			-		
2-Chlorophenol	0.17	0.17	UJ	-			-		
2-Methylnaphthalene	0.17	0.17	UJ	-			-		
2-Methylphenol	0.17	0.17	UJ	-			-		
2-Nitroaniline	0.17	0.17	UJ	-			-		
2-Nitrophenol	0.17	0.17	UJ	-			-		
3,3-Dichlorobenzidine	0.17	0.17	UJ	-			-		
3-Nitroaniline	0.17	0.17	UJ	-			-		
4,6-Dinitro-2-methylphenol	0.17	0.17	UJ	-			-		
4-Bromophenyl-phenylether	0.17	0.17	UJ	-			-		
4-Chloro-3-methylphenol	0.17	0.17	UJ	-			-		
4-Chloroaniline	0.17	0.17	UJ	-			-		

TABLE B-AL25
ANALYTICAL RESULTS FOR GRID AL25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AL25			AL25			AL25		
Sample Name	P3IF-BA-GRID-AL025			P3IF-SS-IS-SO-AL025			P3IF-SS-IS-SO-AL525		
Date Collected	June 22, 2023			June 22, 2023			June 22, 2023		
Semivolatile Organic Compounds (mg/kg), continued									
4-Chlorophenyl-phenylether	0.17	0.17	UJ	-			-		
4-Nitroaniline	0.17	0.17	UJ	-			-		
4-Nitrophenol	0.17	0.17	UJ	-			-		
Acenaphthene	0.17	0.17	UJ	-			-		
Acenaphthylene	0.17	0.17	UJ	-			-		
Anthracene	0.17	0.17	UJ	-			-		
Benzo(a)anthracene	0.17	0.17	UJ	-			-		
Benzo(a)pyrene	0.13	0.13	UJ	-			-		
Benzo(b)fluoranthene	0.17	0.17	UJ	-			-		
Benzo(g,h,i)perylene	0.17	0.17	UJ	-			-		
Benzo(k)fluoranthene	0.17	0.17	UJ	-			-		
Benzoic acid	0.17	0.17	UJ	-			-		
Benzyl Alcohol	0.17	0.17	UJ	-			-		
Bis(2-chloro-1-methylethyl) ether	0.17	0.17	UJ	-			-		
Bis(2-chloroethoxy)methane	0.17	0.17	UJ	-			-		
Bis(2-chloroethyl)ether	0.17	0.17	UJ	-			-		
Bis(2-ethylhexyl)phthalate	0.17	0.17	UJ	-			-		
Butyl benzyl phthalate	0.17	0.17	UJ	-			-		
Carbazole	0.17	0.17	UJ	-			-		
Chrysene	0.17	0.17	UJ	-			-		
Di-n-butyl phthalate	0.17	0.17	UJ	-			-		
Di-n-octyl phthalate	0.17	0.17	UJ	-			-		
Dibenz(a,h)anthracene	0.13	0.13	UJ	-			-		
Dibenzofuran	0.17	0.17	UJ	-			-		
Diethyl phthalate	0.17	0.17	UJ	-			-		
Dimethyl phthalate	0.17	0.17	UJ	-			-		
Fluoranthene	0.17	0.17	UJ	-			-		
Fluorene	0.17	0.17	UJ	-			-		
Hexachlorobenzene	0.17	0.17	UJ	-			-		
Hexachlorobutadiene	0.17	0.17	UJ	-			-		
Hexachloroethane	0.17	0.17	UJ	-			-		
Indeno(1,2,3-cd)pyrene	0.17	0.17	UJ	-			-		
Isophorone	0.17	0.17	UJ	-			-		
n-Nitroso-di-n-propylamine	0.17	0.17	UJ	-			-		
n-Nitrosodimethylamine	0.02	0.02	UJ	-			-		
n-Nitrosodiphenylamine	0.17	0.17	UJ	-			-		
Naphthalene	0.17	0.17	UJ	-			-		
Nitrobenzene	0.17	0.17	UJ	-			-		
Pentachlorophenol	0.17	0.17	UJ	-			-		
Phenanthrene	0.17	0.17	UJ	-			-		
Phenol	0.17	0.17	UJ	-			-		
Pyrene	0.17	0.17	UJ	-			-		
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
1,3-Dinitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,4,6-Trinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,4-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,6-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
3-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
4-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	-			0.075	0.075	UJ	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	-			0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
Nitroglycerin	-			0.15	0.15	UJ	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	-			0.075	0.075	UJ	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	-			0.25	0.25	UJ	0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)									
Aroclor 1016	0.019	0.019	U	-			-		
Aroclor 1221	0.019	0.019	U	-			-		
Aroclor 1232	0.0095	0.0095	U	-			-		
Aroclor 1242	0.0095	0.0095	U	-			-		
Aroclor 1248	0.0095	0.0095	U	-			-		
Aroclor 1254	0.0095	0.0095	U	-			-		
Aroclor 1260	0.0095	0.0095	U	-			-		
Dioxins/Furans (mg/kg)									
Octachlorodibenzofuran (OCDF)	0.0000003	0.0000003	U	-			-		
Octachlorodibenzo-p-dioxin (OCDD)	0.000014	0.000014	J	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.00000024	0.00000024	J	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	0.0000012	0.0000012	U	-			-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.000000045	0.000000045	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000054	0.000000054	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000005	0.00000005	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000064	0.000000064	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000045	0.000000045	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.000000085	0.000000085	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000009	0.00000009	U	-			-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000017	0.00000017	U	-			-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.00000016	0.00000016	U	-			-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000059	0.000000059	U	-			-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000018	0.00000018	U	-			-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.00000015	0.00000015	U	-			-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.000000071	0.000000071	U	-			-		

TABLE B-AL25
ANALYTICAL RESULTS FOR GRID AL25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AL25			AL25			AL25		
Sample Name	P3IF-BA-GRID-AL025			P3IF-SS-IS-SO-AL025			P3IF-SS-IS-SO-AL525		
Date Collected	June 22, 2023			June 22, 2023			June 22, 2023		
Metals (mg/kg)									
Aluminum	-			21000	4	J	22000	4	J
Antimony	-			0.089	0.15	J	0.15	0.15	U
Arsenic	-			1.2	0.3		1.1	0.3	
Barium	-			130	0.2		140	0.2	
Beryllium	-			0.37	0.3	J	0.39	0.3	J
Cadmium	-			0.45	0.08		0.66	0.08	
Calcium (Ca)	-			2800	15		3000	15	
Chromium	-			13	0.2		14	0.2	
Cobalt	-			5.2	0.08		5.4	0.08	
Copper	-			57	0.2		64	0.2	
Iron (Fe)	-			10000	8		10000	8	
Lead	-			13	0.05		14	0.05	
Magnesium (Mg)	-			9200	5		9500	5	
Manganese (Mn)	-			220	0.08		230	0.08	
Mercury	-			0.025	0.04	J	0.024	0.04	J
Nickel	-			9.3	0.2		10	0.2	
Potassium (K)	-			970	8		1000	8	
Selenium	-			0.8	0.1		0.84	0.1	
Silver	-			0.09	0.05	J	0.099	0.05	J
Sodium (Na)	-			75	8		76	8	
Thallium	-			0.05	0.05	J	0.051	0.05	J
Vanadium	-			20	0.1		20	0.1	
Zinc	-			39	1.5		40	1.5	
Other Parameters (mg/kg)									
Cyanide (CN-)	0.32	0.32	U	-			-		
Nitrate	8.1	2.1	J	-			-		
Perchlorate	0.0019	0.0019	UJ	-			-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-AL25
ANALYTICAL RESULTS FOR GRID AL25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AL25		
Sample Name	P3IF-SS-IS-SO-AL625		
Date Collected	June 22, 2023		
	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)			
1,1,1,2-Tetrachloroethane	-		
1,1,1-Trichloroethane	-		
1,1,2,2-Tetrachloroethane	-		
1,1,2-Trichloroethane	-		
1,1-Dichloroethane	-		
1,1-Dichloroethene	-		
1,1-Dichloropropene	-		
1,2,3-Trichlorobenzene	-		
1,2,3-Trichloropropane	-		
1,2,4-Trichlorobenzene	-		
1,2,4-Trimethylbenzene	-		
1,2-Dibromo-3-chloropropane	-		
1,2-Dibromoethane	-		
1,2-Dichlorobenzene	-		
1,2-Dichloroethane	-		
1,2-Dichloropropane	-		
1,3,5-Trimethylbenzene	-		
1,3-Dichlorobenzene	-		
1,3-Dichloropropane	-		
1,4-Dichlorobenzene	-		
2,2-Dichloropropane	-		
2-Butanone	-		
2-Chlorotoluene	-		
2-Hexanone	-		
4-Chlorotoluene	-		
4-Methyl-2-pentanone	-		
Acetone	-		
Benzene	-		
Bromobenzene	-		
Bromochloromethane	-		
Bromodichloromethane	-		
Bromoform	-		
Bromomethane	-		
Carbon disulfide	-		
Carbon tetrachloride	-		
Chlorobenzene	-		
Chloroethane	-		
Chloroform	-		
Chloromethane	-		
cis-1,2-Dichloroethene	-		
cis-1,3-Dichloropropene	-		
Dibromochloromethane	-		
Dibromomethane	-		
Dichlorodifluoromethane	-		
Ethylbenzene	-		
Hexachlorobutadiene	-		
Isopropylbenzene	-		
m+p-Xylene	-		
Methyl Tertiary Butyl Ether	-		
Methylene chloride	-		
n-Butylbenzene	-		
n-Propylbenzene	-		
Naphthalene	-		
o-Xylene	-		
4-Isopropyltoluene	-		
sec-Butylbenzene	-		
Styrene	-		
tert-Butylbenzene	-		
Tetrachloroethene	-		
Toluene	-		
trans-1,2-Dichloroethene	-		
trans-1,3-Dichloropropene	-		
Trichloroethene	-		
Trichlorofluoromethane	-		
Vinyl chloride	-		
Semivolatile Organic Compounds (mg/kg)			
1,2,4-Trichlorobenzene	-		
1,2-Dichlorobenzene	-		
1,3-Dichlorobenzene	-		
1,4-Dichlorobenzene	-		
2,4,5-Trichlorophenol	-		
2,4,6-Trichlorophenol	-		
2,4-Dichlorophenol	-		
2,4-Dimethylphenol	-		
2,4-Dinitrophenol	-		
2,4-Dinitrotoluene	-		
2,6-Dinitrotoluene	-		
2-Chloronaphthalene	-		
2-Chlorophenol	-		
2-Methylnaphthalene	-		
2-Methylphenol	-		
2-Nitroaniline	-		
2-Nitrophenol	-		
3,3-Dichlorobenzidine	-		
3-Nitroaniline	-		
4,6-Dinitro-2-methylphenol	-		
4-Bromophenyl-phenylether	-		
4-Chloro-3-methylphenol	-		
4-Chloroaniline	-		

TABLE B-AL25
ANALYTICAL RESULTS FOR GRID AL25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AL25		
Sample Name	P3IF-SS-IS-SO-AL625		
Date Collected	June 22, 2023		
Semivolatile Organic Compounds (mg/kg), continued			
4-Chlorophenyl-phenylether	-		
4-Nitroaniline	-		
4-Nitrophenol	-		
Acenaphthene	-		
Acenaphthylene	-		
Anthracene	-		
Benzo(a)anthracene	-		
Benzo(a)pyrene	-		
Benzo(b)fluoranthene	-		
Benzo(g,h,i)perylene	-		
Benzo(k)fluoranthene	-		
Benzoic acid	-		
Benzyl Alcohol	-		
Bis(2-chloro-1-methylethyl) ether	-		
Bis(2-chloroethoxy)methane	-		
Bis(2-chloroethyl)ether	-		
Bis(2-ethylhexyl)phthalate	-		
Butyl benzyl phthalate	-		
Carbazole	-		
Chrysene	-		
Di-n-butyl phthalate	-		
Di-n-octyl phthalate	-		
Dibenz(a,h)anthracene	-		
Dibenzofuran	-		
Diethyl phthalate	-		
Dimethyl phthalate	-		
Fluoranthene	-		
Fluorene	-		
Hexachlorobenzene	-		
Hexachlorobutadiene	-		
Hexachloroethane	-		
Indeno(1,2,3-cd)pyrene	-		
Isophorone	-		
n-Nitroso-di-n-propylamine	-		
n-Nitrosodimethylamine	-		
n-Nitrosodiphenylamine	-		
Naphthalene	-		
Nitrobenzene	-		
Pentachlorophenol	-		
Phenanthrene	-		
Phenol	-		
Pyrene	-		
Explosives (mg/kg)			
1,3,5-Trinitrobenzene	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	UJ
2,4,6-Trinitrotoluene	0.075	0.075	UJ
2,4-Dinitrotoluene	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	UJ
2-Nitrotoluene	0.075	0.075	UJ
3-Nitrotoluene	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	0.075	0.075	UJ
4-Nitrotoluene	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	UJ
Nitroglycerin	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)			
Aroclor 1016	-		
Aroclor 1221	-		
Aroclor 1232	-		
Aroclor 1242	-		
Aroclor 1248	-		
Aroclor 1254	-		
Aroclor 1260	-		
Dioxins/Furans (mg/kg)			
Octachlorodibenzofuran (OCDF)	-		
Octachlorodibenzo-p-dioxin (OCDD)	-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	-		

TABLE B-AL25
ANALYTICAL RESULTS FOR GRID AL25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AL25		
Sample Name	P3IF-SS-IS-SO-AL625		
Date Collected	June 22, 2023		
Metals (mg/kg)			
Aluminum	22000	4	J
Antimony	0.15	0.15	U
Arsenic	1.3	0.3	
Barium	140	0.2	
Beryllium	0.43	0.3	J
Cadmium	0.49	0.08	
Calcium (Ca)	3100	15	
Chromium	14	0.2	
Cobalt	5.4	0.08	
Copper	60	0.2	
Iron (Fe)	10000	8	
Lead	14	0.05	
Magnesium (Mg)	9300	5	
Manganese (Mn)	240	0.08	
Mercury	0.026	0.039	J
Nickel	9.8	0.2	
Potassium (K)	1100	8	
Selenium	1	0.1	
Silver	0.094	0.05	J
Sodium (Na)	77	8	
Thallium	0.053	0.05	J
Vanadium	21	0.1	
Zinc	40	1.5	
Other Parameters (mg/kg)			
Cyanide (CN-)	-		
Nitrate	-		
Perchlorate	-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-AM25
ANALYTICAL RESULTS FOR GRID AM25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AM25			AM25			AM25		
Sample Name	P3IF-BA-GRID-AM025			P3IF-SS-IS-SO-AM025			P3IF-SS-IS-SO-AM525		
Date Collected	June 22, 2023			June 22, 2023			June 22, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)									
1,1,1,2-Tetrachloroethane	0.0018	0.0018	U	-			-		
1,1,1-Trichloroethane	0.0018	0.0018	U	-			-		
1,1,2,2-Tetrachloroethane	0.0018	0.0018	U	-			-		
1,1,2-Trichloroethane	0.0018	0.0018	U	-			-		
1,1-Dichloroethane	0.0018	0.0018	U	-			-		
1,1-Dichloroethene	0.0018	0.0018	U	-			-		
1,1-Dichloropropene	0.0018	0.0018	U	-			-		
1,2,3-Trichlorobenzene	0.0018	0.0018	U	-			-		
1,2,3-Trichloropropane	0.0044	0.0044	U	-			-		
1,2,4-Trichlorobenzene	0.0018	0.0018	U	-			-		
1,2,4-Trimethylbenzene	0.0018	0.0018	U	-			-		
1,2-Dibromo-3-chloropropane	0.0044	0.0044	U	-			-		
1,2-Dibromoethane	0.0018	0.0018	U	-			-		
1,2-Dichlorobenzene	0.0018	0.0018	U	-			-		
1,2-Dichloroethane	0.0018	0.0018	U	-			-		
1,2-Dichloropropane	0.0018	0.0018	U	-			-		
1,3,5-Trimethylbenzene	0.0018	0.0018	U	-			-		
1,3-Dichlorobenzene	0.0018	0.0018	U	-			-		
1,3-Dichloropropane	0.0018	0.0018	U	-			-		
1,4-Dichlorobenzene	0.0018	0.0018	U	-			-		
2,2-Dichloropropane	0.0018	0.0018	U	-			-		
2-Butanone	0.0027	0.0027	U	-			-		
2-Chlorotoluene	0.0018	0.0018	U	-			-		
2-Hexanone	0.0018	0.0018	U	-			-		
4-Chlorotoluene	0.0018	0.0018	U	-			-		
4-Methyl-2-pentanone	0.0018	0.0018	U	-			-		
Acetone	0.28	0.0044		-			-		
Benzene	0.0018	0.0018	U	-			-		
Bromobenzene	0.0018	0.0018	U	-			-		
Bromochloromethane	0.0018	0.0018	U	-			-		
Bromodichloromethane	0.0018	0.0018	U	-			-		
Bromoform	0.0018	0.0018	U	-			-		
Bromomethane	0.0018	0.0018	U	-			-		
Carbon disulfide	0.0018	0.0018	U	-			-		
Carbon tetrachloride	0.0018	0.0018	U	-			-		
Chlorobenzene	0.0018	0.0018	U	-			-		
Chloroethane	0.0018	0.0018	U	-			-		
Chloroform	0.0018	0.0018	U	-			-		
Chloromethane	0.0044	0.0044	U	-			-		
cis-1,2-Dichloroethene	0.0018	0.0018	U	-			-		
cis-1,3-Dichloropropene	0.0018	0.0018	U	-			-		
Dibromochloromethane	0.0018	0.0018	U	-			-		
Dibromomethane	0.0018	0.0018	U	-			-		
Dichlorodifluoromethane	0.0018	0.0018	U	-			-		
Ethylbenzene	0.0018	0.0018	U	-			-		
Hexachlorobutadiene	0.0018	0.0018	U	-			-		
Isopropylbenzene	0.0018	0.0018	U	-			-		
m+p-Xylene	0.0044	0.0044	U	-			-		
Methyl Tertiary Butyl Ether	0.0018	0.0018	U	-			-		
Methylene chloride	0.0088	0.0088	U	-			-		
n-Butylbenzene	0.0018	0.0018	U	-			-		
n-Propylbenzene	0.0018	0.0018	U	-			-		
Naphthalene	0.0018	0.0018	U	-			-		
o-Xylene	0.0022	0.0022	U	-			-		
4-Isopropyltoluene	0.0018	0.0018	U	-			-		
sec-Butylbenzene	0.0018	0.0018	U	-			-		
Styrene	0.0018	0.0018	U	-			-		
tert-Butylbenzene	0.0018	0.0018	U	-			-		
Tetrachloroethene	0.0018	0.0018	U	-			-		
Toluene	0.0018	0.0018	U	-			-		
trans-1,2-Dichloroethene	0.0018	0.0018	U	-			-		
trans-1,3-Dichloropropene	0.0018	0.0018	U	-			-		
Trichloroethene	0.0018	0.0018	U	-			-		
Trichlorofluoromethane	0.0018	0.0018	U	-			-		
Vinyl chloride	0.0018	0.0018	U	-			-		
Semivolatile Organic Compounds (mg/kg)									
1,2,4-Trichlorobenzene	0.17	0.17	UJ	-			-		
1,2-Dichlorobenzene	0.17	0.17	UJ	-			-		
1,3-Dichlorobenzene	0.17	0.17	UJ	-			-		
1,4-Dichlorobenzene	0.17	0.17	UJ	-			-		
2,4,5-Trichlorophenol	0.17	0.17	UJ	-			-		
2,4,6-Trichlorophenol	0.17	0.17	UJ	-			-		
2,4-Dichlorophenol	0.17	0.17	UJ	-			-		
2,4-Dimethylphenol	0.17	0.17	UJ	-			-		
2,4-Dinitrophenol	0.17	0.17	UJ	-			-		
2,4-Dinitrotoluene	0.17	0.17	UJ	-			-		
2,6-Dinitrotoluene	0.17	0.17	UJ	-			-		
2-Chloronaphthalene	0.17	0.17	UJ	-			-		
2-Chlorophenol	0.17	0.17	UJ	-			-		
2-Methylnaphthalene	0.17	0.17	UJ	-			-		
2-Methylphenol	0.17	0.17	UJ	-			-		
2-Nitroaniline	0.17	0.17	UJ	-			-		
2-Nitrophenol	0.17	0.17	UJ	-			-		
3,3-Dichlorobenzidine	0.17	0.17	UJ	-			-		
3-Nitroaniline	0.17	0.17	UJ	-			-		
4,6-Dinitro-2-methylphenol	0.17	0.17	UJ	-			-		
4-Bromophenyl-phenylether	0.17	0.17	UJ	-			-		
4-Chloro-3-methylphenol	0.17	0.17	UJ	-			-		
4-Chloroaniline	0.17	0.17	UJ	-			-		

TABLE B-AM25
ANALYTICAL RESULTS FOR GRID AM25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AM25			AM25			AM25		
Sample Name	P3IF-BA-GRID-AM025			P3IF-SS-IS-SO-AM025			P3IF-SS-IS-SO-AM525		
Date Collected	June 22, 2023			June 22, 2023			June 22, 2023		
Semivolatile Organic Compounds (mg/kg), continued									
4-Chlorophenyl-phenylether	0.17	0.17	UJ	-			-		
4-Nitroaniline	0.17	0.17	UJ	-			-		
4-Nitrophenol	0.17	0.17	UJ	-			-		
Acenaphthene	0.17	0.17	UJ	-			-		
Acenaphthylene	0.17	0.17	UJ	-			-		
Anthracene	0.17	0.17	UJ	-			-		
Benzo(a)anthracene	0.17	0.17	UJ	-			-		
Benzo(a)pyrene	0.13	0.13	UJ	-			-		
Benzo(b)fluoranthene	0.17	0.17	UJ	-			-		
Benzo(g,h,i)perylene	0.17	0.17	UJ	-			-		
Benzo(k)fluoranthene	0.17	0.17	UJ	-			-		
Benzoic acid	0.17	0.17	UJ	-			-		
Benzyl Alcohol	0.17	0.17	UJ	-			-		
Bis(2-chloro-1-methylethyl) ether	0.17	0.17	UJ	-			-		
Bis(2-chloroethoxy)methane	0.17	0.17	UJ	-			-		
Bis(2-chloroethyl)ether	0.17	0.17	UJ	-			-		
Bis(2-ethylhexyl)phthalate	0.17	0.17	UJ	-			-		
Butyl benzyl phthalate	0.17	0.17	UJ	-			-		
Carbazole	0.17	0.17	UJ	-			-		
Chrysene	0.17	0.17	UJ	-			-		
Di-n-butyl phthalate	0.17	0.17	UJ	-			-		
Di-n-octyl phthalate	0.17	0.17	UJ	-			-		
Dibenz(a,h)anthracene	0.13	0.13	UJ	-			-		
Dibenzofuran	0.17	0.17	UJ	-			-		
Diethyl phthalate	0.17	0.17	UJ	-			-		
Dimethyl phthalate	0.17	0.17	UJ	-			-		
Fluoranthene	0.17	0.17	UJ	-			-		
Fluorene	0.17	0.17	UJ	-			-		
Hexachlorobenzene	0.17	0.17	UJ	-			-		
Hexachlorobutadiene	0.17	0.17	UJ	-			-		
Hexachloroethane	0.17	0.17	UJ	-			-		
Indeno(1,2,3-cd)pyrene	0.17	0.17	UJ	-			-		
Isophorone	0.17	0.17	UJ	-			-		
n-Nitroso-di-n-propylamine	0.17	0.17	UJ	-			-		
n-Nitrosodimethylamine	0.02	0.02	UJ	-			-		
n-Nitrosodiphenylamine	0.17	0.17	UJ	-			-		
Naphthalene	0.17	0.17	UJ	-			-		
Nitrobenzene	0.17	0.17	UJ	-			-		
Pentachlorophenol	0.17	0.17	UJ	-			-		
Phenanthrene	0.17	0.17	UJ	-			-		
Phenol	0.17	0.17	UJ	-			-		
Pyrene	0.17	0.17	UJ	-			-		
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
1,3-Dinitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,4,6-Trinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,4-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,6-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
3-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
4-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	-			0.075	0.075	UJ	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	-			0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
Nitroglycerin	-			0.15	0.15	UJ	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	-			0.075	0.075	UJ	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	-			0.25	0.25	UJ	0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)									
Aroclor 1016	0.019	0.019	U	-			-		
Aroclor 1221	0.019	0.019	U	-			-		
Aroclor 1232	0.0097	0.0097	U	-			-		
Aroclor 1242	0.0097	0.0097	U	-			-		
Aroclor 1248	0.0097	0.0097	U	-			-		
Aroclor 1254	0.0097	0.0097	U	-			-		
Aroclor 1260	0.0097	0.0097	U	-			-		
Dioxins/Furans (mg/kg)									
Octachlorodibenzofuran (OCDF)	0.00000024	0.00000024	U	-			-		
Octachlorodibenzo-p-dioxin (OCDD)	0.0000061	0.0000061	J	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.00000014	0.00000014	U	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	0.0000012	0.0000012	J	-			-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.00000018	0.00000018	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000043	0.000000043	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.0000001	0.0000001	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.00000004	0.00000004	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000092	0.000000092	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.000000053	0.000000053	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000097	0.000000097	U	-			-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000016	0.00000016	U	-			-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.000000082	0.000000082	J	-			-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.0000001	0.0000001	U	-			-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000016	0.00000016	U	-			-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.0000002	0.0000002	U	-			-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.000000081	0.000000081	U	-			-		

TABLE B-AM25
ANALYTICAL RESULTS FOR GRID AM25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AM25			AM25			AM25		
Sample Name	P3IF-BA-GRID-AM025			P3IF-SS-IS-SO-AM025			P3IF-SS-IS-SO-AM525		
Date Collected	June 22, 2023			June 22, 2023			June 22, 2023		
Metals (mg/kg)									
Aluminum	-			19000	4		18000	4	
Antimony	-			0.15	0.15	J	0.13	0.15	J
Arsenic	-			1.4	0.3		1.5	0.3	
Barium	-			140	0.2		140	0.2	
Beryllium	-			0.37	0.3	J	0.38	0.3	J
Cadmium	-			0.66	0.08		0.47	0.08	
Calcium (Ca)	-			3900	15		3700	15	
Chromium	-			14	0.2		13	0.2	
Cobalt	-			5.3	0.08		5.1	0.08	
Copper	-			84	0.2		64	0.2	
Iron (Fe)	-			12000	8		11000	8	
Lead	-			17	0.05		15	0.05	
Magnesium (Mg)	-			8200	5		8000	5	
Manganese (Mn)	-			290	0.08		270	0.08	
Mercury	-			0.036	0.04	J	0.034	0.04	J
Nickel	-			9.5	0.2		9	0.2	
Potassium (K)	-			1100	8		1100	8	
Selenium	-			0.76	0.1		0.79	0.1	
Silver	-			0.17	0.05		0.12	0.05	
Sodium (Na)	-			70	8		69	8	
Thallium	-			0.052	0.05	J	0.051	0.05	J
Vanadium	-			20	0.1		20	0.1	
Zinc	-			47	1.5		41	1.5	
Other Parameters (mg/kg)									
Cyanide (CN-)	0.31	0.31	UJ	-			-		
Nitrate	7.9	2	J	-			-		
Perchlorate	0.0018	0.0018	UJ	-			-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-AM25
ANALYTICAL RESULTS FOR GRID AM25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AM25		
Sample Name	P3IF-SS-IS-SO-AM625		
Date Collected	June 22, 2023		
	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)			
1,1,1,2-Tetrachloroethane	-		
1,1,1-Trichloroethane	-		
1,1,2,2-Tetrachloroethane	-		
1,1,2-Trichloroethane	-		
1,1-Dichloroethane	-		
1,1-Dichloroethene	-		
1,1-Dichloropropene	-		
1,2,3-Trichlorobenzene	-		
1,2,3-Trichloropropane	-		
1,2,4-Trichlorobenzene	-		
1,2,4-Trimethylbenzene	-		
1,2-Dibromo-3-chloropropane	-		
1,2-Dibromoethane	-		
1,2-Dichlorobenzene	-		
1,2-Dichloroethane	-		
1,2-Dichloropropane	-		
1,3,5-Trimethylbenzene	-		
1,3-Dichlorobenzene	-		
1,3-Dichloropropane	-		
1,4-Dichlorobenzene	-		
2,2-Dichloropropane	-		
2-Butanone	-		
2-Chlorotoluene	-		
2-Hexanone	-		
4-Chlorotoluene	-		
4-Methyl-2-pentanone	-		
Acetone	-		
Benzene	-		
Bromobenzene	-		
Bromochloromethane	-		
Bromodichloromethane	-		
Bromoform	-		
Bromomethane	-		
Carbon disulfide	-		
Carbon tetrachloride	-		
Chlorobenzene	-		
Chloroethane	-		
Chloroform	-		
Chloromethane	-		
cis-1,2-Dichloroethene	-		
cis-1,3-Dichloropropene	-		
Dibromochloromethane	-		
Dibromomethane	-		
Dichlorodifluoromethane	-		
Ethylbenzene	-		
Hexachlorobutadiene	-		
Isopropylbenzene	-		
m+p-Xylene	-		
Methyl Tertiary Butyl Ether	-		
Methylene chloride	-		
n-Butylbenzene	-		
n-Propylbenzene	-		
Naphthalene	-		
o-Xylene	-		
4-Isopropyltoluene	-		
sec-Butylbenzene	-		
Styrene	-		
tert-Butylbenzene	-		
Tetrachloroethene	-		
Toluene	-		
trans-1,2-Dichloroethene	-		
trans-1,3-Dichloropropene	-		
Trichloroethene	-		
Trichlorofluoromethane	-		
Vinyl chloride	-		
Semivolatile Organic Compounds (mg/kg)			
1,2,4-Trichlorobenzene	-		
1,2-Dichlorobenzene	-		
1,3-Dichlorobenzene	-		
1,4-Dichlorobenzene	-		
2,4,5-Trichlorophenol	-		
2,4,6-Trichlorophenol	-		
2,4-Dichlorophenol	-		
2,4-Dimethylphenol	-		
2,4-Dinitrophenol	-		
2,4-Dinitrotoluene	-		
2,6-Dinitrotoluene	-		
2-Chloronaphthalene	-		
2-Chlorophenol	-		
2-Methylnaphthalene	-		
2-Methylphenol	-		
2-Nitroaniline	-		
2-Nitrophenol	-		
3,3-Dichlorobenzidine	-		
3-Nitroaniline	-		
4,6-Dinitro-2-methylphenol	-		
4-Bromophenyl-phenylether	-		
4-Chloro-3-methylphenol	-		
4-Chloroaniline	-		

TABLE B-AM25
ANALYTICAL RESULTS FOR GRID AM25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AM25		
Sample Name	P3IF-SS-IS-SO-AM625		
Date Collected	June 22, 2023		
Semivolatile Organic Compounds (mg/kg), continued			
4-Chlorophenyl-phenylether	-		
4-Nitroaniline	-		
4-Nitrophenol	-		
Acenaphthene	-		
Acenaphthylene	-		
Anthracene	-		
Benzo(a)anthracene	-		
Benzo(a)pyrene	-		
Benzo(b)fluoranthene	-		
Benzo(g,h,i)perylene	-		
Benzo(k)fluoranthene	-		
Benzoic acid	-		
Benzyl Alcohol	-		
Bis(2-chloro-1-methylethyl) ether	-		
Bis(2-chloroethoxy)methane	-		
Bis(2-chloroethyl)ether	-		
Bis(2-ethylhexyl)phthalate	-		
Butyl benzyl phthalate	-		
Carbazole	-		
Chrysene	-		
Di-n-butyl phthalate	-		
Di-n-octyl phthalate	-		
Dibenz(a,h)anthracene	-		
Dibenzofuran	-		
Diethyl phthalate	-		
Dimethyl phthalate	-		
Fluoranthene	-		
Fluorene	-		
Hexachlorobenzene	-		
Hexachlorobutadiene	-		
Hexachloroethane	-		
Indeno(1,2,3-cd)pyrene	-		
Isophorone	-		
n-Nitroso-di-n-propylamine	-		
n-Nitrosodimethylamine	-		
n-Nitrosodiphenylamine	-		
Naphthalene	-		
Nitrobenzene	-		
Pentachlorophenol	-		
Phenanthrene	-		
Phenol	-		
Pyrene	-		
Explosives (mg/kg)			
1,3,5-Trinitrobenzene	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	UJ
2,4,6-Trinitrotoluene	0.075	0.075	UJ
2,4-Dinitrotoluene	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	UJ
2-Nitrotoluene	0.075	0.075	UJ
3-Nitrotoluene	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	0.075	0.075	UJ
4-Nitrotoluene	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	UJ
Nitroglycerin	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)			
Aroclor 1016	-		
Aroclor 1221	-		
Aroclor 1232	-		
Aroclor 1242	-		
Aroclor 1248	-		
Aroclor 1254	-		
Aroclor 1260	-		
Dioxins/Furans (mg/kg)			
Octachlorodibenzofuran (OCDF)	-		
Octachlorodibenzo-p-dioxin (OCDD)	-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	-		

TABLE B-AM25
ANALYTICAL RESULTS FOR GRID AM25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AM25		
Sample Name	P3IF-SS-IS-SO-AM625		
Date Collected	June 22, 2023		
Metals (mg/kg)			
Aluminum	18000	4	
Antimony	0.13	0.15	J
Arsenic	1.4	0.3	J
Barium	130	0.2	
Beryllium	0.39	0.3	J
Cadmium	0.53	0.08	
Calcium (Ca)	3600	15	J
Chromium	13	0.2	
Cobalt	5.1	0.08	J
Copper	70	0.2	J
Iron (Fe)	11000	8	
Lead	16	0.05	
Magnesium (Mg)	7800	5	
Manganese (Mn)	280	0.08	
Mercury	0.036	0.04	J
Nickel	9.1	0.2	J
Potassium (K)	1000	8	J
Selenium	0.71	0.1	J
Silver	0.13	0.05	
Sodium (Na)	69	8	
Thallium	0.052	0.05	J
Vanadium	19	0.1	
Zinc	42	1.5	J
Other Parameters (mg/kg)			
Cyanide (CN-)	-		
Nitrate	-		
Perchlorate	-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-AN25
ANALYTICAL RESULTS FOR GRID AN25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AN25			AN25			AN25		
Sample Name	P3IF-BA-GRID-AN025			P3IF-SS-IS-SO-AN025			P3IF-SS-IS-SO-AN525		
Date Collected	June 22, 2023			June 22, 2023			June 22, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)									
1,1,1,2-Tetrachloroethane	0.002	0.002	UJ	-			-		
1,1,1-Trichloroethane	0.002	0.002	UJ	-			-		
1,1,2,2-Tetrachloroethane	0.002	0.002	U	-			-		
1,1,2-Trichloroethane	0.002	0.002	UJ	-			-		
1,1-Dichloroethane	0.002	0.002	UJ	-			-		
1,1-Dichloroethene	0.002	0.002	UJ	-			-		
1,1-Dichloropropene	0.002	0.002	UJ	-			-		
1,2,3-Trichlorobenzene	0.002	0.002	U	-			-		
1,2,3-Trichloropropane	0.0051	0.0051	U	-			-		
1,2,4-Trichlorobenzene	0.002	0.002	U	-			-		
1,2,4-Trimethylbenzene	0.002	0.002	U	-			-		
1,2-Dibromo-3-chloropropane	0.0051	0.0051	U	-			-		
1,2-Dibromoethane	0.002	0.002	UJ	-			-		
1,2-Dichlorobenzene	0.002	0.002	U	-			-		
1,2-Dichloroethane	0.002	0.002	UJ	-			-		
1,2-Dichloropropane	0.002	0.002	UJ	-			-		
1,3,5-Trimethylbenzene	0.002	0.002	U	-			-		
1,3-Dichlorobenzene	0.002	0.002	UJ	-			-		
1,3-Dichloropropane	0.002	0.002	UJ	-			-		
1,4-Dichlorobenzene	0.002	0.002	U	-			-		
2,2-Dichloropropane	0.002	0.002	UJ	-			-		
2-Butanone	0.003	0.003	UJ	-			-		
2-Chlorotoluene	0.002	0.002	U	-			-		
2-Hexanone	0.002	0.002	UJ	-			-		
4-Chlorotoluene	0.002	0.002	U	-			-		
4-Methyl-2-pentanone	0.002	0.002	UJ	-			-		
Acetone	0.15	0.0051	J	-			-		
Benzene	0.002	0.002	UJ	-			-		
Bromobenzene	0.002	0.002	U	-			-		
Bromochloromethane	0.002	0.002	UJ	-			-		
Bromodichloromethane	0.002	0.002	UJ	-			-		
Bromoform	0.002	0.002	UJ	-			-		
Bromomethane	0.002	0.002	UJ	-			-		
Carbon disulfide	0.002	0.002	UJ	-			-		
Carbon tetrachloride	0.002	0.002	UJ	-			-		
Chlorobenzene	0.002	0.002	UJ	-			-		
Chloroethane	0.002	0.002	UJ	-			-		
Chloroform	0.002	0.002	UJ	-			-		
Chloromethane	0.0051	0.0051	UJ	-			-		
cis-1,2-Dichloroethene	0.002	0.002	UJ	-			-		
cis-1,3-Dichloropropene	0.002	0.002	UJ	-			-		
Dibromochloromethane	0.002	0.002	UJ	-			-		
Dibromomethane	0.002	0.002	UJ	-			-		
Dichlorodifluoromethane	0.002	0.002	UJ	-			-		
Ethylbenzene	0.002	0.002	UJ	-			-		
Hexachlorobutadiene	0.002	0.002	U	-			-		
Isopropylbenzene	0.002	0.002	U	-			-		
m+p-Xylene	0.0051	0.0051	UJ	-			-		
Methyl Tertiary Butyl Ether	0.002	0.002	UJ	-			-		
Methylene chloride	0.01	0.01	UJ	-			-		
n-Butylbenzene	0.002	0.002	U	-			-		
n-Propylbenzene	0.002	0.002	U	-			-		
Naphthalene	0.002	0.002	U	-			-		
o-Xylene	0.0025	0.0025	UJ	-			-		
4-Isopropyltoluene	0.002	0.002	U	-			-		
sec-Butylbenzene	0.002	0.002	U	-			-		
Styrene	0.002	0.002	UJ	-			-		
tert-Butylbenzene	0.002	0.002	U	-			-		
Tetrachloroethene	0.002	0.002	UJ	-			-		
Toluene	0.002	0.002	UJ	-			-		
trans-1,2-Dichloroethene	0.002	0.002	UJ	-			-		
trans-1,3-Dichloropropene	0.002	0.002	UJ	-			-		
Trichloroethene	0.002	0.002	UJ	-			-		
Trichlorofluoromethane	0.002	0.002	UJ	-			-		
Vinyl chloride	0.002	0.002	UJ	-			-		
Semivolatile Organic Compounds (mg/kg)									
1,2,4-Trichlorobenzene	0.17	0.17	UJ	-			-		
1,2-Dichlorobenzene	0.17	0.17	UJ	-			-		
1,3-Dichlorobenzene	0.17	0.17	UJ	-			-		
1,4-Dichlorobenzene	0.17	0.17	UJ	-			-		
2,4,5-Trichlorophenol	0.17	0.17	UJ	-			-		
2,4,6-Trichlorophenol	0.17	0.17	UJ	-			-		
2,4-Dichlorophenol	0.17	0.17	UJ	-			-		
2,4-Dimethylphenol	0.17	0.17	UJ	-			-		
2,4-Dinitrophenol	0.17	0.17	UJ	-			-		
2,4-Dinitrotoluene	0.17	0.17	UJ	-			-		
2,6-Dinitrotoluene	0.17	0.17	UJ	-			-		
2-Chloronaphthalene	0.17	0.17	UJ	-			-		
2-Chlorophenol	0.17	0.17	UJ	-			-		
2-Methylnaphthalene	0.17	0.17	UJ	-			-		
2-Methylphenol	0.17	0.17	UJ	-			-		
2-Nitroaniline	0.17	0.17	UJ	-			-		
2-Nitrophenol	0.17	0.17	UJ	-			-		
3,3-Dichlorobenzidine	0.17	0.17	UJ	-			-		
3-Nitroaniline	0.17	0.17	UJ	-			-		
4,6-Dinitro-2-methylphenol	0.17	0.17	UJ	-			-		
4-Bromophenyl-phenylether	0.17	0.17	UJ	-			-		
4-Chloro-3-methylphenol	0.17	0.17	UJ	-			-		
4-Chloroaniline	0.17	0.17	UJ	-			-		

TABLE B-AN25
ANALYTICAL RESULTS FOR GRID AN25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AN25			AN25			AN25		
Sample Name	P3IF-BA-GRID-AN025			P3IF-SS-IS-SO-AN025			P3IF-SS-IS-SO-AN525		
Date Collected	June 22, 2023			June 22, 2023			June 22, 2023		
Semivolatile Organic Compounds (mg/kg), continued									
4-Chlorophenyl-phenylether	0.17	0.17	UJ	-			-		
4-Nitroaniline	0.17	0.17	UJ	-			-		
4-Nitrophenol	0.17	0.17	UJ	-			-		
Acenaphthene	0.17	0.17	UJ	-			-		
Acenaphthylene	0.17	0.17	UJ	-			-		
Anthracene	0.17	0.17	UJ	-			-		
Benzo(a)anthracene	0.17	0.17	UJ	-			-		
Benzo(a)pyrene	0.13	0.13	UJ	-			-		
Benzo(b)fluoranthene	0.17	0.17	UJ	-			-		
Benzo(g,h,i)perylene	0.17	0.17	UJ	-			-		
Benzo(k)fluoranthene	0.17	0.17	UJ	-			-		
Benzoic acid	0.17	0.17	UJ	-			-		
Benzyl Alcohol	0.17	0.17	UJ	-			-		
Bis(2-chloro-1-methylethyl) ether	0.17	0.17	UJ	-			-		
Bis(2-chloroethoxy)methane	0.17	0.17	UJ	-			-		
Bis(2-chloroethyl)ether	0.17	0.17	UJ	-			-		
Bis(2-ethylhexyl)phthalate	0.17	0.17	UJ	-			-		
Butyl benzyl phthalate	0.17	0.17	UJ	-			-		
Carbazole	0.17	0.17	UJ	-			-		
Chrysene	0.17	0.17	UJ	-			-		
Di-n-butyl phthalate	0.17	0.17	UJ	-			-		
Di-n-octyl phthalate	0.17	0.17	UJ	-			-		
Dibenz(a,h)anthracene	0.13	0.13	UJ	-			-		
Dibenzofuran	0.17	0.17	UJ	-			-		
Diethyl phthalate	0.17	0.17	UJ	-			-		
Dimethyl phthalate	0.17	0.17	UJ	-			-		
Fluoranthene	0.17	0.17	UJ	-			-		
Fluorene	0.17	0.17	UJ	-			-		
Hexachlorobenzene	0.17	0.17	UJ	-			-		
Hexachlorobutadiene	0.17	0.17	UJ	-			-		
Hexachloroethane	0.17	0.17	UJ	-			-		
Indeno(1,2,3-cd)pyrene	0.17	0.17	UJ	-			-		
Isophorone	0.17	0.17	UJ	-			-		
n-Nitroso-di-n-propylamine	0.17	0.17	UJ	-			-		
n-Nitrosodimethylamine	0.02	0.02	UJ	-			-		
n-Nitrosodiphenylamine	0.17	0.17	UJ	-			-		
Naphthalene	0.17	0.17	UJ	-			-		
Nitrobenzene	0.17	0.17	UJ	-			-		
Pentachlorophenol	0.17	0.17	UJ	-			-		
Phenanthrene	0.17	0.17	UJ	-			-		
Phenol	0.17	0.17	UJ	-			-		
Pyrene	0.17	0.17	UJ	-			-		
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
1,3-Dinitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,4,6-Trinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,4-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,6-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
3-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
4-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	-			0.075	0.075	UJ	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	-			0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
Nitroglycerin	-			0.15	0.15	UJ	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	-			0.075	0.075	UJ	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	-			0.25	0.25	UJ	0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)									
Aroclor 1016	0.019	0.019	U	-			-		
Aroclor 1221	0.019	0.019	U	-			-		
Aroclor 1232	0.0094	0.0094	U	-			-		
Aroclor 1242	0.0094	0.0094	U	-			-		
Aroclor 1248	0.0094	0.0094	U	-			-		
Aroclor 1254	0.0094	0.0094	U	-			-		
Aroclor 1260	0.0094	0.0094	U	-			-		
Dioxins/Furans (mg/kg)									
Octachlorodibenzofuran (OCDF)	0.00000041	0.00000041	J	-			-		
Octachlorodibenzo-p-dioxin (OCDD)	0.000011	0.000011	J	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.000000069	0.000000069	U	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	0.0000016	0.0000016	U	-			-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.000000089	0.000000089	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000045	0.000000045	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000015	0.00000015	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000042	0.000000042	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000014	0.00000014	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.000000055	0.000000055	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000011	0.00000011	U	-			-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.0000001	0.0000001	U	-			-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.00000008	0.00000008	U	-			-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.00000017	0.00000017	U	-			-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.0000001	0.0000001	U	-			-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.0000002	0.0000002	J	-			-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.000000058	0.000000058	U	-			-		

TABLE B-AN25
ANALYTICAL RESULTS FOR GRID AN25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AN25			AN25			AN25		
Sample Name	P3IF-BA-GRID-AN025			P3IF-SS-IS-SO-AN025			P3IF-SS-IS-SO-AN525		
Date Collected	June 22, 2023			June 22, 2023			June 22, 2023		
Metals (mg/kg)									
Aluminum	-			21000	4	J	21000	4	J
Antimony	-			0.13	0.15	J	0.15	0.15	U
Arsenic	-			1.2	0.3		1.2	0.3	
Barium	-			120	0.2		120	0.2	
Beryllium	-			0.39	0.3	J	0.4	0.3	J
Cadmium	-			0.78	0.08	J	0.44	0.08	J
Calcium (Ca)	-			2400	15		2400	15	
Chromium	-			15	0.2		14	0.2	
Cobalt	-			5.5	0.08		5.6	0.08	
Copper	-			65	0.2		58	0.2	
Iron (Fe)	-			11000	8		11000	8	
Lead	-			15	0.05		14	0.05	
Magnesium (Mg)	-			9700	5		9500	5	
Manganese (Mn)	-			300	0.08		300	0.08	
Mercury	-			0.041	0.041	U	0.023	0.04	J
Nickel	-			9.3	0.2		9	0.2	
Potassium (K)	-			950	8		960	8	
Selenium	-			0.96	0.1		0.97	0.1	
Silver	-			0.1	0.05		0.096	0.05	J
Sodium (Na)	-			81	8		79	8	
Thallium	-			0.051	0.05	J	0.049	0.05	J
Vanadium	-			22	0.1		22	0.1	
Zinc	-			44	1.5		39	1.5	
Other Parameters (mg/kg)									
Cyanide (CN-)	0.31	0.31	U	-			-		
Nitrate	4.9	1.9	J	-			-		
Perchlorate	0.0019	0.0019	UJ	-			-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-AN25
ANALYTICAL RESULTS FOR GRID AN25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AN25		
Sample Name	P3IF-SS-IS-SO-AN625		
Date Collected	June 22, 2023		
	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)			
1,1,1,2-Tetrachloroethane	-		
1,1,1-Trichloroethane	-		
1,1,2,2-Tetrachloroethane	-		
1,1,2-Trichloroethane	-		
1,1-Dichloroethane	-		
1,1-Dichloroethene	-		
1,1-Dichloropropene	-		
1,2,3-Trichlorobenzene	-		
1,2,3-Trichloropropane	-		
1,2,4-Trichlorobenzene	-		
1,2,4-Trimethylbenzene	-		
1,2-Dibromo-3-chloropropane	-		
1,2-Dibromoethane	-		
1,2-Dichlorobenzene	-		
1,2-Dichloroethane	-		
1,2-Dichloropropane	-		
1,3,5-Trimethylbenzene	-		
1,3-Dichlorobenzene	-		
1,3-Dichloropropane	-		
1,4-Dichlorobenzene	-		
2,2-Dichloropropane	-		
2-Butanone	-		
2-Chlorotoluene	-		
2-Hexanone	-		
4-Chlorotoluene	-		
4-Methyl-2-pentanone	-		
Acetone	-		
Benzene	-		
Bromobenzene	-		
Bromochloromethane	-		
Bromodichloromethane	-		
Bromoform	-		
Bromomethane	-		
Carbon disulfide	-		
Carbon tetrachloride	-		
Chlorobenzene	-		
Chloroethane	-		
Chloroform	-		
Chloromethane	-		
cis-1,2-Dichloroethene	-		
cis-1,3-Dichloropropene	-		
Dibromochloromethane	-		
Dibromomethane	-		
Dichlorodifluoromethane	-		
Ethylbenzene	-		
Hexachlorobutadiene	-		
Isopropylbenzene	-		
m+p-Xylene	-		
Methyl Tertiary Butyl Ether	-		
Methylene chloride	-		
n-Butylbenzene	-		
n-Propylbenzene	-		
Naphthalene	-		
o-Xylene	-		
4-Isopropyltoluene	-		
sec-Butylbenzene	-		
Styrene	-		
tert-Butylbenzene	-		
Tetrachloroethene	-		
Toluene	-		
trans-1,2-Dichloroethene	-		
trans-1,3-Dichloropropene	-		
Trichloroethene	-		
Trichlorofluoromethane	-		
Vinyl chloride	-		
Semivolatile Organic Compounds (mg/kg)			
1,2,4-Trichlorobenzene	-		
1,2-Dichlorobenzene	-		
1,3-Dichlorobenzene	-		
1,4-Dichlorobenzene	-		
2,4,5-Trichlorophenol	-		
2,4,6-Trichlorophenol	-		
2,4-Dichlorophenol	-		
2,4-Dimethylphenol	-		
2,4-Dinitrophenol	-		
2,4-Dinitrotoluene	-		
2,6-Dinitrotoluene	-		
2-Chloronaphthalene	-		
2-Chlorophenol	-		
2-Methylnaphthalene	-		
2-Methylphenol	-		
2-Nitroaniline	-		
2-Nitrophenol	-		
3,3-Dichlorobenzidine	-		
3-Nitroaniline	-		
4,6-Dinitro-2-methylphenol	-		
4-Bromophenyl-phenylether	-		
4-Chloro-3-methylphenol	-		
4-Chloroaniline	-		

TABLE B-AN25
ANALYTICAL RESULTS FOR GRID AN25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AN25		
Sample Name	P3IF-SS-IS-SO-AN625		
Date Collected	June 22, 2023		
Semivolatile Organic Compounds (mg/kg), continued			
4-Chlorophenyl-phenylether	-		
4-Nitroaniline	-		
4-Nitrophenol	-		
Acenaphthene	-		
Acenaphthylene	-		
Anthracene	-		
Benzo(a)anthracene	-		
Benzo(a)pyrene	-		
Benzo(b)fluoranthene	-		
Benzo(g,h,i)perylene	-		
Benzo(k)fluoranthene	-		
Benzoic acid	-		
Benzyl Alcohol	-		
Bis(2-chloro-1-methylethyl) ether	-		
Bis(2-chloroethoxy)methane	-		
Bis(2-chloroethyl)ether	-		
Bis(2-ethylhexyl)phthalate	-		
Butyl benzyl phthalate	-		
Carbazole	-		
Chrysene	-		
Di-n-butyl phthalate	-		
Di-n-octyl phthalate	-		
Dibenz(a,h)anthracene	-		
Dibenzofuran	-		
Diethyl phthalate	-		
Dimethyl phthalate	-		
Fluoranthene	-		
Fluorene	-		
Hexachlorobenzene	-		
Hexachlorobutadiene	-		
Hexachloroethane	-		
Indeno(1,2,3-cd)pyrene	-		
Isophorone	-		
n-Nitroso-di-n-propylamine	-		
n-Nitrosodimethylamine	-		
n-Nitrosodiphenylamine	-		
Naphthalene	-		
Nitrobenzene	-		
Pentachlorophenol	-		
Phenanthrene	-		
Phenol	-		
Pyrene	-		
Explosives (mg/kg)			
1,3,5-Trinitrobenzene	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	UJ
2,4,6-Trinitrotoluene	0.075	0.075	UJ
2,4-Dinitrotoluene	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	UJ
2-Nitrotoluene	0.075	0.075	UJ
3-Nitrotoluene	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	0.075	0.075	UJ
4-Nitrotoluene	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	UJ
Nitroglycerin	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)			
Aroclor 1016	-		
Aroclor 1221	-		
Aroclor 1232	-		
Aroclor 1242	-		
Aroclor 1248	-		
Aroclor 1254	-		
Aroclor 1260	-		
Dioxins/Furans (mg/kg)			
Octachlorodibenzofuran (OCDF)	-		
Octachlorodibenzo-p-dioxin (OCDD)	-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	-		

TABLE B-AN25
ANALYTICAL RESULTS FOR GRID AN25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AN25		
Sample Name	P3IF-SS-IS-SO-AN625		
Date Collected	June 22, 2023		
Metals (mg/kg)			
Aluminum	17000	4	J
Antimony	0.15	0.15	U
Arsenic	1	0.3	
Barium	110	0.2	
Beryllium	0.35	0.3	J
Cadmium	0.46	0.08	J
Calcium (Ca)	2200	15	
Chromium	12	0.2	
Cobalt	4.9	0.08	
Copper	56	0.2	
Iron (Fe)	9400	8	
Lead	13	0.05	
Magnesium (Mg)	8100	5	
Manganese (Mn)	280	0.08	
Mercury	0.023	0.04	J
Nickel	8	0.2	
Potassium (K)	740	8	
Selenium	0.75	0.1	
Silver	0.089	0.05	J
Sodium (Na)	70	8	
Thallium	0.037	0.05	J
Vanadium	18	0.1	
Zinc	36	1.5	
Other Parameters (mg/kg)			
Cyanide (CN-)	-		
Nitrate	-		
Perchlorate	-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-AO25
ANALYTICAL RESULTS FOR GRID AO25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AO25			AO25			AO25		
Sample Name	P3IF-BA-GRID-AO025			P3IF-SS-IS-SO-AO025			P3IF-SS-IS-SO-AO525		
Date Collected	June 22, 2023			June 22, 2023			June 22, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)									
1,1,1,2-Tetrachloroethane	0.002	0.002	UJ	-			-		
1,1,1-Trichloroethane	0.002	0.002	U	-			-		
1,1,2,2-Tetrachloroethane	0.002	0.002	U	-			-		
1,1,2-Trichloroethane	0.002	0.002	U	-			-		
1,1-Dichloroethane	0.002	0.002	U	-			-		
1,1-Dichloroethene	0.002	0.002	U	-			-		
1,1-Dichloropropene	0.002	0.002	U	-			-		
1,2,3-Trichlorobenzene	0.002	0.002	U	-			-		
1,2,3-Trichloropropane	0.0049	0.0049	U	-			-		
1,2,4-Trichlorobenzene	0.002	0.002	U	-			-		
1,2,4-Trimethylbenzene	0.002	0.002	U	-			-		
1,2-Dibromo-3-chloropropane	0.0049	0.0049	U	-			-		
1,2-Dibromoethane	0.002	0.002	UJ	-			-		
1,2-Dichlorobenzene	0.002	0.002	U	-			-		
1,2-Dichloroethane	0.002	0.002	U	-			-		
1,2-Dichloropropane	0.002	0.002	U	-			-		
1,3,5-Trimethylbenzene	0.002	0.002	U	-			-		
1,3-Dichlorobenzene	0.002	0.002	U	-			-		
1,3-Dichloropropane	0.002	0.002	UJ	-			-		
1,4-Dichlorobenzene	0.002	0.002	U	-			-		
2,2-Dichloropropane	0.002	0.002	U	-			-		
2-Butanone	0.003	0.003	U	-			-		
2-Chlorotoluene	0.002	0.002	U	-			-		
2-Hexanone	0.002	0.002	U	-			-		
4-Chlorotoluene	0.002	0.002	U	-			-		
4-Methyl-2-pentanone	0.002	0.002	U	-			-		
Acetone	0.15	0.0049		-			-		
Benzene	0.002	0.002	U	-			-		
Bromobenzene	0.002	0.002	U	-			-		
Bromochloromethane	0.002	0.002	U	-			-		
Bromodichloromethane	0.002	0.002	U	-			-		
Bromoform	0.002	0.002	UJ	-			-		
Bromomethane	0.002	0.002	U	-			-		
Carbon disulfide	0.002	0.002	U	-			-		
Carbon tetrachloride	0.002	0.002	U	-			-		
Chlorobenzene	0.002	0.002	UJ	-			-		
Chloroethane	0.002	0.002	U	-			-		
Chloroform	0.002	0.002	U	-			-		
Chloromethane	0.0049	0.0049	U	-			-		
cis-1,2-Dichloroethene	0.002	0.002	U	-			-		
cis-1,3-Dichloropropene	0.002	0.002	U	-			-		
Dibromochloromethane	0.002	0.002	UJ	-			-		
Dibromomethane	0.002	0.002	U	-			-		
Dichlorodifluoromethane	0.002	0.002	U	-			-		
Ethylbenzene	0.002	0.002	UJ	-			-		
Hexachlorobutadiene	0.002	0.002	U	-			-		
Isopropylbenzene	0.002	0.002	U	-			-		
m+p-Xylene	0.0049	0.0049	UJ	-			-		
Methyl Tertiary Butyl Ether	0.002	0.002	U	-			-		
Methylene chloride	0.0099	0.0099	U	-			-		
n-Butylbenzene	0.002	0.002	U	-			-		
n-Propylbenzene	0.002	0.002	U	-			-		
Naphthalene	0.002	0.002	U	-			-		
o-Xylene	0.0025	0.0025	UJ	-			-		
4-Isopropyltoluene	0.002	0.002	U	-			-		
sec-Butylbenzene	0.002	0.002	U	-			-		
Styrene	0.002	0.002	UJ	-			-		
tert-Butylbenzene	0.002	0.002	U	-			-		
Tetrachloroethene	0.002	0.002	UJ	-			-		
Toluene	0.002	0.002	U	-			-		
trans-1,2-Dichloroethene	0.002	0.002	U	-			-		
trans-1,3-Dichloropropene	0.002	0.002	U	-			-		
Trichloroethene	0.002	0.002	U	-			-		
Trichlorofluoromethane	0.002	0.002	U	-			-		
Vinyl chloride	0.002	0.002	U	-			-		
Semivolatile Organic Compounds (mg/kg)									
1,2,4-Trichlorobenzene	0.17	0.17	U	-			-		
1,2-Dichlorobenzene	0.17	0.17	U	-			-		
1,3-Dichlorobenzene	0.17	0.17	U	-			-		
1,4-Dichlorobenzene	0.17	0.17	U	-			-		
2,4,5-Trichlorophenol	0.17	0.17	U	-			-		
2,4,6-Trichlorophenol	0.17	0.17	UJ	-			-		
2,4-Dichlorophenol	0.17	0.17	UJ	-			-		
2,4-Dimethylphenol	0.17	0.17	UJ	-			-		
2,4-Dinitrophenol	0.17	0.17	UJ	-			-		
2,4-Dinitrotoluene	0.17	0.17	UJ	-			-		
2,6-Dinitrotoluene	0.17	0.17	UJ	-			-		
2-Chloronaphthalene	0.17	0.17	UJ	-			-		
2-Chlorophenol	0.17	0.17	UJ	-			-		
2-Methylnaphthalene	0.17	0.17	UJ	-			-		
2-Methylphenol	0.17	0.17	UJ	-			-		
2-Nitroaniline	0.17	0.17	UJ	-			-		
2-Nitrophenol	0.17	0.17	UJ	-			-		
3,3-Dichlorobenzidine	0.17	0.17	UJ	-			-		
3-Nitroaniline	0.17	0.17	UJ	-			-		
4,6-Dinitro-2-methylphenol	0.17	0.17	UJ	-			-		
4-Bromophenyl-phenylether	0.17	0.17	UJ	-			-		
4-Chloro-3-methylphenol	0.17	0.17	UJ	-			-		
4-Chloroaniline	0.17	0.17	UJ	-			-		

TABLE B-AO25
ANALYTICAL RESULTS FOR GRID AO25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AO25			AO25			AO25		
Sample Name	P3IF-BA-GRID-AO025			P3IF-SS-IS-SO-AO025			P3IF-SS-IS-SO-AO525		
Date Collected	June 22, 2023			June 22, 2023			June 22, 2023		
Semivolatile Organic Compounds (mg/kg), continued									
4-Chlorophenyl-phenylether	0.17	0.17	UJ	-			-		
4-Nitroaniline	0.17	0.17	UJ	-			-		
4-Nitrophenol	0.17	0.17	UJ	-			-		
Acenaphthene	0.17	0.17	UJ	-			-		
Acenaphthylene	0.17	0.17	UJ	-			-		
Anthracene	0.17	0.17	UJ	-			-		
Benzo(a)anthracene	0.17	0.17	UJ	-			-		
Benzo(a)pyrene	0.13	0.13	UJ	-			-		
Benzo(b)fluoranthene	0.17	0.17	UJ	-			-		
Benzo(g,h,i)perylene	0.17	0.17	UJ	-			-		
Benzo(k)fluoranthene	0.17	0.17	UJ	-			-		
Benzoic acid	0.17	0.17	UJ	-			-		
Benzyl Alcohol	0.17	0.17	UJ	-			-		
Bis(2-chloro-1-methylethyl) ether	0.17	0.17	UJ	-			-		
Bis(2-chloroethoxy)methane	0.17	0.17	UJ	-			-		
Bis(2-chloroethyl)ether	0.17	0.17	UJ	-			-		
Bis(2-ethylhexyl)phthalate	0.17	0.17	UJ	-			-		
Butyl benzyl phthalate	0.17	0.17	UJ	-			-		
Carbazole	0.17	0.17	UJ	-			-		
Chrysene	0.17	0.17	UJ	-			-		
Di-n-butyl phthalate	0.17	0.17	UJ	-			-		
Di-n-octyl phthalate	0.17	0.17	UJ	-			-		
Dibenz(a,h)anthracene	0.13	0.13	UJ	-			-		
Dibenzofuran	0.17	0.17	UJ	-			-		
Diethyl phthalate	0.17	0.17	UJ	-			-		
Dimethyl phthalate	0.17	0.17	UJ	-			-		
Fluoranthene	0.17	0.17	UJ	-			-		
Fluorene	0.17	0.17	UJ	-			-		
Hexachlorobenzene	0.17	0.17	UJ	-			-		
Hexachlorobutadiene	0.17	0.17	UJ	-			-		
Hexachloroethane	0.17	0.17	UJ	-			-		
Indeno(1,2,3-cd)pyrene	0.17	0.17	UJ	-			-		
Isophorone	0.17	0.17	UJ	-			-		
n-Nitroso-di-n-propylamine	0.17	0.17	UJ	-			-		
n-Nitrosodimethylamine	0.02	0.02	UJ	-			-		
n-Nitrosodiphenylamine	0.17	0.17	UJ	-			-		
Naphthalene	0.17	0.17	UJ	-			-		
Nitrobenzene	0.17	0.17	UJ	-			-		
Pentachlorophenol	0.17	0.17	UJ	-			-		
Phenanthrene	0.17	0.17	UJ	-			-		
Phenol	0.17	0.17	UJ	-			-		
Pyrene	0.17	0.17	UJ	-			-		
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
1,3-Dinitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,4,6-Trinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,4-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,6-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
3-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
4-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	-			0.075	0.075	UJ	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	-			0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
Nitroglycerin	-			0.15	0.15	UJ	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	-			0.075	0.075	UJ	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	-			0.25	0.25	UJ	0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)									
Aroclor 1016	0.019	0.019	U	-			-		
Aroclor 1221	0.019	0.019	U	-			-		
Aroclor 1232	0.0094	0.0094	U	-			-		
Aroclor 1242	0.0094	0.0094	U	-			-		
Aroclor 1248	0.0094	0.0094	U	-			-		
Aroclor 1254	0.0094	0.0094	U	-			-		
Aroclor 1260	0.0094	0.0094	U	-			-		
Dioxins/Furans (mg/kg)									
Octachlorodibenzofuran (OCDF)	0.000000085	0.000000085	U	-			-		
Octachlorodibenzo-p-dioxin (OCDD)	0.000009	0.000009	J	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.000000089	0.000000089	U	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	0.0000011	0.0000011	U	-			-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.00000012	0.00000012	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.0000001	0.0000001	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000098	0.000000098	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000093	0.000000093	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000089	0.000000089	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.00000012	0.00000012	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000099	0.000000099	U	-			-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000013	0.00000013	U	-			-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.000000093	0.000000093	U	-			-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.0000001	0.0000001	U	-			-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000013	0.00000013	U	-			-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.00000018	0.00000018	U	-			-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.000000077	0.000000077	U	-			-		

TABLE B-AO25
ANALYTICAL RESULTS FOR GRID AO25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AO25			AO25			AO25		
Sample Name	P3IF-BA-GRID-AO025			P3IF-SS-IS-SO-AO025			P3IF-SS-IS-SO-AO525		
Date Collected	June 22, 2023			June 22, 2023			June 22, 2023		
Metals (mg/kg)									
Aluminum	-			20000	4	J	16000	4	J
Antimony	-			0.15	0.15	U	0.15	0.15	U
Arsenic	-			1.1	0.3		0.82	0.3	
Barium	-			140	0.2		110	0.2	
Beryllium	-			0.33	0.3	J	0.27	0.3	J
Cadmium	-			0.4	0.08		0.39	0.08	
Calcium (Ca)	-			2800	15		2500	15	
Chromium	-			14	0.2		12	0.2	
Cobalt	-			5.2	0.08		4.5	0.08	
Copper	-			58	0.2		60	0.2	
Iron (Fe)	-			10000	8		8800	8	
Lead	-			13	0.05		12	0.05	
Magnesium (Mg)	-			8600	5		7200	5	
Manganese (Mn)	-			340	0.08		290	0.08	
Mercury	-			0.02	0.04	J	0.02	0.04	J
Nickel	-			8.6	0.2		7.7	0.2	
Potassium (K)	-			940	8		670	8	
Selenium	-			0.68	0.1		0.58	0.1	
Silver	-			0.099	0.05	J	0.091	0.05	J
Sodium (Na)	-			77	8	J	190	8	J
Thallium	-			0.046	0.05	J	0.033	0.05	J
Vanadium	-			20	0.1		16	0.1	
Zinc	-			36	1.5		33	1.5	
Other Parameters (mg/kg)									
Cyanide (CN-)	0.32	0.32	U	-			-		
Nitrate	4.3	2.1	J	-			-		
Perchlorate	0.0018	0.0018	UJ	-			-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-AO25
ANALYTICAL RESULTS FOR GRID AO25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AO25		
Sample Name	P3IF-SS-IS-SO-AO625		
Date Collected	June 22, 2023		
	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)			
1,1,1,2-Tetrachloroethane	-		
1,1,1-Trichloroethane	-		
1,1,2,2-Tetrachloroethane	-		
1,1,2-Trichloroethane	-		
1,1-Dichloroethane	-		
1,1-Dichloroethene	-		
1,1-Dichloropropene	-		
1,2,3-Trichlorobenzene	-		
1,2,3-Trichloropropane	-		
1,2,4-Trichlorobenzene	-		
1,2,4-Trimethylbenzene	-		
1,2-Dibromo-3-chloropropane	-		
1,2-Dibromoethane	-		
1,2-Dichlorobenzene	-		
1,2-Dichloroethane	-		
1,2-Dichloropropane	-		
1,3,5-Trimethylbenzene	-		
1,3-Dichlorobenzene	-		
1,3-Dichloropropane	-		
1,4-Dichlorobenzene	-		
2,2-Dichloropropane	-		
2-Butanone	-		
2-Chlorotoluene	-		
2-Hexanone	-		
4-Chlorotoluene	-		
4-Methyl-2-pentanone	-		
Acetone	-		
Benzene	-		
Bromobenzene	-		
Bromochloromethane	-		
Bromodichloromethane	-		
Bromoform	-		
Bromomethane	-		
Carbon disulfide	-		
Carbon tetrachloride	-		
Chlorobenzene	-		
Chloroethane	-		
Chloroform	-		
Chloromethane	-		
cis-1,2-Dichloroethene	-		
cis-1,3-Dichloropropene	-		
Dibromochloromethane	-		
Dibromomethane	-		
Dichlorodifluoromethane	-		
Ethylbenzene	-		
Hexachlorobutadiene	-		
Isopropylbenzene	-		
m+p-Xylene	-		
Methyl Tertiary Butyl Ether	-		
Methylene chloride	-		
n-Butylbenzene	-		
n-Propylbenzene	-		
Naphthalene	-		
o-Xylene	-		
4-Isopropyltoluene	-		
sec-Butylbenzene	-		
Styrene	-		
tert-Butylbenzene	-		
Tetrachloroethene	-		
Toluene	-		
trans-1,2-Dichloroethene	-		
trans-1,3-Dichloropropene	-		
Trichloroethene	-		
Trichlorofluoromethane	-		
Vinyl chloride	-		
Semivolatile Organic Compounds (mg/kg)			
1,2,4-Trichlorobenzene	-		
1,2-Dichlorobenzene	-		
1,3-Dichlorobenzene	-		
1,4-Dichlorobenzene	-		
2,4,5-Trichlorophenol	-		
2,4,6-Trichlorophenol	-		
2,4-Dichlorophenol	-		
2,4-Dimethylphenol	-		
2,4-Dinitrophenol	-		
2,4-Dinitrotoluene	-		
2,6-Dinitrotoluene	-		
2-Chloronaphthalene	-		
2-Chlorophenol	-		
2-Methylnaphthalene	-		
2-Methylphenol	-		
2-Nitroaniline	-		
2-Nitrophenol	-		
3,3-Dichlorobenzidine	-		
3-Nitroaniline	-		
4,6-Dinitro-2-methylphenol	-		
4-Bromophenyl-phenylether	-		
4-Chloro-3-methylphenol	-		
4-Chloroaniline	-		

TABLE B-AO25
ANALYTICAL RESULTS FOR GRID AO25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AO25		
Sample Name	P3IF-SS-IS-SO-AO625		
Date Collected	June 22, 2023		
Semivolatile Organic Compounds (mg/kg), continued			
4-Chlorophenyl-phenylether	-		
4-Nitroaniline	-		
4-Nitrophenol	-		
Acenaphthene	-		
Acenaphthylene	-		
Anthracene	-		
Benzo(a)anthracene	-		
Benzo(a)pyrene	-		
Benzo(b)fluoranthene	-		
Benzo(g,h,i)perylene	-		
Benzo(k)fluoranthene	-		
Benzoic acid	-		
Benzyl Alcohol	-		
Bis(2-chloro-1-methylethyl) ether	-		
Bis(2-chloroethoxy)methane	-		
Bis(2-chloroethyl)ether	-		
Bis(2-ethylhexyl)phthalate	-		
Butyl benzyl phthalate	-		
Carbazole	-		
Chrysene	-		
Di-n-butyl phthalate	-		
Di-n-octyl phthalate	-		
Dibenz(a,h)anthracene	-		
Dibenzofuran	-		
Diethyl phthalate	-		
Dimethyl phthalate	-		
Fluoranthene	-		
Fluorene	-		
Hexachlorobenzene	-		
Hexachlorobutadiene	-		
Hexachloroethane	-		
Indeno(1,2,3-cd)pyrene	-		
Isophorone	-		
n-Nitroso-di-n-propylamine	-		
n-Nitrosodimethylamine	-		
n-Nitrosodiphenylamine	-		
Naphthalene	-		
Nitrobenzene	-		
Pentachlorophenol	-		
Phenanthrene	-		
Phenol	-		
Pyrene	-		
Explosives (mg/kg)			
1,3,5-Trinitrobenzene	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	UJ
2,4,6-Trinitrotoluene	0.075	0.075	UJ
2,4-Dinitrotoluene	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	UJ
2-Nitrotoluene	0.075	0.075	UJ
3-Nitrotoluene	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	0.075	0.075	UJ
4-Nitrotoluene	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	UJ
Nitroglycerin	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)			
Aroclor 1016	-		
Aroclor 1221	-		
Aroclor 1232	-		
Aroclor 1242	-		
Aroclor 1248	-		
Aroclor 1254	-		
Aroclor 1260	-		
Dioxins/Furans (mg/kg)			
Octachlorodibenzofuran (OCDF)	-		
Octachlorodibenzo-p-dioxin (OCDD)	-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	-		

TABLE B-AO25
ANALYTICAL RESULTS FOR GRID AO25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AO25		
Sample Name	P3IF-SS-IS-SO-AO625		
Date Collected	June 22, 2023		
Metals (mg/kg)			
Aluminum	18000	4	J
Antimony	0.15	0.15	U
Arsenic	0.82	0.3	
Barium	110	0.2	
Beryllium	0.3	0.3	J
Cadmium	0.33	0.08	
Calcium (Ca)	2100	15	
Chromium	14	0.2	
Cobalt	4.8	0.08	
Copper	51	0.2	
Iron (Fe)	9200	8	
Lead	11	0.05	
Magnesium (Mg)	8200	5	
Manganese (Mn)	280	0.08	
Mercury	0.015	0.039	J
Nickel	8.1	0.2	
Potassium (K)	710	8	
Selenium	0.68	0.1	
Silver	0.079	0.05	J
Sodium (Na)	73	8	
Thallium	0.034	0.05	J
Vanadium	18	0.1	
Zinc	32	1.5	
Other Parameters (mg/kg)			
Cyanide (CN-)	-		
Nitrate	-		
Perchlorate	-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-AP8
ANALYTICAL RESULTS FOR GRID AP8
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP8			AP8			AP8		
Sample Name	P3IF-BA-GRID-AP008			P3IF-SS-IS-SO-AP008			P3IF-SS-IS-SO-AP508		
Date Collected	June 5, 2023			June 5, 2023			June 5, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)									
1,1,1,2-Tetrachloroethane	0.0025	0.0025	U	-			-		
1,1,1-Trichloroethane	0.0025	0.0025	U	-			-		
1,1,2,2-Tetrachloroethane	0.0025	0.0025	U	-			-		
1,1,2-Trichloroethane	0.0025	0.0025	U	-			-		
1,1-Dichloroethane	0.0025	0.0025	U	-			-		
1,1-Dichloroethene	0.0025	0.0025	U	-			-		
1,1-Dichloropropene	0.0025	0.0025	U	-			-		
1,2,3-Trichlorobenzene	0.0025	0.0025	U	-			-		
1,2,3-Trichloropropane	0.0063	0.0063	U	-			-		
1,2,4-Trichlorobenzene	0.0025	0.0025	U	-			-		
1,2,4-Trimethylbenzene	0.0025	0.0025	U	-			-		
1,2-Dibromo-3-chloropropane	0.0063	0.0063	U	-			-		
1,2-Dibromoethane	0.0025	0.0025	U	-			-		
1,2-Dichlorobenzene	0.0025	0.0025	U	-			-		
1,2-Dichloroethane	0.0025	0.0025	U	-			-		
1,2-Dichloropropane	0.0025	0.0025	U	-			-		
1,3,5-Trimethylbenzene	0.0025	0.0025	U	-			-		
1,3-Dichlorobenzene	0.0025	0.0025	U	-			-		
1,3-Dichloropropane	0.0025	0.0025	U	-			-		
1,4-Dichlorobenzene	0.0025	0.0025	U	-			-		
2,2-Dichloropropane	0.0025	0.0025	U	-			-		
2-Butanone	0.0038	0.0038	U	-			-		
2-Chlorotoluene	0.0025	0.0025	U	-			-		
2-Hexanone	0.0025	0.0025	U	-			-		
4-Chlorotoluene	0.0025	0.0025	U	-			-		
4-Methyl-2-pentanone	0.0025	0.0025	U	-			-		
Acetone	0.077	0.0063		-			-		
Benzene	0.0025	0.0025	U	-			-		
Bromobenzene	0.0025	0.0025	U	-			-		
Bromochloromethane	0.0025	0.0025	U	-			-		
Bromodichloromethane	0.0025	0.0025	U	-			-		
Bromoform	0.0025	0.0025	U	-			-		
Bromomethane	0.0025	0.0025	U	-			-		
Carbon disulfide	0.0025	0.0025	U	-			-		
Carbon tetrachloride	0.0025	0.0025	U	-			-		
Chlorobenzene	0.0025	0.0025	U	-			-		
Chloroethane	0.0025	0.0025	U	-			-		
Chloroform	0.0025	0.0025	U	-			-		
Chloromethane	0.0063	0.0063	U	-			-		
cis-1,2-Dichloroethene	0.0025	0.0025	U	-			-		
cis-1,3-Dichloropropene	0.0025	0.0025	U	-			-		
Dibromochloromethane	0.0025	0.0025	U	-			-		
Dibromomethane	0.0025	0.0025	U	-			-		
Dichlorodifluoromethane	0.0025	0.0025	U	-			-		
Ethylbenzene	0.0025	0.0025	U	-			-		
Hexachlorobutadiene	0.0025	0.0025	U	-			-		
Isopropylbenzene	0.0025	0.0025	U	-			-		
m+p-Xylene	0.0063	0.0063	U	-			-		
Methyl Tertiary Butyl Ether	0.0025	0.0025	U	-			-		
Methylene chloride	0.013	0.013	U	-			-		
n-Butylbenzene	0.0025	0.0025	U	-			-		
n-Propylbenzene	0.0025	0.0025	U	-			-		
Naphthalene	0.0025	0.0025	U	-			-		
o-Xylene	0.0031	0.0031	U	-			-		
4-Isopropyltoluene	0.0025	0.0025	U	-			-		
sec-Butylbenzene	0.0025	0.0025	U	-			-		
Styrene	0.0025	0.0025	U	-			-		
tert-Butylbenzene	0.0025	0.0025	U	-			-		
Tetrachloroethene	0.0025	0.0025	U	-			-		
Toluene	0.0025	0.0025	U	-			-		
trans-1,2-Dichloroethene	0.0025	0.0025	U	-			-		
trans-1,3-Dichloropropene	0.0025	0.0025	U	-			-		
Trichloroethene	0.0025	0.0025	U	-			-		
Trichlorofluoromethane	0.0025	0.0025	U	-			-		
Vinyl chloride	0.0025	0.0025	U	-			-		
Semivolatile Organic Compounds (mg/kg)									
1,2,4-Trichlorobenzene	0.17	0.17	U	-			-		
1,2-Dichlorobenzene	0.17	0.17	U	-			-		
1,3-Dichlorobenzene	0.17	0.17	U	-			-		
1,4-Dichlorobenzene	0.17	0.17	U	-			-		
2,4,5-Trichlorophenol	0.17	0.17	U	-			-		
2,4,6-Trichlorophenol	0.17	0.17	U	-			-		
2,4-Dichlorophenol	0.17	0.17	U	-			-		
2,4-Dimethylphenol	0.17	0.17	U	-			-		
2,4-Dinitrophenol	0.17	0.17	U	-			-		
2,4-Dinitrotoluene	0.17	0.17	U	-			-		
2,6-Dinitrotoluene	0.17	0.17	U	-			-		
2-Chloronaphthalene	0.17	0.17	U	-			-		
2-Chlorophenol	0.17	0.17	U	-			-		
2-Methylnaphthalene	0.17	0.17	U	-			-		
2-Methylphenol	0.17	0.17	U	-			-		
2-Nitroaniline	0.17	0.17	U	-			-		
2-Nitrophenol	0.17	0.17	U	-			-		
3,3-Dichlorobenzidine	0.17	0.17	U	-			-		
3-Nitroaniline	0.17	0.17	U	-			-		
4,6-Dinitro-2-methylphenol	0.17	0.17	U	-			-		
4-Bromophenyl-phenylether	0.17	0.17	U	-			-		
4-Chloro-3-methylphenol	0.17	0.17	U	-			-		
4-Chloroaniline	0.17	0.17	U	-			-		

TABLE B-AP8
ANALYTICAL RESULTS FOR GRID AP8
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP8			AP8			AP8		
Sample Name	P3IF-BA-GRID-AP008			P3IF-SS-IS-SO-AP008			P3IF-SS-IS-SO-AP508		
Date Collected	June 5, 2023			June 5, 2023			June 5, 2023		
Semivolatile Organic Compounds (mg/kg), continued									
4-Chlorophenyl-phenylether	0.17	0.17	U	-			-		
4-Nitroaniline	0.17	0.17	U	-			-		
4-Nitrophenol	0.17	0.17	U	-			-		
Acenaphthene	0.17	0.17	U	-			-		
Acenaphthylene	0.17	0.17	U	-			-		
Anthracene	0.17	0.17	U	-			-		
Benzo(a)anthracene	0.17	0.17	U	-			-		
Benzo(a)pyrene	0.13	0.13	U	-			-		
Benzo(b)fluoranthene	0.17	0.17	U	-			-		
Benzo(g,h,i)perylene	0.17	0.17	U	-			-		
Benzo(k)fluoranthene	0.17	0.17	U	-			-		
Benzoic acid	0.17	0.17	U	-			-		
Benzyl Alcohol	0.17	0.17	U	-			-		
Bis(2-chloro-1-methylethyl) ether	0.17	0.17	U	-			-		
Bis(2-chloroethoxy)methane	0.17	0.17	U	-			-		
Bis(2-chloroethyl)ether	0.17	0.17	U	-			-		
Bis(2-ethylhexyl)phthalate	0.17	0.17	U	-			-		
Butyl benzyl phthalate	0.17	0.17	U	-			-		
Carbazole	0.17	0.17	U	-			-		
Chrysene	0.17	0.17	U	-			-		
Di-n-butyl phthalate	0.17	0.17	U	-			-		
Di-n-octyl phthalate	0.17	0.17	U	-			-		
Dibenz(a,h)anthracene	0.13	0.13	U	-			-		
Dibenzofuran	0.17	0.17	U	-			-		
Diethyl phthalate	0.17	0.17	U	-			-		
Dimethyl phthalate	0.17	0.17	U	-			-		
Fluoranthene	0.17	0.17	U	-			-		
Fluorene	0.17	0.17	U	-			-		
Hexachlorobenzene	0.17	0.17	U	-			-		
Hexachlorobutadiene	0.17	0.17	U	-			-		
Hexachloroethane	0.17	0.17	U	-			-		
Indeno(1,2,3-cd)pyrene	0.17	0.17	U	-			-		
Isophorone	0.17	0.17	U	-			-		
n-Nitroso-di-n-propylamine	0.17	0.17	U	-			-		
n-Nitrosodimethylamine	0.021	0.021	U	-			-		
n-Nitrosodiphenylamine	0.17	0.17	U	-			-		
Naphthalene	0.17	0.17	U	-			-		
Nitrobenzene	0.17	0.17	U	-			-		
Pentachlorophenol	0.17	0.17	U	-			-		
Phenanthrene	0.17	0.17	U	-			-		
Phenol	0.17	0.17	U	-			-		
Pyrene	0.17	0.17	U	-			-		
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	-			0.075	0.075	U	0.075	0.075	U
1,3-Dinitrobenzene	-			0.075	0.075	U	0.075	0.075	U
2,4,6-Trinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2,4-Dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2,6-Dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2-Nitrotoluene	-			0.075	0.075	U	0.075	0.075	U
3-Nitrotoluene	-			0.075	0.075	U	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
4-Nitrotoluene	-			0.075	0.075	U	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	-			0.075	0.075	U	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	-			0.075	0.075	U	0.075	0.075	U
Nitrobenzene	-			0.075	0.075	U	0.075	0.075	U
Nitroglycerin	-			0.15	0.15	U	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	-			0.075	0.075	U	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	-			0.25	0.25	U	0.25	0.25	U
Polychlorinated Biphenyls (mg/kg)									
Aroclor 1016	0.021	0.021	U	-			-		
Aroclor 1221	0.021	0.021	U	-			-		
Aroclor 1232	0.01	0.01	U	-			-		
Aroclor 1242	0.01	0.01	U	-			-		
Aroclor 1248	0.01	0.01	U	-			-		
Aroclor 1254	0.01	0.01	U	-			-		
Aroclor 1260	0.01	0.01	U	-			-		
Dioxins/Furans (mg/kg)									
Octachlorodibenzofuran (OCDF)	0.0000011	0.0000011	U	-			-		
Octachlorodibenzo-p-dioxin (OCDD)	0.000017	0.000017	J	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.00000043	0.00000043	U	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	0.0000024	0.0000024	U	-			-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.00000022	0.00000022	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.00000015	0.00000015	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000091	0.000000091	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.00000015	0.00000015	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000095	0.000000095	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.00000018	0.00000018	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000016	0.00000016	U	-			-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000012	0.00000012	U	-			-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.00000011	0.00000011	U	-			-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.00000036	0.00000036	U	-			-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000011	0.00000011	U	-			-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.00000044	0.00000044	J	-			-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.00000009	0.00000009	U	-			-		

TABLE B-AP8
ANALYTICAL RESULTS FOR GRID AP8
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP8			AP8			AP8		
Sample Name	P3IF-BA-GRID-AP008			P3IF-SS-IS-SO-AP008			P3IF-SS-IS-SO-AP508		
Date Collected	June 5, 2023			June 5, 2023			June 5, 2023		
Metals (mg/kg)									
Aluminum	-			7500	4		6900	4	
Antimony	-			0.15	0.15	U	0.15	0.15	U
Arsenic	-			1.4	0.3		1.3	0.3	
Barium	-			120	0.2	J	120	0.2	J
Beryllium	-			0.38	0.3	J	0.35	0.3	J
Cadmium	-			0.14	0.08		0.13	0.08	
Calcium (Ca)	-			14000	15		13000	15	
Chromium	-			5.4	0.2		5	0.2	
Cobalt	-			2.8	0.08		2.5	0.08	
Copper	-			16	0.2		15	0.2	
Iron (Fe)	-			6700	8		6000	8	
Lead	-			5.8	0.05		5.3	0.05	
Magnesium (Mg)	-			2600	5		2400	5	
Manganese (Mn)	-			220	0.08		210	0.08	
Mercury	-			0.026	0.04	J	0.025	0.04	J
Nickel	-			5.2	0.2		4.6	0.2	
Potassium (K)	-			1200	8		1100	8	
Selenium	-			0.75	0.1		0.8	0.1	
Silver	-			0.045	0.05	J	0.025	0.05	J
Sodium (Na)	-			54	8		48	8	
Thallium	-			0.19	0.05		0.06	0.05	J
Vanadium	-			9.2	0.1		8.3	0.1	
Zinc	-			21	1.5		19	1.5	
Other Parameters (mg/kg)									
Cyanide (CN-)	0.31	0.31	U	-			-		
Nitrate	2.7	2.1	J	-			-		
Perchlorate	0.002	0.002	U	-			-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-AP8
ANALYTICAL RESULTS FOR GRID AP8
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP8		
Sample Name	P3IF-SS-IS-SO-AP608		
Date Collected	June 5, 2023		
	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)			
1,1,1,2-Tetrachloroethane	-		
1,1,1-Trichloroethane	-		
1,1,2,2-Tetrachloroethane	-		
1,1,2-Trichloroethane	-		
1,1-Dichloroethane	-		
1,1-Dichloroethene	-		
1,1-Dichloropropene	-		
1,2,3-Trichlorobenzene	-		
1,2,3-Trichloropropane	-		
1,2,4-Trichlorobenzene	-		
1,2,4-Trimethylbenzene	-		
1,2-Dibromo-3-chloropropane	-		
1,2-Dibromoethane	-		
1,2-Dichlorobenzene	-		
1,2-Dichloroethane	-		
1,2-Dichloropropane	-		
1,3,5-Trimethylbenzene	-		
1,3-Dichlorobenzene	-		
1,3-Dichloropropane	-		
1,4-Dichlorobenzene	-		
2,2-Dichloropropane	-		
2-Butanone	-		
2-Chlorotoluene	-		
2-Hexanone	-		
4-Chlorotoluene	-		
4-Methyl-2-pentanone	-		
Acetone	-		
Benzene	-		
Bromobenzene	-		
Bromochloromethane	-		
Bromodichloromethane	-		
Bromoform	-		
Bromomethane	-		
Carbon disulfide	-		
Carbon tetrachloride	-		
Chlorobenzene	-		
Chloroethane	-		
Chloroform	-		
Chloromethane	-		
cis-1,2-Dichloroethene	-		
cis-1,3-Dichloropropene	-		
Dibromochloromethane	-		
Dibromomethane	-		
Dichlorodifluoromethane	-		
Ethylbenzene	-		
Hexachlorobutadiene	-		
Isopropylbenzene	-		
m+p-Xylene	-		
Methyl Tertiary Butyl Ether	-		
Methylene chloride	-		
n-Butylbenzene	-		
n-Propylbenzene	-		
Naphthalene	-		
o-Xylene	-		
4-Isopropyltoluene	-		
sec-Butylbenzene	-		
Styrene	-		
tert-Butylbenzene	-		
Tetrachloroethene	-		
Toluene	-		
trans-1,2-Dichloroethene	-		
trans-1,3-Dichloropropene	-		
Trichloroethene	-		
Trichlorofluoromethane	-		
Vinyl chloride	-		
Semivolatile Organic Compounds (mg/kg)			
1,2,4-Trichlorobenzene	-		
1,2-Dichlorobenzene	-		
1,3-Dichlorobenzene	-		
1,4-Dichlorobenzene	-		
2,4,5-Trichlorophenol	-		
2,4,6-Trichlorophenol	-		
2,4-Dichlorophenol	-		
2,4-Dimethylphenol	-		
2,4-Dinitrophenol	-		
2,4-Dinitrotoluene	-		
2,6-Dinitrotoluene	-		
2-Chloronaphthalene	-		
2-Chlorophenol	-		
2-Methylnaphthalene	-		
2-Methylphenol	-		
2-Nitroaniline	-		
2-Nitrophenol	-		
3,3-Dichlorobenzidine	-		
3-Nitroaniline	-		
4,6-Dinitro-2-methylphenol	-		
4-Bromophenyl-phenylether	-		
4-Chloro-3-methylphenol	-		
4-Chloroaniline	-		

TABLE B-AP8
ANALYTICAL RESULTS FOR GRID AP8
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP8		
Sample Name	P3IF-SS-IS-SO-AP608		
Date Collected	June 5, 2023		
Semivolatile Organic Compounds (mg/kg), continued			
4-Chlorophenyl-phenylether	-		
4-Nitroaniline	-		
4-Nitrophenol	-		
Acenaphthene	-		
Acenaphthylene	-		
Anthracene	-		
Benzo(a)anthracene	-		
Benzo(a)pyrene	-		
Benzo(b)fluoranthene	-		
Benzo(g,h,i)perylene	-		
Benzo(k)fluoranthene	-		
Benzoic acid	-		
Benzyl Alcohol	-		
Bis(2-chloro-1-methylethyl) ether	-		
Bis(2-chloroethoxy)methane	-		
Bis(2-chloroethyl)ether	-		
Bis(2-ethylhexyl)phthalate	-		
Butyl benzyl phthalate	-		
Carbazole	-		
Chrysene	-		
Di-n-butyl phthalate	-		
Di-n-octyl phthalate	-		
Dibenz(a,h)anthracene	-		
Dibenzofuran	-		
Diethyl phthalate	-		
Dimethyl phthalate	-		
Fluoranthene	-		
Fluorene	-		
Hexachlorobenzene	-		
Hexachlorobutadiene	-		
Hexachloroethane	-		
Indeno(1,2,3-cd)pyrene	-		
Isophorone	-		
n-Nitroso-di-n-propylamine	-		
n-Nitrosodimethylamine	-		
n-Nitrosodiphenylamine	-		
Naphthalene	-		
Nitrobenzene	-		
Pentachlorophenol	-		
Phenanthrene	-		
Phenol	-		
Pyrene	-		
Explosives (mg/kg)			
1,3,5-Trinitrobenzene	0.075	0.075	U
1,3-Dinitrobenzene	0.075	0.075	U
2,4,6-Trinitrotoluene	0.075	0.075	U
2,4-Dinitrotoluene	0.075	0.075	U
2,6-Dinitrotoluene	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	0.075	0.075	U
2-Nitrotoluene	0.075	0.075	U
3-Nitrotoluene	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	0.075	0.075	U
4-Nitrotoluene	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	U
Nitrobenzene	0.075	0.075	U
Nitroglycerin	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	0.25	0.25	U
Polychlorinated Biphenyls (mg/kg)			
Aroclor 1016	-		
Aroclor 1221	-		
Aroclor 1232	-		
Aroclor 1242	-		
Aroclor 1248	-		
Aroclor 1254	-		
Aroclor 1260	-		
Dioxins/Furans (mg/kg)			
Octachlorodibenzofuran (OCDF)	-		
Octachlorodibenzo-p-dioxin (OCDD)	-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	-		

TABLE B-AP8
ANALYTICAL RESULTS FOR GRID AP8
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP8		
Sample Name	P3IF-SS-IS-SO-AP608		
Date Collected	June 5, 2023		
Metals (mg/kg)			
Aluminum	7700	4	
Antimony	0.15	0.15	U
Arsenic	1.3	0.3	
Barium	120	0.2	J
Beryllium	0.39	0.3	J
Cadmium	0.15	0.08	
Calcium (Ca)	14000	15	
Chromium	5.2	0.2	
Cobalt	2.8	0.08	
Copper	13	0.2	
Iron (Fe)	6500	8	
Lead	5.8	0.05	
Magnesium (Mg)	2700	5	
Manganese (Mn)	220	0.08	
Mercury	0.037	0.041	J
Nickel	4.9	0.2	
Potassium (K)	1300	8	
Selenium	0.73	0.1	
Silver	0.022	0.05	J
Sodium (Na)	43	8	
Thallium	0.05	0.05	J
Vanadium	9.3	0.1	
Zinc	21	1.5	
Other Parameters (mg/kg)			
Cyanide (CN-)	-		
Nitrate	-		
Perchlorate	-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-AP9
ANALYTICAL RESULTS FOR GRID AP9
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP9			AP9			AP9		
Sample Name	P3IF-BA-GRID-AP009			P3IF-BA-GRID-AP509			P3IF-SS-IS-SO-AP009		
Date Collected	June 6, 2023			June 6, 2023			June 6, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)									
1,1,1,2-Tetrachloroethane	0.0022	0.0022	U	0.0023	0.0023	U	-		
1,1,1-Trichloroethane	0.0022	0.0022	U	0.0023	0.0023	U	-		
1,1,2,2-Tetrachloroethane	0.0022	0.0022	U	0.0023	0.0023	U	-		
1,1,2-Trichloroethane	0.0022	0.0022	U	0.0023	0.0023	U	-		
1,1-Dichloroethane	0.0022	0.0022	U	0.0023	0.0023	U	-		
1,1-Dichloroethene	0.0022	0.0022	U	0.0023	0.0023	U	-		
1,1-Dichloropropene	0.0022	0.0022	U	0.0023	0.0023	U	-		
1,2,3-Trichlorobenzene	0.0022	0.0022	U	0.0023	0.0023	U	-		
1,2,3-Trichloropropane	0.0056	0.0056	U	0.0057	0.0057	U	-		
1,2,4-Trichlorobenzene	0.0022	0.0022	U	0.0023	0.0023	U	-		
1,2,4-Trimethylbenzene	0.0022	0.0022	U	0.0023	0.0023	U	-		
1,2-Dibromo-3-chloropropane	0.0056	0.0056	U	0.0057	0.0057	U	-		
1,2-Dibromoethane	0.0022	0.0022	U	0.0023	0.0023	U	-		
1,2-Dichlorobenzene	0.0022	0.0022	U	0.0023	0.0023	U	-		
1,2-Dichloroethane	0.0022	0.0022	U	0.0023	0.0023	U	-		
1,2-Dichloropropane	0.0022	0.0022	U	0.0023	0.0023	U	-		
1,3,5-Trimethylbenzene	0.0022	0.0022	U	0.0023	0.0023	U	-		
1,3-Dichlorobenzene	0.0022	0.0022	U	0.0023	0.0023	U	-		
1,3-Dichloropropane	0.0022	0.0022	U	0.0023	0.0023	U	-		
1,4-Dichlorobenzene	0.0022	0.0022	U	0.0023	0.0023	U	-		
2,2-Dichloropropane	0.0022	0.0022	U	0.0023	0.0023	U	-		
2-Butanone	0.0034	0.0034	U	0.0034	0.0034	U	-		
2-Chlorotoluene	0.0022	0.0022	U	0.0023	0.0023	U	-		
2-Hexanone	0.0022	0.0022	U	0.0023	0.0023	U	-		
4-Chlorotoluene	0.0022	0.0022	U	0.0023	0.0023	U	-		
4-Methyl-2-pentanone	0.0022	0.0022	U	0.0023	0.0023	U	-		
Acetone	0.042	0.0056		0.042	0.0057		-		
Benzene	0.0022	0.0022	U	0.0023	0.0023	U	-		
Bromobenzene	0.0022	0.0022	U	0.0023	0.0023	U	-		
Bromochloromethane	0.0022	0.0022	U	0.0023	0.0023	U	-		
Bromodichloromethane	0.0022	0.0022	U	0.0023	0.0023	U	-		
Bromoform	0.0022	0.0022	U	0.0023	0.0023	U	-		
Bromomethane	0.0022	0.0022	U	0.0023	0.0023	U	-		
Carbon disulfide	0.0022	0.0022	U	0.0023	0.0023	U	-		
Carbon tetrachloride	0.0022	0.0022	U	0.0023	0.0023	U	-		
Chlorobenzene	0.0022	0.0022	U	0.0023	0.0023	U	-		
Chloroethane	0.0022	0.0022	U	0.0023	0.0023	U	-		
Chloroform	0.0022	0.0022	U	0.0023	0.0023	U	-		
Chloromethane	0.0056	0.0056	U	0.0057	0.0057	U	-		
cis-1,2-Dichloroethene	0.0022	0.0022	U	0.0023	0.0023	U	-		
cis-1,3-Dichloropropene	0.0022	0.0022	U	0.0023	0.0023	U	-		
Dibromochloromethane	0.0022	0.0022	U	0.0023	0.0023	U	-		
Dibromomethane	0.0022	0.0022	U	0.0023	0.0023	U	-		
Dichlorodifluoromethane	0.0022	0.0022	U	0.0023	0.0023	U	-		
Ethylbenzene	0.0022	0.0022	U	0.0023	0.0023	U	-		
Hexachlorobutadiene	0.0022	0.0022	U	0.0023	0.0023	U	-		
Isopropylbenzene	0.0022	0.0022	U	0.0023	0.0023	U	-		
m+p-Xylene	0.0056	0.0056	U	0.0057	0.0057	U	-		
Methyl Tertiary Butyl Ether	0.0022	0.0022	U	0.0023	0.0023	U	-		
Methylene chloride	0.011	0.011	U	0.011	0.011	U	-		
n-Butylbenzene	0.0022	0.0022	U	0.0023	0.0023	U	-		
n-Propylbenzene	0.0022	0.0022	U	0.0023	0.0023	U	-		
Naphthalene	0.0022	0.0022	U	0.0023	0.0023	U	-		
o-Xylene	0.0028	0.0028	U	0.0028	0.0028	U	-		
4-Isopropyltoluene	0.0022	0.0022	U	0.0023	0.0023	U	-		
sec-Butylbenzene	0.0022	0.0022	U	0.0023	0.0023	U	-		
Styrene	0.0022	0.0022	U	0.0023	0.0023	U	-		
tert-Butylbenzene	0.0022	0.0022	U	0.0023	0.0023	U	-		
Tetrachloroethene	0.0022	0.0022	U	0.0023	0.0023	U	-		
Toluene	0.0022	0.0022	U	0.0023	0.0023	U	-		
trans-1,2-Dichloroethene	0.0022	0.0022	U	0.0023	0.0023	U	-		
trans-1,3-Dichloropropene	0.0022	0.0022	U	0.0023	0.0023	U	-		
Trichloroethene	0.0022	0.0022	U	0.0023	0.0023	U	-		
Trichlorofluoromethane	0.0022	0.0022	U	0.0023	0.0023	U	-		
Vinyl chloride	0.0022	0.0022	U	0.0023	0.0023	U	-		
Semivolatile Organic Compounds (mg/kg)									
1,2,4-Trichlorobenzene	0.35	0.35	U	0.35	0.35	U	-		
1,2-Dichlorobenzene	0.35	0.35	U	0.35	0.35	U	-		
1,3-Dichlorobenzene	0.35	0.35	U	0.35	0.35	U	-		
1,4-Dichlorobenzene	0.35	0.35	U	0.35	0.35	U	-		
2,4,5-Trichlorophenol	0.35	0.35	U	0.35	0.35	U	-		
2,4,6-Trichlorophenol	0.35	0.35	U	0.35	0.35	U	-		
2,4-Dichlorophenol	0.35	0.35	U	0.35	0.35	U	-		
2,4-Dimethylphenol	0.35	0.35	U	0.35	0.35	U	-		
2,4-Dinitrophenol	0.35	0.35	U	0.35	0.35	U	-		
2,4-Dinitrotoluene	0.35	0.35	U	0.35	0.35	U	-		
2,6-Dinitrotoluene	0.35	0.35	U	0.35	0.35	U	-		
2-Chloronaphthalene	0.35	0.35	U	0.35	0.35	U	-		
2-Chlorophenol	0.35	0.35	U	0.35	0.35	U	-		
2-Methylnaphthalene	0.35	0.35	U	0.35	0.35	U	-		
2-Methylphenol	0.35	0.35	U	0.35	0.35	U	-		
2-Nitroaniline	0.35	0.35	U	0.35	0.35	U	-		
2-Nitrophenol	0.35	0.35	U	0.35	0.35	U	-		
3,3-Dichlorobenzidine	0.35	0.35	U	0.35	0.35	U	-		
3-Nitroaniline	0.35	0.35	U	0.35	0.35	U	-		
4,6-Dinitro-2-methylphenol	0.35	0.35	U	0.35	0.35	U	-		
4-Bromophenyl-phenylether	0.35	0.35	U	0.35	0.35	U	-		
4-Chloro-3-methylphenol	0.35	0.35	U	0.35	0.35	U	-		
4-Chloroaniline	0.35	0.35	U	0.35	0.35	U	-		

TABLE B-AP9
ANALYTICAL RESULTS FOR GRID AP9
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP9			AP9			AP9		
Sample Name	P3IF-BA-GRID-AP009			P3IF-BA-GRID-AP509			P3IF-SS-IS-SO-AP009		
Date Collected	June 6, 2023			June 6, 2023			June 6, 2023		
Semivolatile Organic Compounds (mg/kg), continued									
4-Chlorophenyl-phenylether	0.35	0.35	U	0.35	0.35	U	-		
4-Nitroaniline	0.35	0.35	U	0.35	0.35	U	-		
4-Nitrophenol	0.35	0.35	U	0.35	0.35	U	-		
Acenaphthene	0.35	0.35	U	0.35	0.35	U	-		
Acenaphthylene	0.35	0.35	U	0.35	0.35	U	-		
Anthracene	0.35	0.35	U	0.35	0.35	U	-		
Benzo(a)anthracene	0.35	0.35	U	0.35	0.35	U	-		
Benzo(a)pyrene	0.28	0.28	U	0.27	0.27	U	-		
Benzo(b)fluoranthene	0.35	0.35	U	0.35	0.35	U	-		
Benzo(g,h,i)perylene	0.35	0.35	U	0.35	0.35	U	-		
Benzo(k)fluoranthene	0.35	0.35	U	0.35	0.35	U	-		
Benzoic acid	0.35	0.35	U	0.35	0.35	U	-		
Benzyl Alcohol	0.35	0.35	U	0.35	0.35	U	-		
Bis(2-chloro-1-methylethyl) ether	0.35	0.35	U	0.35	0.35	U	-		
Bis(2-chloroethoxy)methane	0.35	0.35	U	0.35	0.35	U	-		
Bis(2-chloroethyl)ether	0.35	0.35	U	0.35	0.35	U	-		
Bis(2-ethylhexyl)phthalate	0.35	0.35	U	0.35	0.35	U	-		
Butyl benzyl phthalate	0.35	0.35	U	0.35	0.35	U	-		
Carbazole	0.35	0.35	U	0.35	0.35	U	-		
Chrysene	0.35	0.35	U	0.35	0.35	U	-		
Di-n-butyl phthalate	0.35	0.35	U	0.35	0.35	U	-		
Di-n-octyl phthalate	0.35	0.35	U	0.35	0.35	U	-		
Dibenz(a,h)anthracene	**0.28**	**0.28**	**U**	**0.27**	**0.27**	**U**	-		
Dibenzofuran	0.35	0.35	U	0.35	0.35	U	-		
Diethyl phthalate	0.35	0.35	U	0.35	0.35	U	-		
Dimethyl phthalate	0.35	0.35	U	0.35	0.35	U	-		
Fluoranthene	0.35	0.35	U	0.35	0.35	U	-		
Fluorene	0.35	0.35	U	0.35	0.35	U	-		
Hexachlorobenzene	0.35	0.35	U	0.35	0.35	U	-		
Hexachlorobutadiene	0.35	0.35	U	0.35	0.35	U	-		
Hexachloroethane	0.35	0.35	U	0.35	0.35	U	-		
Indeno(1,2,3-cd)pyrene	0.35	0.35	U	0.35	0.35	U	-		
Isophorone	0.35	0.35	U	0.35	0.35	U	-		
n-Nitroso-di-n-propylamine	0.35	0.35	U	0.35	0.35	U	-		
n-Nitrosodimethylamine	**0.042**	**0.042**	**U**	**0.042**	**0.042**	**U**	-		
n-Nitrosodiphenylamine	0.35	0.35	U	0.35	0.35	U	-		
Naphthalene	0.35	0.35	U	0.35	0.35	U	-		
Nitrobenzene	0.35	0.35	U	0.35	0.35	U	-		
Pentachlorophenol	0.35	0.35	U	0.35	0.35	U	-		
Phenanthrene	0.35	0.35	U	0.35	0.35	U	-		
Phenol	0.35	0.35	U	0.35	0.35	U	-		
Pyrene	0.35	0.35	U	0.35	0.35	U	-		
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	-			-			0.075	0.075	U
1,3-Dinitrobenzene	-			-			0.075	0.075	U
2,4,6-Trinitrotoluene	-			-			0.075	0.075	U
2,4-Dinitrotoluene	-			-			0.075	0.075	U
2,6-Dinitrotoluene	-			-			0.075	0.075	U
2-Amino-4,6-dinitrotoluene	-			-			0.075	0.075	U
2-Nitrotoluene	-			-			0.075	0.075	U
3-Nitrotoluene	-			-			0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	-			-			0.075	0.075	U
4-Nitrotoluene	-			-			0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	-			-			0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	-			-			0.075	0.075	U
Nitrobenzene	-			-			0.075	0.075	U
Nitroglycerin	-			-			0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	-			-			0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	-			-			0.25	0.25	U
Polychlorinated Biphenyls (mg/kg)									
Aroclor 1016	0.021	0.021	U	0.021	0.021	U	-		
Aroclor 1221	0.021	0.021	U	0.021	0.021	U	-		
Aroclor 1232	0.011	0.011	U	0.011	0.011	U	-		
Aroclor 1242	0.011	0.011	U	0.011	0.011	U	-		
Aroclor 1248	0.011	0.011	U	0.011	0.011	U	-		
Aroclor 1254	0.011	0.011	U	0.011	0.011	U	-		
Aroclor 1260	0.011	0.011	U	0.011	0.011	U	-		
Dioxins/Furans (mg/kg)									
Octachlorodibenzofuran (OCDF)	0.0000022	0.0000022	J	0.0000023	0.0000023	U	-		
Octachlorodibenzo-p-dioxin (OCDD)	0.000063	0.000013		0.000058	0.000013		-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.0000017	0.0000017	J	0.0000016	0.0000016	J	-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	0.0000075	0.0000075	J	0.0000059	0.0000059	J	-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.00000029	0.00000029	U	0.00000028	0.00000028	U	-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.00000015	0.00000015	U	0.00000017	0.00000017	U	-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.0000002	0.0000002	U	0.00000018	0.00000018	U	-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.00000014	0.00000014	U	0.00000017	0.00000017	U	-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000036	0.00000036	UJ	0.00000019	0.00000019	U	-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.00000018	0.00000018	UJ	0.0000002	0.0000002	U	-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000028	0.00000028	U	0.00000018	0.00000018	U	-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000011	0.00000011	U	0.00000017	0.00000017	U	-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.000000082	0.000000082	U	0.00000016	0.00000016	U	-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.0000004	0.0000004	UJ	0.0000002	0.0000002	U	-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000006	0.00000006	U	0.00000014	0.00000014	U	-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.00000023	0.00000023	U	0.00000026	0.00000026	U	-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.000000052	0.000000052	U	0.00000022	0.00000022	U	-		

TABLE B-AP9
ANALYTICAL RESULTS FOR GRID AP9
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP9			AP9			AP9		
Sample Name	P3IF-BA-GRID-AP009			P3IF-BA-GRID-AP509			P3IF-SS-IS-SO-AP009		
Date Collected	June 6, 2023			June 6, 2023			June 6, 2023		
Metals (mg/kg)									
Aluminum	-			-			15000	4	
Antimony	-			-			0.15	0.15	U
Arsenic	-			-			1.7	0.3	
Barium	-			-			280	0.2	J
Beryllium	-			-			0.7	0.3	J
Cadmium	-			-			0.44	0.08	
Calcium (Ca)	-			-			18000	15	
Chromium	-			-			10	0.2	
Cobalt	-			-			4.1	0.08	
Copper	-			-			46	0.2	
Iron (Fe)	-			-			11000	8	
Lead	-			-			13	0.05	
Magnesium (Mg)	-			-			5000	5	
Manganese (Mn)	-			-			470	0.08	
Mercury	-			-			0.045	0.042	J
Nickel	-			-			8.5	0.2	
Potassium (K)	-			-			2500	8	
Selenium	-			-			1	0.1	
Silver	-			-			0.084	0.05	J
Sodium (Na)	-			-			56	8	
Thallium	-			-			0.083	0.05	J
Vanadium	-			-			14	0.1	
Zinc	-			-			43	1.5	
Other Parameters (mg/kg)									
Cyanide (CN-)	0.33	0.33	U	0.32	0.32	U	-		
Nitrate	4.1	2.2	J	2.1	2.2	J	-		
Perchlorate	0.0021	0.0021	U	0.0020	0.0020	UJ	-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-AP9
ANALYTICAL RESULTS FOR GRID AP9
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP9			AP9		
Sample Name	P3IF-SS-IS-SO-AP509			P3IF-SS-IS-SO-AP609		
Date Collected	June 6, 2023			June 6, 2023		
	Result	LOD	Qual	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)						
1,1,1,2-Tetrachloroethane	-			-		
1,1,1-Trichloroethane	-			-		
1,1,2,2-Tetrachloroethane	-			-		
1,1,2-Trichloroethane	-			-		
1,1-Dichloroethane	-			-		
1,1-Dichloroethene	-			-		
1,1-Dichloropropene	-			-		
1,2,3-Trichlorobenzene	-			-		
1,2,3-Trichloropropane	-			-		
1,2,4-Trichlorobenzene	-			-		
1,2,4-Trimethylbenzene	-			-		
1,2-Dibromo-3-chloropropane	-			-		
1,2-Dibromoethane	-			-		
1,2-Dichlorobenzene	-			-		
1,2-Dichloroethane	-			-		
1,2-Dichloropropane	-			-		
1,3,5-Trimethylbenzene	-			-		
1,3-Dichlorobenzene	-			-		
1,3-Dichloropropane	-			-		
1,4-Dichlorobenzene	-			-		
2,2-Dichloropropane	-			-		
2-Butanone	-			-		
2-Chlorotoluene	-			-		
2-Hexanone	-			-		
4-Chlorotoluene	-			-		
4-Methyl-2-pentanone	-			-		
Acetone	-			-		
Benzene	-			-		
Bromobenzene	-			-		
Bromochloromethane	-			-		
Bromodichloromethane	-			-		
Bromoform	-			-		
Bromomethane	-			-		
Carbon disulfide	-			-		
Carbon tetrachloride	-			-		
Chlorobenzene	-			-		
Chloroethane	-			-		
Chloroform	-			-		
Chloromethane	-			-		
cis-1,2-Dichloroethene	-			-		
cis-1,3-Dichloropropene	-			-		
Dibromochloromethane	-			-		
Dibromomethane	-			-		
Dichlorodifluoromethane	-			-		
Ethylbenzene	-			-		
Hexachlorobutadiene	-			-		
Isopropylbenzene	-			-		
m+p-Xylene	-			-		
Methyl Tertiary Butyl Ether	-			-		
Methylene chloride	-			-		
n-Butylbenzene	-			-		
n-Propylbenzene	-			-		
Naphthalene	-			-		
o-Xylene	-			-		
4-Isopropyltoluene	-			-		
sec-Butylbenzene	-			-		
Styrene	-			-		
tert-Butylbenzene	-			-		
Tetrachloroethene	-			-		
Toluene	-			-		
trans-1,2-Dichloroethene	-			-		
trans-1,3-Dichloropropene	-			-		
Trichloroethene	-			-		
Trichlorofluoromethane	-			-		
Vinyl chloride	-			-		
Semivolatile Organic Compounds (mg/kg)						
1,2,4-Trichlorobenzene	-			-		
1,2-Dichlorobenzene	-			-		
1,3-Dichlorobenzene	-			-		
1,4-Dichlorobenzene	-			-		
2,4,5-Trichlorophenol	-			-		
2,4,6-Trichlorophenol	-			-		
2,4-Dichlorophenol	-			-		
2,4-Dimethylphenol	-			-		
2,4-Dinitrophenol	-			-		
2,4-Dinitrotoluene	-			-		
2,6-Dinitrotoluene	-			-		
2-Chloronaphthalene	-			-		
2-Chlorophenol	-			-		
2-Methylnaphthalene	-			-		
2-Methylphenol	-			-		
2-Nitroaniline	-			-		
2-Nitrophenol	-			-		
3,3-Dichlorobenzidine	-			-		
3-Nitroaniline	-			-		
4,6-Dinitro-2-methylphenol	-			-		
4-Bromophenyl-phenylether	-			-		
4-Chloro-3-methylphenol	-			-		
4-Chloroaniline	-			-		

TABLE B-AP9
ANALYTICAL RESULTS FOR GRID AP9
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP9			AP9		
Sample Name	P3IF-SS-IS-SO-AP509			P3IF-SS-IS-SO-AP609		
Date Collected	June 6, 2023			June 6, 2023		
Semivolatile Organic Compounds (mg/kg), continued						
4-Chlorophenyl-phenylether	-			-		
4-Nitroaniline	-			-		
4-Nitrophenol	-			-		
Acenaphthene	-			-		
Acenaphthylene	-			-		
Anthracene	-			-		
Benzo(a)anthracene	-			-		
Benzo(a)pyrene	-			-		
Benzo(b)fluoranthene	-			-		
Benzo(g,h,i)perylene	-			-		
Benzo(k)fluoranthene	-			-		
Benzoic acid	-			-		
Benzyl Alcohol	-			-		
Bis(2-chloro-1-methylethyl) ether	-			-		
Bis(2-chloroethoxy)methane	-			-		
Bis(2-chloroethyl)ether	-			-		
Bis(2-ethylhexyl)phthalate	-			-		
Butyl benzyl phthalate	-			-		
Carbazole	-			-		
Chrysene	-			-		
Di-n-butyl phthalate	-			-		
Di-n-octyl phthalate	-			-		
Dibenz(a,h)anthracene	-			-		
Dibenzofuran	-			-		
Diethyl phthalate	-			-		
Dimethyl phthalate	-			-		
Fluoranthene	-			-		
Fluorene	-			-		
Hexachlorobenzene	-			-		
Hexachlorobutadiene	-			-		
Hexachloroethane	-			-		
Indeno(1,2,3-cd)pyrene	-			-		
Isophorone	-			-		
n-Nitroso-di-n-propylamine	-			-		
n-Nitrosodimethylamine	-			-		
n-Nitrosodiphenylamine	-			-		
Naphthalene	-			-		
Nitrobenzene	-			-		
Pentachlorophenol	-			-		
Phenanthrene	-			-		
Phenol	-			-		
Pyrene	-			-		
Explosives (mg/kg)						
1,3,5-Trinitrobenzene	0.075	0.075	U	0.075	0.075	U
1,3-Dinitrobenzene	0.075	0.075	U	0.075	0.075	U
2,4,6-Trinitrotoluene	0.075	0.075	U	0.075	0.075	U
2,4-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U
2,6-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	0.075	0.075	U	0.075	0.075	U
2-Nitrotoluene	0.075	0.075	U	0.075	0.075	U
3-Nitrotoluene	0.075	0.075	U	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U
4-Nitrotoluene	0.075	0.075	U	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	U	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	U	0.075	0.075	U
Nitrobenzene	0.075	0.075	U	0.075	0.075	U
Nitroglycerin	0.15	0.15	U	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	U	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	0.25	0.25	U	0.25	0.25	U
Polychlorinated Biphenyls (mg/kg)						
Aroclor 1016	-			-		
Aroclor 1221	-			-		
Aroclor 1232	-			-		
Aroclor 1242	-			-		
Aroclor 1248	-			-		
Aroclor 1254	-			-		
Aroclor 1260	-			-		
Dioxins/Furans (mg/kg)						
Octachlorodibenzofuran (OCDF)	-			-		
Octachlorodibenzo-p-dioxin (OCDD)	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	-			-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	-			-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	-			-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-			-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	-			-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-			-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	-			-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	-			-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	-			-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	-			-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	-			-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	-			-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	-			-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	-			-		

TABLE B-AP9
ANALYTICAL RESULTS FOR GRID AP9
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP9			AP9		
Sample Name	P3IF-SS-IS-SO-AP509			P3IF-SS-IS-SO-AP609		
Date Collected	June 6, 2023			June 6, 2023		
Metals (mg/kg)						
Aluminum	12000	4		13000	4.0	
Antimony	0.15	0.15	U	0.15	0.15	U
Arsenic	1.6	0.3		1.8	0.30	
Barium	230	0.2	J	260	0.20	J
Beryllium	0.56	0.3	J	0.61	0.30	J
Cadmium	0.36	0.08		0.41	0.080	
Calcium (Ca)	16000	15		17000	15	
Chromium	8.5	0.2		8.9	0.20	
Cobalt	3.6	0.08		3.8	0.080	
Copper	50	0.2		40	0.20	
Iron (Fe)	9800	8		11000	8.0	
Lead	12	0.05		12	0.050	
Magnesium (Mg)	4100	5		4600	5.0	
Manganese (Mn)	410	0.08		440	0.080	
Mercury	0.048	0.043	J	0.043	0.042	J
Nickel	7.6	0.2		7.8	0.20	
Potassium (K)	1900	8		2200	8.0	
Selenium	1.2	0.1		1.1	0.10	
Silver	0.084	0.05	J	0.062	0.050	J
Sodium (Na)	44	8		49	8.0	
Thallium	0.057	0.05	J	0.063	0.050	J
Vanadium	11	0.1		13	0.10	
Zinc	37	1.5		36	1.5	
Other Parameters (mg/kg)						
Cyanide (CN-)	-			-		
Nitrate	-			-		
Perchlorate	-			-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-AP10
ANALYTICAL RESULTS FOR GRID AP10
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP10			AP10			AP10		
Sample Name	P3IF-BA-GRID-AP010			P3IF-SS-IS-SO-AP010			P3IF-SS-IS-SO-AP510		
Date Collected	June 6, 2023			June 6, 2023			June 6, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)									
1,1,1,2-Tetrachloroethane	0.0023	0.0023	U	-			-		
1,1,1-Trichloroethane	0.0023	0.0023	UJ	-			-		
1,1,2,2-Tetrachloroethane	0.0023	0.0023	U	-			-		
1,1,2-Trichloroethane	0.0023	0.0023	UJ	-			-		
1,1-Dichloroethane	0.0023	0.0023	UJ	-			-		
1,1-Dichloroethene	0.0023	0.0023	UJ	-			-		
1,1-Dichloropropene	0.0023	0.0023	UJ	-			-		
1,2,3-Trichlorobenzene	0.0023	0.0023	U	-			-		
1,2,3-Trichloropropane	0.0057	0.0057	U	-			-		
1,2,4-Trichlorobenzene	0.0023	0.0023	U	-			-		
1,2,4-Trimethylbenzene	0.0023	0.0023	U	-			-		
1,2-Dibromo-3-chloropropane	0.0057	0.0057	U	-			-		
1,2-Dibromoethane	0.0023	0.0023	U	-			-		
1,2-Dichlorobenzene	0.0023	0.0023	U	-			-		
1,2-Dichloroethane	0.0023	0.0023	UJ	-			-		
1,2-Dichloropropane	0.0023	0.0023	UJ	-			-		
1,3,5-Trimethylbenzene	0.0023	0.0023	U	-			-		
1,3-Dichlorobenzene	0.0023	0.0023	U	-			-		
1,3-Dichloropropane	0.0023	0.0023	U	-			-		
1,4-Dichlorobenzene	0.0023	0.0023	U	-			-		
2,2-Dichloropropane	0.0023	0.0023	UJ	-			-		
2-Butanone	0.0034	0.0034	UJ	-			-		
2-Chlorotoluene	0.0023	0.0023	U	-			-		
2-Hexanone	0.0023	0.0023	UJ	-			-		
4-Chlorotoluene	0.0023	0.0023	U	-			-		
4-Methyl-2-pentanone	0.0023	0.0023	UJ	-			-		
Acetone	0.029	0.0057	J	-			-		
Benzene	0.0023	0.0023	UJ	-			-		
Bromobenzene	0.0023	0.0023	U	-			-		
Bromochloromethane	0.0023	0.0023	UJ	-			-		
Bromodichloromethane	0.0023	0.0023	UJ	-			-		
Bromoform	0.0023	0.0023	U	-			-		
Bromomethane	0.0023	0.0023	UJ	-			-		
Carbon disulfide	0.0023	0.0023	UJ	-			-		
Carbon tetrachloride	0.0023	0.0023	UJ	-			-		
Chlorobenzene	0.0023	0.0023	U	-			-		
Chloroethane	0.0023	0.0023	UJ	-			-		
Chloroform	0.0023	0.0023	UJ	-			-		
Chloromethane	0.0057	0.0057	UJ	-			-		
cis-1,2-Dichloroethene	0.0023	0.0023	UJ	-			-		
cis-1,3-Dichloropropene	0.0023	0.0023	UJ	-			-		
Dibromochloromethane	0.0023	0.0023	U	-			-		
Dibromomethane	0.0023	0.0023	UJ	-			-		
Dichlorodifluoromethane	0.0023	0.0023	UJ	-			-		
Ethylbenzene	0.0023	0.0023	U	-			-		
Hexachlorobutadiene	0.0023	0.0023	U	-			-		
Isopropylbenzene	0.0023	0.0023	U	-			-		
m+p-Xylene	0.0057	0.0057	U	-			-		
Methyl Tertiary Butyl Ether	0.0023	0.0023	UJ	-			-		
Methylene chloride	0.011	0.011	UJ	-			-		
n-Butylbenzene	0.0023	0.0023	U	-			-		
n-Propylbenzene	0.0023	0.0023	U	-			-		
Naphthalene	0.0023	0.0023	U	-			-		
o-Xylene	0.0029	0.0029	U	-			-		
4-Isopropyltoluene	0.0023	0.0023	U	-			-		
sec-Butylbenzene	0.0023	0.0023	U	-			-		
Styrene	0.0023	0.0023	U	-			-		
tert-Butylbenzene	0.0023	0.0023	U	-			-		
Tetrachloroethene	0.0023	0.0023	U	-			-		
Toluene	0.0023	0.0023	UJ	-			-		
trans-1,2-Dichloroethene	0.0023	0.0023	UJ	-			-		
trans-1,3-Dichloropropene	0.0023	0.0023	UJ	-			-		
Trichloroethene	0.0023	0.0023	UJ	-			-		
Trichlorofluoromethane	0.0023	0.0023	UJ	-			-		
Vinyl chloride	0.0023	0.0023	UJ	-			-		
Semivolatile Organic Compounds (mg/kg)									
1,2,4-Trichlorobenzene	0.18	0.18	U	-			-		
1,2-Dichlorobenzene	0.18	0.18	U	-			-		
1,3-Dichlorobenzene	0.18	0.18	U	-			-		
1,4-Dichlorobenzene	0.18	0.18	U	-			-		
2,4,5-Trichlorophenol	0.18	0.18	U	-			-		
2,4,6-Trichlorophenol	0.18	0.18	U	-			-		
2,4-Dichlorophenol	0.18	0.18	U	-			-		
2,4-Dimethylphenol	0.18	0.18	U	-			-		
2,4-Dinitrophenol	0.18	0.18	U	-			-		
2,4-Dinitrotoluene	0.18	0.18	U	-			-		
2,6-Dinitrotoluene	0.18	0.18	U	-			-		
2-Chloronaphthalene	0.18	0.18	U	-			-		
2-Chlorophenol	0.18	0.18	U	-			-		
2-Methylnaphthalene	0.18	0.18	U	-			-		
2-Methylphenol	0.18	0.18	U	-			-		
2-Nitroaniline	0.18	0.18	U	-			-		
2-Nitrophenol	0.18	0.18	U	-			-		
3,3-Dichlorobenzidine	0.18	0.18	U	-			-		
3-Nitroaniline	0.18	0.18	U	-			-		
4,6-Dinitro-2-methylphenol	0.18	0.18	U	-			-		
4-Bromophenyl-phenylether	0.18	0.18	U	-			-		
4-Chloro-3-methylphenol	0.18	0.18	U	-			-		
4-Chloroaniline	0.18	0.18	U	-			-		

TABLE B-AP10
ANALYTICAL RESULTS FOR GRID AP10
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP10			AP10			AP10		
Sample Name	P3IF-BA-GRID-AP010			P3IF-SS-IS-SO-AP010			P3IF-SS-IS-SO-AP510		
Date Collected	June 6, 2023			June 6, 2023			June 6, 2023		
Semivolatile Organic Compounds (mg/kg), continued									
4-Chlorophenyl-phenylether	0.18	0.18	U	-			-		
4-Nitroaniline	0.18	0.18	U	-			-		
4-Nitrophenol	0.18	0.18	U	-			-		
Acenaphthene	0.18	0.18	U	-			-		
Acenaphthylene	0.18	0.18	U	-			-		
Anthracene	0.18	0.18	U	-			-		
Benzo(a)anthracene	0.18	0.18	U	-			-		
Benzo(a)pyrene	0.14	0.14	U	-			-		
Benzo(b)fluoranthene	0.18	0.18	U	-			-		
Benzo(g,h,i)perylene	0.18	0.18	U	-			-		
Benzo(k)fluoranthene	0.18	0.18	U	-			-		
Benzoic acid	0.18	0.18	U	-			-		
Benzyl Alcohol	0.18	0.18	U	-			-		
Bis(2-chloro-1-methylethyl) ether	0.18	0.18	U	-			-		
Bis(2-chloroethoxy)methane	0.18	0.18	U	-			-		
Bis(2-chloroethyl)ether	0.18	0.18	U	-			-		
Bis(2-ethylhexyl)phthalate	0.18	0.18	U	-			-		
Butyl benzyl phthalate	0.18	0.18	U	-			-		
Carbazole	0.18	0.18	U	-			-		
Chrysene	0.18	0.18	U	-			-		
Di-n-butyl phthalate	0.18	0.18	U	-			-		
Di-n-octyl phthalate	0.18	0.18	U	-			-		
Dibenz(a,h)anthracene	0.14	0.14	U	-			-		
Dibenzofuran	0.18	0.18	U	-			-		
Diethyl phthalate	0.18	0.18	U	-			-		
Dimethyl phthalate	0.18	0.18	U	-			-		
Fluoranthene	0.18	0.18	U	-			-		
Fluorene	0.18	0.18	U	-			-		
Hexachlorobenzene	0.18	0.18	U	-			-		
Hexachlorobutadiene	0.18	0.18	U	-			-		
Hexachloroethane	0.18	0.18	U	-			-		
Indeno(1,2,3-cd)pyrene	0.18	0.18	U	-			-		
Isophorone	0.18	0.18	U	-			-		
n-Nitroso-di-n-propylamine	0.18	0.18	U	-			-		
n-Nitrosodimethylamine	0.021	0.021	U	-			-		
n-Nitrosodiphenylamine	0.18	0.18	U	-			-		
Naphthalene	0.18	0.18	U	-			-		
Nitrobenzene	0.18	0.18	U	-			-		
Pentachlorophenol	0.18	0.18	U	-			-		
Phenanthrene	0.18	0.18	U	-			-		
Phenol	0.18	0.18	U	-			-		
Pyrene	0.18	0.18	U	-			-		
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	-			0.075	0.075	U	0.075	0.075	U
1,3-Dinitrobenzene	-			0.075	0.075	U	0.075	0.075	U
2,4,6-Trinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2,4-Dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2,6-Dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2-Nitrotoluene	-			0.075	0.075	U	0.075	0.075	U
3-Nitrotoluene	-			0.075	0.075	U	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
4-Nitrotoluene	-			0.075	0.075	U	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	-			0.075	0.075	U	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	-			0.075	0.075	U	0.075	0.075	U
Nitrobenzene	-			0.075	0.075	U	0.075	0.075	U
Nitroglycerin	-			0.15	0.15	U	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	-			0.075	0.075	U	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	-			0.25	0.25	U	0.25	0.25	U
Polychlorinated Biphenyls (mg/kg)									
Aroclor 1016	0.021	0.021	U	-			-		
Aroclor 1221	0.021	0.021	U	-			-		
Aroclor 1232	0.01	0.01	U	-			-		
Aroclor 1242	0.01	0.01	U	-			-		
Aroclor 1248	0.01	0.01	U	-			-		
Aroclor 1254	0.01	0.01	U	-			-		
Aroclor 1260	0.01	0.01	U	-			-		
Dioxins/Furans (mg/kg)									
Octachlorodibenzofuran (OCDF)	0.00000091	0.00000091	J	-			-		
Octachlorodibenzo-p-dioxin (OCDD)	0.000014	0.000014	J	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.00000068	0.00000068	J	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	0.0000026	0.0000026	J	-			-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.00000013	0.00000013	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000098	0.000000098	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000016	0.00000016	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000097	0.000000097	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000016	0.00000016	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.00000011	0.00000011	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000016	0.00000016	U	-			-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000017	0.00000017	U	-			-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.000000069	0.000000069	U	-			-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.00000015	0.00000015	U	-			-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000017	0.00000017	U	-			-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.00000034	0.00000034	U	-			-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.00000012	0.00000012	U	-			-		

TABLE B-AP10
ANALYTICAL RESULTS FOR GRID AP10
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP10			AP10			AP10		
Sample Name	P3IF-BA-GRID-AP010			P3IF-SS-IS-SO-AP010			P3IF-SS-IS-SO-AP510		
Date Collected	June 6, 2023			June 6, 2023			June 6, 2023		
Metals (mg/kg)									
Aluminum	-			16000	4		19000	4	
Antimony	-			0.15	0.15	U	0.15	0.15	U
Arsenic	-			1.5	0.3		1.6	0.3	
Barium	-			230	0.2		250	0.2	
Beryllium	-			0.68	0.3	J	0.78	0.3	J
Cadmium	-			0.52	0.08		0.51	0.08	
Calcium (Ca)	-			7600	15		8000	15	
Chromium	-			11	0.2		12	0.2	
Cobalt	-			4.1	0.08		4.4	0.08	
Copper	-			64	0.2		67	0.2	
Iron (Fe)	-			9700	8		11000	8	
Lead	-			14	0.05		16	0.05	
Magnesium (Mg)	-			5300	5		6000	5	
Manganese (Mn)	-			390	0.08		410	0.08	
Mercury	-			0.071	0.041	J	0.052	0.042	J
Nickel	-			8.7	0.2		9.5	0.2	
Potassium (K)	-			2100	8		2500	8	
Selenium	-			1.1	0.1		1.2	0.1	
Silver	-			0.097	0.05	J	0.1	0.05	
Sodium (Na)	-			49	8		55	8	
Thallium	-			0.064	0.05	J	0.069	0.05	J
Vanadium	-			15	0.1		17	0.1	
Zinc	-			42	1.5		53	1.5	
Other Parameters (mg/kg)									
Cyanide (CN-)	0.33	0.33	U	-			-		
Nitrate	8.9	2.1	J	-			-		
Perchlorate	0.002	0.002	UJ	-			-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-AP10
ANALYTICAL RESULTS FOR GRID AP10
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP10		
Sample Name	P3IF-SS-IS-SO-AP610		
Date Collected	June 6, 2023		
	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)			
1,1,1,2-Tetrachloroethane	-		
1,1,1-Trichloroethane	-		
1,1,2,2-Tetrachloroethane	-		
1,1,2-Trichloroethane	-		
1,1-Dichloroethane	-		
1,1-Dichloroethene	-		
1,1-Dichloropropene	-		
1,2,3-Trichlorobenzene	-		
1,2,3-Trichloropropane	-		
1,2,4-Trichlorobenzene	-		
1,2,4-Trimethylbenzene	-		
1,2-Dibromo-3-chloropropane	-		
1,2-Dibromoethane	-		
1,2-Dichlorobenzene	-		
1,2-Dichloroethane	-		
1,2-Dichloropropane	-		
1,3,5-Trimethylbenzene	-		
1,3-Dichlorobenzene	-		
1,3-Dichloropropane	-		
1,4-Dichlorobenzene	-		
2,2-Dichloropropane	-		
2-Butanone	-		
2-Chlorotoluene	-		
2-Hexanone	-		
4-Chlorotoluene	-		
4-Methyl-2-pentanone	-		
Acetone	-		
Benzene	-		
Bromobenzene	-		
Bromochloromethane	-		
Bromodichloromethane	-		
Bromoform	-		
Bromomethane	-		
Carbon disulfide	-		
Carbon tetrachloride	-		
Chlorobenzene	-		
Chloroethane	-		
Chloroform	-		
Chloromethane	-		
cis-1,2-Dichloroethene	-		
cis-1,3-Dichloropropene	-		
Dibromochloromethane	-		
Dibromomethane	-		
Dichlorodifluoromethane	-		
Ethylbenzene	-		
Hexachlorobutadiene	-		
Isopropylbenzene	-		
m+p-Xylene	-		
Methyl Tertiary Butyl Ether	-		
Methylene chloride	-		
n-Butylbenzene	-		
n-Propylbenzene	-		
Naphthalene	-		
o-Xylene	-		
4-Isopropyltoluene	-		
sec-Butylbenzene	-		
Styrene	-		
tert-Butylbenzene	-		
Tetrachloroethene	-		
Toluene	-		
trans-1,2-Dichloroethene	-		
trans-1,3-Dichloropropene	-		
Trichloroethene	-		
Trichlorofluoromethane	-		
Vinyl chloride	-		
Semivolatile Organic Compounds (mg/kg)			
1,2,4-Trichlorobenzene	-		
1,2-Dichlorobenzene	-		
1,3-Dichlorobenzene	-		
1,4-Dichlorobenzene	-		
2,4,5-Trichlorophenol	-		
2,4,6-Trichlorophenol	-		
2,4-Dichlorophenol	-		
2,4-Dimethylphenol	-		
2,4-Dinitrophenol	-		
2,4-Dinitrotoluene	-		
2,6-Dinitrotoluene	-		
2-Chloronaphthalene	-		
2-Chlorophenol	-		
2-Methylnaphthalene	-		
2-Methylphenol	-		
2-Nitroaniline	-		
2-Nitrophenol	-		
3,3-Dichlorobenzidine	-		
3-Nitroaniline	-		
4,6-Dinitro-2-methylphenol	-		
4-Bromophenyl-phenylether	-		
4-Chloro-3-methylphenol	-		
4-Chloroaniline	-		

TABLE B-AP10
ANALYTICAL RESULTS FOR GRID AP10
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP10		
Sample Name	P3IF-SS-IS-SO-AP610		
Date Collected	June 6, 2023		
Semivolatile Organic Compounds (mg/kg), continued			
4-Chlorophenyl-phenylether	-		
4-Nitroaniline	-		
4-Nitrophenol	-		
Acenaphthene	-		
Acenaphthylene	-		
Anthracene	-		
Benzo(a)anthracene	-		
Benzo(a)pyrene	-		
Benzo(b)fluoranthene	-		
Benzo(g,h,i)perylene	-		
Benzo(k)fluoranthene	-		
Benzoic acid	-		
Benzyl Alcohol	-		
Bis(2-chloro-1-methylethyl) ether	-		
Bis(2-chloroethoxy)methane	-		
Bis(2-chloroethyl)ether	-		
Bis(2-ethylhexyl)phthalate	-		
Butyl benzyl phthalate	-		
Carbazole	-		
Chrysene	-		
Di-n-butyl phthalate	-		
Di-n-octyl phthalate	-		
Dibenz(a,h)anthracene	-		
Dibenzofuran	-		
Diethyl phthalate	-		
Dimethyl phthalate	-		
Fluoranthene	-		
Fluorene	-		
Hexachlorobenzene	-		
Hexachlorobutadiene	-		
Hexachloroethane	-		
Indeno(1,2,3-cd)pyrene	-		
Isophorone	-		
n-Nitroso-di-n-propylamine	-		
n-Nitrosodimethylamine	-		
n-Nitrosodiphenylamine	-		
Naphthalene	-		
Nitrobenzene	-		
Pentachlorophenol	-		
Phenanthrene	-		
Phenol	-		
Pyrene	-		
Explosives (mg/kg)			
1,3,5-Trinitrobenzene	0.075	0.075	U
1,3-Dinitrobenzene	0.075	0.075	U
2,4,6-Trinitrotoluene	0.075	0.075	U
2,4-Dinitrotoluene	0.075	0.075	U
2,6-Dinitrotoluene	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	0.075	0.075	U
2-Nitrotoluene	0.075	0.075	U
3-Nitrotoluene	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	0.075	0.075	U
4-Nitrotoluene	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	U
Nitrobenzene	0.075	0.075	U
Nitroglycerin	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	0.25	0.25	U
Polychlorinated Biphenyls (mg/kg)			
Aroclor 1016	-		
Aroclor 1221	-		
Aroclor 1232	-		
Aroclor 1242	-		
Aroclor 1248	-		
Aroclor 1254	-		
Aroclor 1260	-		
Dioxins/Furans (mg/kg)			
Octachlorodibenzofuran (OCDF)	-		
Octachlorodibenzo-p-dioxin (OCDD)	-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	-		

TABLE B-AP10
ANALYTICAL RESULTS FOR GRID AP10
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP10		
Sample Name	P3IF-SS-IS-SO-AP610		
Date Collected	June 6, 2023		
Metals (mg/kg)			
Aluminum	19000	4	
Antimony	0.15	0.15	U
Arsenic	1.5	0.3	
Barium	250	0.2	
Beryllium	0.74	0.3	J
Cadmium	0.46	0.08	
Calcium (Ca)	8100	15	
Chromium	12	0.2	
Cobalt	4.3	0.08	
Copper	70	0.2	
Iron (Fe)	11000	8	
Lead	15	0.05	
Magnesium (Mg)	6000	5	
Manganese (Mn)	390	0.08	
Mercury	0.061	0.041	J
Nickel	9.3	0.2	
Potassium (K)	2600	8	
Selenium	1.2	0.1	
Silver	0.096	0.05	J
Sodium (Na)	53	8	
Thallium	0.075	0.05	J
Vanadium	18	0.1	
Zinc	53	1.5	
Other Parameters (mg/kg)			
Cyanide (CN-)	-		
Nitrate	-		
Perchlorate	-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-AP11
ANALYTICAL RESULTS FOR GRID AP11
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP11			AP11			AP11		
Sample Name	P3IF-BA-GRID-AP011			P3IF-SS-IS-SO-AP011			P3IF-SS-IS-SO-AP511		
Date Collected	June 6, 2023			June 6, 2023			June 6, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)									
1,1,1,2-Tetrachloroethane	0.0023	0.0023	U	-			-		
1,1,1-Trichloroethane	0.0023	0.0023	U	-			-		
1,1,2,2-Tetrachloroethane	0.0023	0.0023	U	-			-		
1,1,2-Trichloroethane	0.0023	0.0023	U	-			-		
1,1-Dichloroethane	0.0023	0.0023	U	-			-		
1,1-Dichloroethene	0.0023	0.0023	U	-			-		
1,1-Dichloropropene	0.0023	0.0023	U	-			-		
1,2,3-Trichlorobenzene	0.0023	0.0023	U	-			-		
1,2,3-Trichloropropane	0.0058	0.0058	U	-			-		
1,2,4-Trichlorobenzene	0.0023	0.0023	U	-			-		
1,2,4-Trimethylbenzene	0.0023	0.0023	U	-			-		
1,2-Dibromo-3-chloropropane	0.0058	0.0058	U	-			-		
1,2-Dibromoethane	0.0023	0.0023	U	-			-		
1,2-Dichlorobenzene	0.0023	0.0023	U	-			-		
1,2-Dichloroethane	0.0023	0.0023	U	-			-		
1,2-Dichloropropane	0.0023	0.0023	U	-			-		
1,3,5-Trimethylbenzene	0.0023	0.0023	U	-			-		
1,3-Dichlorobenzene	0.0023	0.0023	U	-			-		
1,3-Dichloropropane	0.0023	0.0023	U	-			-		
1,4-Dichlorobenzene	0.0023	0.0023	U	-			-		
2,2-Dichloropropane	0.0023	0.0023	U	-			-		
2-Butanone	0.0035	0.0035	U	-			-		
2-Chlorotoluene	0.0023	0.0023	U	-			-		
2-Hexanone	0.0023	0.0023	U	-			-		
4-Chlorotoluene	0.0023	0.0023	U	-			-		
4-Methyl-2-pentanone	0.0023	0.0023	U	-			-		
Acetone	0.1	0.0058		-			-		
Benzene	0.0023	0.0023	U	-			-		
Bromobenzene	0.0023	0.0023	U	-			-		
Bromochloromethane	0.0023	0.0023	U	-			-		
Bromodichloromethane	0.0023	0.0023	U	-			-		
Bromoform	0.0023	0.0023	U	-			-		
Bromomethane	0.0023	0.0023	U	-			-		
Carbon disulfide	0.0023	0.0023	U	-			-		
Carbon tetrachloride	0.0023	0.0023	U	-			-		
Chlorobenzene	0.0023	0.0023	U	-			-		
Chloroethane	0.0023	0.0023	U	-			-		
Chloroform	0.0023	0.0023	U	-			-		
Chloromethane	0.0058	0.0058	U	-			-		
cis-1,2-Dichloroethene	0.0023	0.0023	U	-			-		
cis-1,3-Dichloropropene	0.0023	0.0023	U	-			-		
Dibromochloromethane	0.0023	0.0023	U	-			-		
Dibromomethane	0.0023	0.0023	U	-			-		
Dichlorodifluoromethane	0.0023	0.0023	U	-			-		
Ethylbenzene	0.0023	0.0023	U	-			-		
Hexachlorobutadiene	0.0023	0.0023	U	-			-		
Isopropylbenzene	0.0023	0.0023	U	-			-		
m+p-Xylene	0.0058	0.0058	U	-			-		
Methyl Tertiary Butyl Ether	0.0023	0.0023	U	-			-		
Methylene chloride	0.012	0.012	U	-			-		
n-Butylbenzene	0.0023	0.0023	U	-			-		
n-Propylbenzene	0.0023	0.0023	U	-			-		
Naphthalene	0.0023	0.0023	U	-			-		
o-Xylene	0.0029	0.0029	U	-			-		
4-Isopropyltoluene	0.02	0.0023		-			-		
sec-Butylbenzene	0.0023	0.0023	U	-			-		
Styrene	0.0023	0.0023	U	-			-		
tert-Butylbenzene	0.0023	0.0023	U	-			-		
Tetrachloroethene	0.0023	0.0023	U	-			-		
Toluene	0.0023	0.0023	U	-			-		
trans-1,2-Dichloroethene	0.0023	0.0023	U	-			-		
trans-1,3-Dichloropropene	0.0023	0.0023	U	-			-		
Trichloroethene	0.0023	0.0023	U	-			-		
Trichlorofluoromethane	0.0023	0.0023	U	-			-		
Vinyl chloride	0.0023	0.0023	U	-			-		
Semivolatile Organic Compounds (mg/kg)									
1,2,4-Trichlorobenzene	0.18	0.18	U	-			-		
1,2-Dichlorobenzene	0.18	0.18	U	-			-		
1,3-Dichlorobenzene	0.18	0.18	U	-			-		
1,4-Dichlorobenzene	0.18	0.18	U	-			-		
2,4,5-Trichlorophenol	0.18	0.18	U	-			-		
2,4,6-Trichlorophenol	0.18	0.18	U	-			-		
2,4-Dichlorophenol	0.18	0.18	U	-			-		
2,4-Dimethylphenol	0.18	0.18	U	-			-		
2,4-Dinitrophenol	0.18	0.18	U	-			-		
2,4-Dinitrotoluene	0.18	0.18	U	-			-		
2,6-Dinitrotoluene	0.18	0.18	U	-			-		
2-Chloronaphthalene	0.18	0.18	U	-			-		
2-Chlorophenol	0.18	0.18	U	-			-		
2-Methylnaphthalene	0.18	0.18	U	-			-		
2-Methylphenol	0.18	0.18	U	-			-		
2-Nitroaniline	0.18	0.18	U	-			-		
2-Nitrophenol	0.18	0.18	U	-			-		
3,3-Dichlorobenzidine	0.18	0.18	U	-			-		
3-Nitroaniline	0.18	0.18	U	-			-		
4,6-Dinitro-2-methylphenol	0.18	0.18	U	-			-		
4-Bromophenyl-phenylether	0.18	0.18	U	-			-		
4-Chloro-3-methylphenol	0.18	0.18	U	-			-		
4-Chloroaniline	0.18	0.18	U	-			-		

TABLE B-AP11
ANALYTICAL RESULTS FOR GRID AP11
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP11			AP11			AP11		
Sample Name	P3IF-BA-GRID-AP011			P3IF-SS-IS-SO-AP011			P3IF-SS-IS-SO-AP511		
Date Collected	June 6, 2023			June 6, 2023			June 6, 2023		
Semivolatile Organic Compounds (mg/kg), continued									
4-Chlorophenyl-phenylether	0.18	0.18	U	-			-		
4-Nitroaniline	0.18	0.18	U	-			-		
4-Nitrophenol	0.18	0.18	U	-			-		
Acenaphthene	0.18	0.18	U	-			-		
Acenaphthylene	0.18	0.18	U	-			-		
Anthracene	0.18	0.18	U	-			-		
Benzo(a)anthracene	0.18	0.18	U	-			-		
Benzo(a)pyrene	0.14	0.14	U	-			-		
Benzo(b)fluoranthene	0.18	0.18	U	-			-		
Benzo(g,h,i)perylene	0.18	0.18	U	-			-		
Benzo(k)fluoranthene	0.18	0.18	U	-			-		
Benzoic acid	0.18	0.18	U	-			-		
Benzyl Alcohol	0.18	0.18	U	-			-		
Bis(2-chloro-1-methylethyl) ether	0.18	0.18	U	-			-		
Bis(2-chloroethoxy)methane	0.18	0.18	U	-			-		
Bis(2-chloroethyl)ether	0.18	0.18	U	-			-		
Bis(2-ethylhexyl)phthalate	0.18	0.18	U	-			-		
Butyl benzyl phthalate	0.18	0.18	U	-			-		
Carbazole	0.18	0.18	U	-			-		
Chrysene	0.18	0.18	U	-			-		
Di-n-butyl phthalate	0.18	0.18	U	-			-		
Di-n-octyl phthalate	0.18	0.18	U	-			-		
Dibenz(a,h)anthracene	0.14	0.14	U	-			-		
Dibenzofuran	0.18	0.18	U	-			-		
Diethyl phthalate	0.18	0.18	U	-			-		
Dimethyl phthalate	0.18	0.18	U	-			-		
Fluoranthene	0.18	0.18	U	-			-		
Fluorene	0.18	0.18	U	-			-		
Hexachlorobenzene	0.18	0.18	U	-			-		
Hexachlorobutadiene	0.18	0.18	U	-			-		
Hexachloroethane	0.18	0.18	U	-			-		
Indeno(1,2,3-cd)pyrene	0.18	0.18	U	-			-		
Isophorone	0.18	0.18	U	-			-		
n-Nitroso-di-n-propylamine	0.18	0.18	U	-			-		
n-Nitrosodimethylamine	0.022	0.022	U	-			-		
n-Nitrosodiphenylamine	0.18	0.18	U	-			-		
Naphthalene	0.18	0.18	U	-			-		
Nitrobenzene	0.18	0.18	U	-			-		
Pentachlorophenol	0.18	0.18	U	-			-		
Phenanthrene	0.18	0.18	U	-			-		
Phenol	0.18	0.18	U	-			-		
Pyrene	0.18	0.18	U	-			-		
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	-			0.075	0.075	U	0.075	0.075	U
1,3-Dinitrobenzene	-			0.075	0.075	U	0.075	0.075	U
2,4,6-Trinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2,4-Dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2,6-Dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2-Nitrotoluene	-			0.075	0.075	U	0.075	0.075	U
3-Nitrotoluene	-			0.075	0.075	U	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
4-Nitrotoluene	-			0.075	0.075	U	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	-			0.075	0.075	U	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	-			0.075	0.075	U	0.075	0.075	U
Nitrobenzene	-			0.075	0.075	U	0.075	0.075	U
Nitroglycerin	-			0.15	0.15	U	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	-			0.075	0.075	U	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	-			0.25	0.25	U	0.25	0.25	U
Polychlorinated Biphenyls (mg/kg)									
Aroclor 1016	0.022	0.022	U	-			-		
Aroclor 1221	0.022	0.022	U	-			-		
Aroclor 1232	0.011	0.011	U	-			-		
Aroclor 1242	0.011	0.011	U	-			-		
Aroclor 1248	0.011	0.011	U	-			-		
Aroclor 1254	0.011	0.011	U	-			-		
Aroclor 1260	0.011	0.011	U	-			-		
Dioxins/Furans (mg/kg)									
Octachlorodibenzofuran (OCDF)	0.0000015	0.0000015	J	-			-		
Octachlorodibenzo-p-dioxin (OCDD)	0.000017	0.000017	J	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.00000041	0.00000041	U	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	0.0000027	0.0000027	J	-			-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.00000013	0.00000013	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.00000012	0.00000012	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000012	0.00000012	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000088	0.000000088	J	-			-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000013	0.00000013	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.00000014	0.00000014	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000012	0.00000012	U	-			-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000011	0.00000011	U	-			-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.000000065	0.000000065	U	-			-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.00000012	0.00000012	U	-			-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000015	0.00000015	U	-			-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.00000032	0.00000032	U	-			-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.00000018	0.00000018	U	-			-		

TABLE B-AP11
ANALYTICAL RESULTS FOR GRID AP11
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP11			AP11			AP11		
Sample Name	P3IF-BA-GRID-AP011			P3IF-SS-IS-SO-AP011			P3IF-SS-IS-SO-AP511		
Date Collected	June 6, 2023			June 6, 2023			June 6, 2023		
Metals (mg/kg)									
Aluminum	-			19000	4		29000	4	
Antimony	-			0.15	0.15	U	0.15	0.15	U
Arsenic	-			1.7	0.3		2.1	0.3	
Barium	-			260	0.2		320	0.2	
Beryllium	-			0.83	0.3	J	1.1	0.3	
Cadmium	-			1.5	0.08	J	0.42	0.08	J
Calcium (Ca)	-			7500	15		7900	15	
Chromium	-			12	0.2		17	0.2	
Cobalt	-			4.5	0.08		5.6	0.08	
Copper	-			52	0.2		46	0.2	
Iron (Fe)	-			11000	8		15000	8	
Lead	-			14	0.05		16	0.05	
Magnesium (Mg)	-			5900	5		8400	5	
Manganese (Mn)	-			330	0.08		360	0.08	
Mercury	-			0.062	0.042	J	0.066	0.042	J
Nickel	-			9.4	0.2		12	0.2	
Potassium (K)	-			1900	8	J	3300	8	J
Selenium	-			1.4	0.1		1.5	0.1	
Silver	-			0.12	0.05		0.12	0.05	
Sodium (Na)	-			42	8		62	8	
Thallium	-			0.071	0.05	J	0.12	0.05	
Vanadium	-			17	0.1		25	0.1	
Zinc	-			39	1.5		43	1.5	
Other Parameters (mg/kg)									
Cyanide (CN-)	0.34	0.34	U	-			-		
Nitrate	2.2	2.2	U	-			-		
Perchlorate	0.0019	0.0019	UJ	-			-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-AP11
ANALYTICAL RESULTS FOR GRID AP11
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP11		
Sample Name	P3IF-SS-IS-SO-AP611		
Date Collected	June 6, 2023		
	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)			
1,1,1,2-Tetrachloroethane	-		
1,1,1-Trichloroethane	-		
1,1,2,2-Tetrachloroethane	-		
1,1,2-Trichloroethane	-		
1,1-Dichloroethane	-		
1,1-Dichloroethene	-		
1,1-Dichloropropene	-		
1,2,3-Trichlorobenzene	-		
1,2,3-Trichloropropane	-		
1,2,4-Trichlorobenzene	-		
1,2,4-Trimethylbenzene	-		
1,2-Dibromo-3-chloropropane	-		
1,2-Dibromoethane	-		
1,2-Dichlorobenzene	-		
1,2-Dichloroethane	-		
1,2-Dichloropropane	-		
1,3,5-Trimethylbenzene	-		
1,3-Dichlorobenzene	-		
1,3-Dichloropropane	-		
1,4-Dichlorobenzene	-		
2,2-Dichloropropane	-		
2-Butanone	-		
2-Chlorotoluene	-		
2-Hexanone	-		
4-Chlorotoluene	-		
4-Methyl-2-pentanone	-		
Acetone	-		
Benzene	-		
Bromobenzene	-		
Bromochloromethane	-		
Bromodichloromethane	-		
Bromoform	-		
Bromomethane	-		
Carbon disulfide	-		
Carbon tetrachloride	-		
Chlorobenzene	-		
Chloroethane	-		
Chloroform	-		
Chloromethane	-		
cis-1,2-Dichloroethene	-		
cis-1,3-Dichloropropene	-		
Dibromochloromethane	-		
Dibromomethane	-		
Dichlorodifluoromethane	-		
Ethylbenzene	-		
Hexachlorobutadiene	-		
Isopropylbenzene	-		
m+p-Xylene	-		
Methyl Tertiary Butyl Ether	-		
Methylene chloride	-		
n-Butylbenzene	-		
n-Propylbenzene	-		
Naphthalene	-		
o-Xylene	-		
4-Isopropyltoluene	-		
sec-Butylbenzene	-		
Styrene	-		
tert-Butylbenzene	-		
Tetrachloroethene	-		
Toluene	-		
trans-1,2-Dichloroethene	-		
trans-1,3-Dichloropropene	-		
Trichloroethene	-		
Trichlorofluoromethane	-		
Vinyl chloride	-		
Semivolatile Organic Compounds (mg/kg)			
1,2,4-Trichlorobenzene	-		
1,2-Dichlorobenzene	-		
1,3-Dichlorobenzene	-		
1,4-Dichlorobenzene	-		
2,4,5-Trichlorophenol	-		
2,4,6-Trichlorophenol	-		
2,4-Dichlorophenol	-		
2,4-Dimethylphenol	-		
2,4-Dinitrophenol	-		
2,4-Dinitrotoluene	-		
2,6-Dinitrotoluene	-		
2-Chloronaphthalene	-		
2-Chlorophenol	-		
2-Methylnaphthalene	-		
2-Methylphenol	-		
2-Nitroaniline	-		
2-Nitrophenol	-		
3,3-Dichlorobenzidine	-		
3-Nitroaniline	-		
4,6-Dinitro-2-methylphenol	-		
4-Bromophenyl-phenylether	-		
4-Chloro-3-methylphenol	-		
4-Chloroaniline	-		

TABLE B-AP11
ANALYTICAL RESULTS FOR GRID AP11
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP11		
Sample Name	P3IF-SS-IS-SO-AP611		
Date Collected	June 6, 2023		
Semivolatile Organic Compounds (mg/kg), continued			
4-Chlorophenyl-phenylether	-		
4-Nitroaniline	-		
4-Nitrophenol	-		
Acenaphthene	-		
Acenaphthylene	-		
Anthracene	-		
Benzo(a)anthracene	-		
Benzo(a)pyrene	-		
Benzo(b)fluoranthene	-		
Benzo(g,h,i)perylene	-		
Benzo(k)fluoranthene	-		
Benzoic acid	-		
Benzyl Alcohol	-		
Bis(2-chloro-1-methylethyl) ether	-		
Bis(2-chloroethoxy)methane	-		
Bis(2-chloroethyl)ether	-		
Bis(2-ethylhexyl)phthalate	-		
Butyl benzyl phthalate	-		
Carbazole	-		
Chrysene	-		
Di-n-butyl phthalate	-		
Di-n-octyl phthalate	-		
Dibenz(a,h)anthracene	-		
Dibenzofuran	-		
Diethyl phthalate	-		
Dimethyl phthalate	-		
Fluoranthene	-		
Fluorene	-		
Hexachlorobenzene	-		
Hexachlorobutadiene	-		
Hexachloroethane	-		
Indeno(1,2,3-cd)pyrene	-		
Isophorone	-		
n-Nitroso-di-n-propylamine	-		
n-Nitrosodimethylamine	-		
n-Nitrosodiphenylamine	-		
Naphthalene	-		
Nitrobenzene	-		
Pentachlorophenol	-		
Phenanthrene	-		
Phenol	-		
Pyrene	-		
Explosives (mg/kg)			
1,3,5-Trinitrobenzene	0.075	0.075	U
1,3-Dinitrobenzene	0.075	0.075	U
2,4,6-Trinitrotoluene	0.075	0.075	U
2,4-Dinitrotoluene	0.075	0.075	U
2,6-Dinitrotoluene	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	0.075	0.075	U
2-Nitrotoluene	0.075	0.075	U
3-Nitrotoluene	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	0.075	0.075	U
4-Nitrotoluene	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	U
Nitrobenzene	0.075	0.075	U
Nitroglycerin	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	0.25	0.25	U
Polychlorinated Biphenyls (mg/kg)			
Aroclor 1016	-		
Aroclor 1221	-		
Aroclor 1232	-		
Aroclor 1242	-		
Aroclor 1248	-		
Aroclor 1254	-		
Aroclor 1260	-		
Dioxins/Furans (mg/kg)			
Octachlorodibenzofuran (OCDF)	-		
Octachlorodibenzo-p-dioxin (OCDD)	-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	-		

TABLE B-AP11
ANALYTICAL RESULTS FOR GRID AP11
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP11		
Sample Name	P3IF-SS-IS-SO-AP611		
Date Collected	June 6, 2023		
Metals (mg/kg)			
Aluminum	30000	4	
Antimony	0.15	0.15	U
Arsenic	2	0.3	
Barium	270	0.2	
Beryllium	1.1	0.3	
Cadmium	0.35	0.08	J
Calcium (Ca)	7100	15	
Chromium	18	0.2	
Cobalt	5.6	0.08	
Copper	40	0.2	
Iron (Fe)	15000	8	
Lead	13	0.05	
Magnesium (Mg)	8600	5	
Manganese (Mn)	330	0.08	
Mercury	0.05	0.041	J
Nickel	12	0.2	
Potassium (K)	3400	8	J
Selenium	1.5	0.1	
Silver	0.1	0.05	
Sodium (Na)	62	8	
Thallium	0.12	0.05	
Vanadium	26	0.1	
Zinc	41	1.5	
Other Parameters (mg/kg)			
Cyanide (CN-)	-		
Nitrate	-		
Perchlorate	-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-AP12
ANALYTICAL RESULTS FOR GRID AP12
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP12			AP12			AP12		
Sample Name	P3IF-BA-GRID-AP012			P3IF-SS-IS-SO-AP012			P3IF-SS-IS-SO-AP512		
Date Collected	June 7, 2023			June 7, 2023			June 7, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)									
1,1,1,2-Tetrachloroethane	0.0025	0.0025	U	-			-		
1,1,1-Trichloroethane	0.0025	0.0025	U	-			-		
1,1,2,2-Tetrachloroethane	0.0025	0.0025	U	-			-		
1,1,2-Trichloroethane	0.0025	0.0025	U	-			-		
1,1-Dichloroethane	0.0025	0.0025	U	-			-		
1,1-Dichloroethene	0.0025	0.0025	U	-			-		
1,1-Dichloropropene	0.0025	0.0025	U	-			-		
1,2,3-Trichlorobenzene	0.0025	0.0025	U	-			-		
1,2,3-Trichloropropane	0.0062	0.0062	U	-			-		
1,2,4-Trichlorobenzene	0.0025	0.0025	U	-			-		
1,2,4-Trimethylbenzene	0.0025	0.0025	U	-			-		
1,2-Dibromo-3-chloropropane	0.0062	0.0062	U	-			-		
1,2-Dibromoethane	0.0025	0.0025	U	-			-		
1,2-Dichlorobenzene	0.0025	0.0025	U	-			-		
1,2-Dichloroethane	0.0025	0.0025	U	-			-		
1,2-Dichloropropane	0.0025	0.0025	U	-			-		
1,3,5-Trimethylbenzene	0.0025	0.0025	U	-			-		
1,3-Dichlorobenzene	0.0025	0.0025	U	-			-		
1,3-Dichloropropane	0.0025	0.0025	U	-			-		
1,4-Dichlorobenzene	0.0025	0.0025	U	-			-		
2,2-Dichloropropane	0.0025	0.0025	U	-			-		
2-Butanone	0.0037	0.0037	U	-			-		
2-Chlorotoluene	0.0025	0.0025	U	-			-		
2-Hexanone	0.0025	0.0025	U	-			-		
4-Chlorotoluene	0.0025	0.0025	U	-			-		
4-Methyl-2-pentanone	0.0025	0.0025	U	-			-		
Acetone	0.054	0.0062		-			-		
Benzene	0.0025	0.0025	U	-			-		
Bromobenzene	0.0025	0.0025	U	-			-		
Bromochloromethane	0.0025	0.0025	U	-			-		
Bromodichloromethane	0.0025	0.0025	U	-			-		
Bromoform	0.0025	0.0025	U	-			-		
Bromomethane	0.0025	0.0025	U	-			-		
Carbon disulfide	0.0025	0.0025	U	-			-		
Carbon tetrachloride	0.0025	0.0025	U	-			-		
Chlorobenzene	0.0025	0.0025	U	-			-		
Chloroethane	0.0025	0.0025	U	-			-		
Chloroform	0.0025	0.0025	U	-			-		
Chloromethane	0.0062	0.0062	U	-			-		
cis-1,2-Dichloroethene	0.0025	0.0025	U	-			-		
cis-1,3-Dichloropropene	0.0025	0.0025	U	-			-		
Dibromochloromethane	0.0025	0.0025	U	-			-		
Dibromomethane	0.0025	0.0025	U	-			-		
Dichlorodifluoromethane	0.0025	0.0025	U	-			-		
Ethylbenzene	0.0025	0.0025	U	-			-		
Hexachlorobutadiene	0.0025	0.0025	U	-			-		
Isopropylbenzene	0.0025	0.0025	U	-			-		
m+p-Xylene	0.0062	0.0062	U	-			-		
Methyl Tertiary Butyl Ether	0.0025	0.0025	U	-			-		
Methylene chloride	0.012	0.012	U	-			-		
n-Butylbenzene	0.0025	0.0025	U	-			-		
n-Propylbenzene	0.0025	0.0025	U	-			-		
Naphthalene	0.0025	0.0025	U	-			-		
o-Xylene	0.0031	0.0031	U	-			-		
4-Isopropyltoluene	0.0025	0.0025	U	-			-		
sec-Butylbenzene	0.0025	0.0025	U	-			-		
Styrene	0.0025	0.0025	U	-			-		
tert-Butylbenzene	0.0025	0.0025	U	-			-		
Tetrachloroethene	0.0025	0.0025	U	-			-		
Toluene	0.0025	0.0025	U	-			-		
trans-1,2-Dichloroethene	0.0025	0.0025	U	-			-		
trans-1,3-Dichloropropene	0.0025	0.0025	U	-			-		
Trichloroethene	0.0025	0.0025	U	-			-		
Trichlorofluoromethane	0.0025	0.0025	U	-			-		
Vinyl chloride	0.0025	0.0025	U	-			-		
Semivolatile Organic Compounds (mg/kg)									
1,2,4-Trichlorobenzene	0.21	0.21	U	-			-		
1,2-Dichlorobenzene	0.21	0.21	U	-			-		
1,3-Dichlorobenzene	0.21	0.21	U	-			-		
1,4-Dichlorobenzene	0.21	0.21	U	-			-		
2,4,5-Trichlorophenol	0.21	0.21	U	-			-		
2,4,6-Trichlorophenol	0.21	0.21	U	-			-		
2,4-Dichlorophenol	0.21	0.21	U	-			-		
2,4-Dimethylphenol	0.21	0.21	U	-			-		
2,4-Dinitrophenol	0.21	0.21	U	-			-		
2,4-Dinitrotoluene	0.21	0.21	U	-			-		
2,6-Dinitrotoluene	0.21	0.21	U	-			-		
2-Chloronaphthalene	0.21	0.21	U	-			-		
2-Chlorophenol	0.21	0.21	U	-			-		
2-Methylnaphthalene	0.21	0.21	U	-			-		
2-Methylphenol	0.21	0.21	U	-			-		
2-Nitroaniline	0.21	0.21	U	-			-		
2-Nitrophenol	0.21	0.21	U	-			-		
3,3-Dichlorobenzidine	0.21	0.21	U	-			-		
3-Nitroaniline	0.21	0.21	U	-			-		
4,6-Dinitro-2-methylphenol	0.21	0.21	U	-			-		
4-Bromophenyl-phenylether	0.21	0.21	U	-			-		
4-Chloro-3-methylphenol	0.21	0.21	U	-			-		
4-Chloroaniline	0.21	0.21	U	-			-		

TABLE B-AP12
ANALYTICAL RESULTS FOR GRID AP12
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP12			AP12			AP12		
Sample Name	P3IF-BA-GRID-AP012			P3IF-SS-IS-SO-AP012			P3IF-SS-IS-SO-AP512		
Date Collected	June 7, 2023			June 7, 2023			June 7, 2023		
Semivolatile Organic Compounds (mg/kg), continued									
4-Chlorophenyl-phenylether	0.21	0.21	U	-			-		
4-Nitroaniline	0.21	0.21	U	-			-		
4-Nitrophenol	0.21	0.21	U	-			-		
Acenaphthene	0.21	0.21	U	-			-		
Acenaphthylene	0.21	0.21	U	-			-		
Anthracene	0.21	0.21	U	-			-		
Benzo(a)anthracene	0.21	0.21	U	-			-		
Benzo(a)pyrene	0.16	0.16	U	-			-		
Benzo(b)fluoranthene	0.21	0.21	U	-			-		
Benzo(g,h,i)perylene	0.21	0.21	U	-			-		
Benzo(k)fluoranthene	0.21	0.21	U	-			-		
Benzoic acid	0.21	0.21	U	-			-		
Benzyl Alcohol	0.21	0.21	U	-			-		
Bis(2-chloro-1-methylethyl) ether	0.21	0.21	U	-			-		
Bis(2-chloroethoxy)methane	0.21	0.21	U	-			-		
Bis(2-chloroethyl)ether	0.21	0.21	U	-			-		
Bis(2-ethylhexyl)phthalate	0.21	0.21	U	-			-		
Butyl benzyl phthalate	0.21	0.21	U	-			-		
Carbazole	0.21	0.21	U	-			-		
Chrysene	0.21	0.21	U	-			-		
Di-n-butyl phthalate	0.21	0.21	U	-			-		
Di-n-octyl phthalate	0.21	0.21	U	-			-		
Dibenz(a,h)anthracene	**0.16**	**0.16**	**U**	-			-		
Dibenzofuran	0.21	0.21	U	-			-		
Diethyl phthalate	0.21	0.21	U	-			-		
Dimethyl phthalate	0.21	0.21	U	-			-		
Fluoranthene	0.21	0.21	U	-			-		
Fluorene	0.21	0.21	U	-			-		
Hexachlorobenzene	0.21	0.21	U	-			-		
Hexachlorobutadiene	0.21	0.21	U	-			-		
Hexachloroethane	0.21	0.21	U	-			-		
Indeno(1,2,3-cd)pyrene	0.21	0.21	U	-			-		
Isophorone	0.21	0.21	U	-			-		
n-Nitroso-di-n-propylamine	0.21	0.21	U	-			-		
n-Nitrosodimethylamine	**0.025**	**0.025**	**U**	-			-		
n-Nitrosodiphenylamine	0.21	0.21	U	-			-		
Naphthalene	0.21	0.21	U	-			-		
Nitrobenzene	0.21	0.21	U	-			-		
Pentachlorophenol	0.21	0.21	U	-			-		
Phenanthrene	0.21	0.21	U	-			-		
Phenol	0.21	0.21	U	-			-		
Pyrene	0.21	0.21	U	-			-		
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	-			0.075	0.075	U	0.075	0.075	U
1,3-Dinitrobenzene	-			0.075	0.075	U	0.075	0.075	U
2,4,6-Trinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2,4-Dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2,6-Dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2-Nitrotoluene	-			0.075	0.075	U	0.075	0.075	U
3-Nitrotoluene	-			0.075	0.075	U	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
4-Nitrotoluene	-			0.075	0.075	U	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	-			0.075	0.075	U	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	-			0.075	0.075	U	0.075	0.075	U
Nitrobenzene	-			0.075	0.075	U	0.075	0.075	U
Nitroglycerin	-			0.15	0.15	U	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	-			0.075	0.075	U	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	-			0.25	0.25	U	0.25	0.25	U
Polychlorinated Biphenyls (mg/kg)									
Aroclor 1016	0.025	0.025	U	-			-		
Aroclor 1221	0.025	0.025	U	-			-		
Aroclor 1232	0.012	0.012	U	-			-		
Aroclor 1242	0.012	0.012	U	-			-		
Aroclor 1248	0.012	0.012	U	-			-		
Aroclor 1254	0.012	0.012	U	-			-		
Aroclor 1260	0.012	0.012	U	-			-		
Dioxins/Furans (mg/kg)									
Octachlorodibenzofuran (OCDF)	0.00000023	0.00000023	U	-			-		
Octachlorodibenzo-p-dioxin (OCDD)	0.0000021	0.0000021	U	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.00000016	0.00000016	U	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	0.00000038	0.00000038	U	-			-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.000000043	0.000000043	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000069	0.000000069	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000099	0.000000099	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000066	0.000000066	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000075	0.000000075	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.000000041	0.000000041	J	-			-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000010	0.00000010	U	-			-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000024	0.00000024	U	-			-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.00000021	0.00000021	U	-			-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.00000011	0.00000011	J	-			-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000011	0.00000011	U	-			-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.00000069	0.00000069	U	-			-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.00000013	0.00000013	U	-			-		

TABLE B-AP12
ANALYTICAL RESULTS FOR GRID AP12
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP12			AP12			AP12		
Sample Name	P3IF-BA-GRID-AP012			P3IF-SS-IS-SO-AP012			P3IF-SS-IS-SO-AP512		
Date Collected	June 7, 2023			June 7, 2023			June 7, 2023		
Metals (mg/kg)									
Aluminum	-			23000	4.0		24000	4.0	
Antimony	-			0.24	0.15		0.11	0.15	J
Arsenic	-			1.9	0.30		2.1	0.30	
Barium	-			230	0.20		250	0.20	
Beryllium	-			0.84	0.30	J	0.93	0.30	J
Cadmium	-			0.37	0.080		0.28	0.080	
Calcium (Ca)	-			4400	15		5100	15	
Chromium	-			14	0.20		15	0.20	
Cobalt	-			5.2	0.080		5.2	0.080	
Copper	-			42	0.20	J	33	0.20	
Iron (Fe)	-			12000	8.0		13000	8.0	
Lead	-			14	0.050		13	0.050	
Magnesium (Mg)	-			7100	5.0		7200	5.0	
Manganese (Mn)	-			360	0.080		350	0.080	
Mercury	-			0.048	0.046	J	0.051	0.045	J
Nickel	-			12	0.20		12	0.20	
Potassium (K)	-			2100	8.0		2300	8.0	
Selenium	-			1.2	0.10		1.3	0.10	
Silver	-			0.083	0.050	J	0.061	0.050	J
Sodium (Na)	-			23	8.0		24	8.0	
Thallium	-			0.096	0.050	J	0.10	0.050	
Vanadium	-			28	0.10		27	0.10	
Zinc	-			47	1.5		47	1.5	
Other Parameters (mg/kg)									
Cyanide (CN-)	0.37	0.37	U	-			-		
Nitrate	1.4	2.4	J	-			-		
Perchlorate	0.0022	0.0022	UJ	-			-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-AP12
ANALYTICAL RESULTS FOR GRID AP12
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP12		
Sample Name	P3IF-SS-IS-SO-AP612		
Date Collected	June 7, 2023		
	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)			
1,1,1,2-Tetrachloroethane	-		
1,1,1-Trichloroethane	-		
1,1,2,2-Tetrachloroethane	-		
1,1,2-Trichloroethane	-		
1,1-Dichloroethane	-		
1,1-Dichloroethene	-		
1,1-Dichloropropene	-		
1,2,3-Trichlorobenzene	-		
1,2,3-Trichloropropane	-		
1,2,4-Trichlorobenzene	-		
1,2,4-Trimethylbenzene	-		
1,2-Dibromo-3-chloropropane	-		
1,2-Dibromoethane	-		
1,2-Dichlorobenzene	-		
1,2-Dichloroethane	-		
1,2-Dichloropropane	-		
1,3,5-Trimethylbenzene	-		
1,3-Dichlorobenzene	-		
1,3-Dichloropropane	-		
1,4-Dichlorobenzene	-		
2,2-Dichloropropane	-		
2-Butanone	-		
2-Chlorotoluene	-		
2-Hexanone	-		
4-Chlorotoluene	-		
4-Methyl-2-pentanone	-		
Acetone	-		
Benzene	-		
Bromobenzene	-		
Bromochloromethane	-		
Bromodichloromethane	-		
Bromoform	-		
Bromomethane	-		
Carbon disulfide	-		
Carbon tetrachloride	-		
Chlorobenzene	-		
Chloroethane	-		
Chloroform	-		
Chloromethane	-		
cis-1,2-Dichloroethene	-		
cis-1,3-Dichloropropene	-		
Dibromochloromethane	-		
Dibromomethane	-		
Dichlorodifluoromethane	-		
Ethylbenzene	-		
Hexachlorobutadiene	-		
Isopropylbenzene	-		
m+p-Xylene	-		
Methyl Tertiary Butyl Ether	-		
Methylene chloride	-		
n-Butylbenzene	-		
n-Propylbenzene	-		
Naphthalene	-		
o-Xylene	-		
4-Isopropyltoluene	-		
sec-Butylbenzene	-		
Styrene	-		
tert-Butylbenzene	-		
Tetrachloroethene	-		
Toluene	-		
trans-1,2-Dichloroethene	-		
trans-1,3-Dichloropropene	-		
Trichloroethene	-		
Trichlorofluoromethane	-		
Vinyl chloride	-		
Semivolatile Organic Compounds (mg/kg)			
1,2,4-Trichlorobenzene	-		
1,2-Dichlorobenzene	-		
1,3-Dichlorobenzene	-		
1,4-Dichlorobenzene	-		
2,4,5-Trichlorophenol	-		
2,4,6-Trichlorophenol	-		
2,4-Dichlorophenol	-		
2,4-Dimethylphenol	-		
2,4-Dinitrophenol	-		
2,4-Dinitrotoluene	-		
2,6-Dinitrotoluene	-		
2-Chloronaphthalene	-		
2-Chlorophenol	-		
2-Methylnaphthalene	-		
2-Methylphenol	-		
2-Nitroaniline	-		
2-Nitrophenol	-		
3,3-Dichlorobenzidine	-		
3-Nitroaniline	-		
4,6-Dinitro-2-methylphenol	-		
4-Bromophenyl-phenylether	-		
4-Chloro-3-methylphenol	-		
4-Chloroaniline	-		

TABLE B-AP12
ANALYTICAL RESULTS FOR GRID AP12
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP12		
Sample Name	P3IF-SS-IS-SO-AP612		
Date Collected	June 7, 2023		
Semivolatile Organic Compounds (mg/kg), continued			
4-Chlorophenyl-phenylether	-		
4-Nitroaniline	-		
4-Nitrophenol	-		
Acenaphthene	-		
Acenaphthylene	-		
Anthracene	-		
Benzo(a)anthracene	-		
Benzo(a)pyrene	-		
Benzo(b)fluoranthene	-		
Benzo(g,h,i)perylene	-		
Benzo(k)fluoranthene	-		
Benzoic acid	-		
Benzyl Alcohol	-		
Bis(2-chloro-1-methylethyl) ether	-		
Bis(2-chloroethoxy)methane	-		
Bis(2-chloroethyl)ether	-		
Bis(2-ethylhexyl)phthalate	-		
Butyl benzyl phthalate	-		
Carbazole	-		
Chrysene	-		
Di-n-butyl phthalate	-		
Di-n-octyl phthalate	-		
Dibenz(a,h)anthracene	-		
Dibenzofuran	-		
Diethyl phthalate	-		
Dimethyl phthalate	-		
Fluoranthene	-		
Fluorene	-		
Hexachlorobenzene	-		
Hexachlorobutadiene	-		
Hexachloroethane	-		
Indeno(1,2,3-cd)pyrene	-		
Isophorone	-		
n-Nitroso-di-n-propylamine	-		
n-Nitrosodimethylamine	-		
n-Nitrosodiphenylamine	-		
Naphthalene	-		
Nitrobenzene	-		
Pentachlorophenol	-		
Phenanthrene	-		
Phenol	-		
Pyrene	-		
Explosives (mg/kg)			
1,3,5-Trinitrobenzene	0.075	0.075	U
1,3-Dinitrobenzene	0.075	0.075	U
2,4,6-Trinitrotoluene	0.075	0.075	U
2,4-Dinitrotoluene	0.075	0.075	U
2,6-Dinitrotoluene	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	0.075	0.075	U
2-Nitrotoluene	0.075	0.075	U
3-Nitrotoluene	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	0.075	0.075	U
4-Nitrotoluene	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	U
Nitrobenzene	0.075	0.075	U
Nitroglycerin	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	0.25	0.25	U
Polychlorinated Biphenyls (mg/kg)			
Aroclor 1016	-		
Aroclor 1221	-		
Aroclor 1232	-		
Aroclor 1242	-		
Aroclor 1248	-		
Aroclor 1254	-		
Aroclor 1260	-		
Dioxins/Furans (mg/kg)			
Octachlorodibenzofuran (OCDF)	-		
Octachlorodibenzo-p-dioxin (OCDD)	-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	-		

TABLE B-AP12
ANALYTICAL RESULTS FOR GRID AP12
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP12		
Sample Name	P3IF-SS-IS-SO-AP612		
Date Collected	June 7, 2023		
Metals (mg/kg)			
Aluminum	20000	4.0	
Antimony	0.080	0.15	J
Arsenic	1.8	0.30	
Barium	230	0.20	
Beryllium	0.78	0.30	J
Cadmium	0.23	0.080	
Calcium (Ca)	4300	15	
Chromium	13	0.20	
Cobalt	4.8	0.080	
Copper	25	0.20	J
Iron (Fe)	12000	8.0	
Lead	11	0.050	
Magnesium (Mg)	6500	5.0	
Manganese (Mn)	330	0.080	
Mercury	0.052	0.047	J
Nickel	11	0.20	
Potassium (K)	1800	8.0	
Selenium	1.2	0.10	
Silver	0.070	0.050	J
Sodium (Na)	22	8.0	
Thallium	0.10	0.050	
Vanadium	25	0.10	
Zinc	47	1.5	
Other Parameters (mg/kg)			
Cyanide (CN-)	-		
Nitrate	-		
Perchlorate	-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-AP14
ANALYTICAL RESULTS FOR GRID AP14
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP14			AP14			AP14		
Sample Name	P3IF-BA-GRID-AP014			P3IF-SS-IS-SO-AP014			P3IF-SS-IS-SO-AP514		
Date Collected	07 Jun 2023			07 Jun 2023			07 Jun 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)									
1,1,1,2-Tetrachloroethane	0.0021	0.0021	U	-			-		
1,1,1-Trichloroethane	0.0021	0.0021	U	-			-		
1,1,2,2-Tetrachloroethane	0.0021	0.0021	U	-			-		
1,1,2-Trichloroethane	0.0021	0.0021	U	-			-		
1,1-Dichloroethane	0.0021	0.0021	U	-			-		
1,1-Dichloroethene	0.0021	0.0021	U	-			-		
1,1-Dichloropropene	0.0021	0.0021	U	-			-		
1,2,3-Trichlorobenzene	0.0021	0.0021	U	-			-		
1,2,3-Trichloropropane	0.0053	0.0053	U	-			-		
1,2,4-Trichlorobenzene	0.0021	0.0021	U	-			-		
1,2,4-Trimethylbenzene	0.0021	0.0021	U	-			-		
1,2-Dibromo-3-chloropropane	0.0053	0.0053	U	-			-		
1,2-Dibromoethane	0.0021	0.0021	U	-			-		
1,2-Dichlorobenzene	0.0021	0.0021	U	-			-		
1,2-Dichloroethane	0.0021	0.0021	U	-			-		
1,2-Dichloropropane	0.0021	0.0021	U	-			-		
1,3,5-Trimethylbenzene	0.0021	0.0021	U	-			-		
1,3-Dichlorobenzene	0.0021	0.0021	U	-			-		
1,3-Dichloropropane	0.0021	0.0021	U	-			-		
1,4-Dichlorobenzene	0.0021	0.0021	U	-			-		
2,2-Dichloropropane	0.0021	0.0021	U	-			-		
2-Butanone	0.0032	0.0032	U	-			-		
2-Chlorotoluene	0.0021	0.0021	U	-			-		
2-Hexanone	0.0021	0.0021	U	-			-		
4-Chlorotoluene	0.0021	0.0021	U	-			-		
4-Methyl-2-pentanone	0.0021	0.0021	U	-			-		
Acetone	0.12	0.0053		-			-		
Benzene	0.0021	0.0021	U	-			-		
Bromobenzene	0.0021	0.0021	U	-			-		
Bromochloromethane	0.0021	0.0021	U	-			-		
Bromodichloromethane	0.0021	0.0021	U	-			-		
Bromoform	0.0021	0.0021	U	-			-		
Bromomethane	0.0021	0.0021	U	-			-		
Carbon disulfide	0.0021	0.0021	U	-			-		
Carbon tetrachloride	0.0021	0.0021	U	-			-		
Chlorobenzene	0.0021	0.0021	U	-			-		
Chloroethane	0.0021	0.0021	U	-			-		
Chloroform	0.0021	0.0021	U	-			-		
Chloromethane	0.0053	0.0053	U	-			-		
cis-1,2-Dichloroethene	0.0021	0.0021	U	-			-		
cis-1,3-Dichloropropene	0.0021	0.0021	U	-			-		
Dibromochloromethane	0.0021	0.0021	U	-			-		
Dibromomethane	0.0021	0.0021	U	-			-		
Dichlorodifluoromethane	0.0021	0.0021	U	-			-		
Ethylbenzene	0.0021	0.0021	U	-			-		
Hexachlorobutadiene	0.0021	0.0021	U	-			-		
Isopropylbenzene	0.0021	0.0021	U	-			-		
m+p-Xylene	0.0053	0.0053	U	-			-		
Methyl Tertiary Butyl Ether	0.0021	0.0021	U	-			-		
Methylene chloride	0.011	0.011	U	-			-		
n-Butylbenzene	0.0021	0.0021	U	-			-		
n-Propylbenzene	0.0021	0.0021	U	-			-		
Naphthalene	0.0021	0.0021	U	-			-		
o-Xylene	0.0027	0.0027	U	-			-		
4-Isopropyltoluene	0.0021	0.0021	U	-			-		
sec-Butylbenzene	0.0021	0.0021	U	-			-		
Styrene	0.0021	0.0021	U	-			-		
tert-Butylbenzene	0.0021	0.0021	U	-			-		
Tetrachloroethene	0.0021	0.0021	U	-			-		
Toluene	0.0021	0.0021	U	-			-		
trans-1,2-Dichloroethene	0.0021	0.0021	U	-			-		
trans-1,3-Dichloropropene	0.0021	0.0021	U	-			-		
Trichloroethene	0.0021	0.0021	U	-			-		
Trichlorofluoromethane	0.0021	0.0021	U	-			-		
Vinyl chloride	0.0021	0.0021	U	-			-		
Semivolatile Organic Compounds (mg/kg)									
1,2,4-Trichlorobenzene	0.20	0.2	U	-			-		
1,2-Dichlorobenzene	0.20	0.2	U	-			-		
1,3-Dichlorobenzene	0.20	0.2	U	-			-		
1,4-Dichlorobenzene	0.20	0.2	U	-			-		
2,4,5-Trichlorophenol	0.20	0.2	U	-			-		
2,4,6-Trichlorophenol	0.20	0.2	U	-			-		
2,4-Dichlorophenol	0.20	0.2	U	-			-		
2,4-Dimethylphenol	0.20	0.2	U	-			-		
2,4-Dinitrophenol	0.20	0.2	U	-			-		
2,4-Dinitrotoluene	0.20	0.2	U	-			-		
2,6-Dinitrotoluene	0.20	0.2	U	-			-		
2-Chloronaphthalene	0.20	0.2	U	-			-		
2-Chlorophenol	0.20	0.2	U	-			-		
2-Methylnaphthalene	0.20	0.2	U	-			-		
2-Methylphenol	0.20	0.2	U	-			-		
2-Nitroaniline	0.20	0.2	U	-			-		
2-Nitrophenol	0.20	0.2	U	-			-		
3,3-Dichlorobenzidine	0.20	0.2	U	-			-		
3-Nitroaniline	0.20	0.2	U	-			-		
4,6-Dinitro-2-methylphenol	0.20	0.2	U	-			-		
4-Bromophenyl-phenylether	0.20	0.2	U	-			-		
4-Chloro-3-methylphenol	0.20	0.2	U	-			-		
4-Chloroaniline	0.20	0.2	U	-			-		

TABLE B-AP14
ANALYTICAL RESULTS FOR GRID AP14
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP14			AP14			AP14		
Sample Name	P3IF-BA-GRID-AP014			P3IF-SS-IS-SO-AP014			P3IF-SS-IS-SO-AP514		
Date Collected	07 Jun 2023			07 Jun 2023			07 Jun 2023		
Semivolatile Organic Compounds (mg/kg), continued									
4-Chlorophenyl-phenylether	0.20	0.2	U	-			-		
4-Nitroaniline	0.20	0.2	U	-			-		
4-Nitrophenol	0.20	0.2	U	-			-		
Acenaphthene	0.20	0.2	U	-			-		
Acenaphthylene	0.20	0.2	U	-			-		
Anthracene	0.20	0.2	U	-			-		
Benzo(a)anthracene	0.20	0.2	U	-			-		
Benzo(a)pyrene	0.16	0.16	U	-			-		
Benzo(b)fluoranthene	0.20	0.2	U	-			-		
Benzo(g,h,i)perylene	0.20	0.2	U	-			-		
Benzo(k)fluoranthene	0.20	0.2	U	-			-		
Benzoic acid	0.20	0.2	U	-			-		
Benzyl Alcohol	0.20	0.2	U	-			-		
Bis(2-chloro-1-methylethyl) ether	0.20	0.2	U	-			-		
Bis(2-chloroethoxy)methane	0.20	0.2	U	-			-		
Bis(2-chloroethyl)ether	0.20	0.2	U	-			-		
Bis(2-ethylhexyl)phthalate	0.20	0.2	U	-			-		
Butyl benzyl phthalate	0.20	0.2	U	-			-		
Carbazole	0.20	0.2	U	-			-		
Chrysene	0.20	0.2	U	-			-		
Di-n-butyl phthalate	0.20	0.2	U	-			-		
Di-n-octyl phthalate	0.20	0.2	U	-			-		
Dibenz(a,h)anthracene	**0.16**	**0.16**	**U**	-			-		
Dibenzofuran	0.20	0.2	U	-			-		
Diethyl phthalate	0.20	0.2	U	-			-		
Dimethyl phthalate	0.20	0.2	U	-			-		
Fluoranthene	0.20	0.2	U	-			-		
Fluorene	0.20	0.2	U	-			-		
Hexachlorobenzene	0.20	0.2	U	-			-		
Hexachlorobutadiene	0.20	0.2	U	-			-		
Hexachloroethane	0.20	0.2	U	-			-		
Indeno(1,2,3-cd)pyrene	0.20	0.2	U	-			-		
Isophorone	0.20	0.2	U	-			-		
n-Nitroso-di-n-propylamine	0.20	0.2	U	-			-		
n-Nitrosodimethylamine	**0.025**	**0.025**	**U**	-			-		
n-Nitrosodiphenylamine	0.20	0.2	U	-			-		
Naphthalene	0.20	0.2	U	-			-		
Nitrobenzene	0.20	0.2	U	-			-		
Pentachlorophenol	0.20	0.2	U	-			-		
Phenanthrene	0.20	0.2	U	-			-		
Phenol	0.20	0.2	U	-			-		
Pyrene	0.20	0.2	U	-			-		
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	-			0.075	0.075	U	0.075	0.075	U
1,3-Dinitrobenzene	-			0.075	0.075	U	0.075	0.075	U
2,4,6-Trinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2,4-Dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2,6-Dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2-Nitrotoluene	-			0.075	0.075	U	0.075	0.075	U
3-Nitrotoluene	-			0.075	0.075	U	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
4-Nitrotoluene	-			0.075	0.075	U	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	-			0.075	0.075	U	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	-			0.075	0.075	U	0.075	0.075	U
Nitrobenzene	-			0.075	0.075	U	0.075	0.075	U
Nitroglycerin	-			0.15	0.15	U	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	-			0.075	0.075	U	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	-			0.25	0.25	U	0.25	0.25	U
Polychlorinated Biphenyls (mg/kg)									
Aroclor 1016	0.025	0.025	U	-			-		
Aroclor 1221	0.025	0.025	U	-			-		
Aroclor 1232	0.012	0.012	U	-			-		
Aroclor 1242	0.012	0.012	U	-			-		
Aroclor 1248	0.012	0.012	U	-			-		
Aroclor 1254	0.012	0.012	U	-			-		
Aroclor 1260	0.012	0.012	U	-			-		
Dioxins/Furans (mg/kg)									
Octachlorodibenzofuran (OCDF)	0.00000062	0.00000062	J	-			-		
Octachlorodibenzo-p-dioxin (OCDD)	0.0000064	0.0000064	J	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.000000090	0.000000090	U	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	0.0000020	0.0000020	J	-			-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.00000011	0.00000011	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.00000010	0.00000010	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000012	0.00000012	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000093	0.000000093	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000012	0.00000012	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.00000012	0.00000012	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000014	0.00000014	U	-			-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000014	0.00000014	U	-			-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.00000011	0.00000011	U	-			-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.00000012	0.00000012	U	-			-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000014	0.00000014	U	-			-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.00000065	0.00000065	U	-			-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.00000044	0.00000044	U	-			-		

TABLE B-AP14
ANALYTICAL RESULTS FOR GRID AP14
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP14			AP14			AP14		
Sample Name	P3IF-BA-GRID-AP014			P3IF-SS-IS-SO-AP014			P3IF-SS-IS-SO-AP514		
Date Collected	07 Jun 2023			07 Jun 2023			07 Jun 2023		
Metals (mg/kg)									
Aluminum	-			18000	4.0		20000	4.0	
Antimony	-			0.15	0.15	J	0.16	0.15	J
Arsenic	-			1.2	0.30		1.2	0.30	
Barium	-			210	0.20		210	0.20	
Beryllium	-			0.77	0.30	J	0.72	0.30	J
Cadmium	-			0.50	0.080		0.50	0.080	
Calcium (Ca)	-			6800	15		8500	15	
Chromium	-			13	0.20		13	0.20	
Cobalt	-			4.3	0.080		4.3	0.080	
Copper	-			64	0.20		60	0.20	
Iron (Fe)	-			11000	8.0		11000	8.0	
Lead	-			14	0.050		14	0.050	
Magnesium (Mg)	-			6500	5.0		6800	5.0	
Manganese (Mn)	-			420	0.080		410	0.080	
Mercury	-			0.041	0.045	J	0.047	0.043	J
Nickel	-			11	0.20		11	0.20	
Potassium (K)	-			1700	8.0		2100	8.0	
Selenium	-			1.2	0.10		1.2	0.10	
Silver	-			0.11	0.050		0.099	0.050	J
Sodium (Na)	-			22	8.0		28	8.0	
Thallium	-			0.067	0.050	J	0.089	0.050	J
Vanadium	-			20	0.10		22	0.10	
Zinc	-			50	1.5		51	1.5	
Other Parameters (mg/kg)									
Cyanide (CN-)	0.39	0.39	U	-			-		
Nitrate	2.5	2.5	J	-			-		
Perchlorate	0.0023	0.0023	UJ	-			-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-AP14
ANALYTICAL RESULTS FOR GRID AP14
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP14		
Sample Name	P3IF-SS-IS-SO-AP614		
Date Collected	June 19, 2023		
	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)			
1,1,1,2-Tetrachloroethane	-		
1,1,1-Trichloroethane	-		
1,1,2,2-Tetrachloroethane	-		
1,1,2-Trichloroethane	-		
1,1-Dichloroethane	-		
1,1-Dichloroethene	-		
1,1-Dichloropropene	-		
1,2,3-Trichlorobenzene	-		
1,2,3-Trichloropropane	-		
1,2,4-Trichlorobenzene	-		
1,2,4-Trimethylbenzene	-		
1,2-Dibromo-3-chloropropane	-		
1,2-Dibromoethane	-		
1,2-Dichlorobenzene	-		
1,2-Dichloroethane	-		
1,2-Dichloropropane	-		
1,3,5-Trimethylbenzene	-		
1,3-Dichlorobenzene	-		
1,3-Dichloropropane	-		
1,4-Dichlorobenzene	-		
2,2-Dichloropropane	-		
2-Butanone	-		
2-Chlorotoluene	-		
2-Hexanone	-		
4-Chlorotoluene	-		
4-Methyl-2-pentanone	-		
Acetone	-		
Benzene	-		
Bromobenzene	-		
Bromochloromethane	-		
Bromodichloromethane	-		
Bromoform	-		
Bromomethane	-		
Carbon disulfide	-		
Carbon tetrachloride	-		
Chlorobenzene	-		
Chloroethane	-		
Chloroform	-		
Chloromethane	-		
cis-1,2-Dichloroethene	-		
cis-1,3-Dichloropropene	-		
Dibromochloromethane	-		
Dibromomethane	-		
Dichlorodifluoromethane	-		
Ethylbenzene	-		
Hexachlorobutadiene	-		
Isopropylbenzene	-		
m+p-Xylene	-		
Methyl Tertiary Butyl Ether	-		
Methylene chloride	-		
n-Butylbenzene	-		
n-Propylbenzene	-		
Naphthalene	-		
o-Xylene	-		
4-Isopropyltoluene	-		
sec-Butylbenzene	-		
Styrene	-		
tert-Butylbenzene	-		
Tetrachloroethene	-		
Toluene	-		
trans-1,2-Dichloroethene	-		
trans-1,3-Dichloropropene	-		
Trichloroethene	-		
Trichlorofluoromethane	-		
Vinyl chloride	-		
Semivolatile Organic Compounds (mg/kg)			
1,2,4-Trichlorobenzene	-		
1,2-Dichlorobenzene	-		
1,3-Dichlorobenzene	-		
1,4-Dichlorobenzene	-		
2,4,5-Trichlorophenol	-		
2,4,6-Trichlorophenol	-		
2,4-Dichlorophenol	-		
2,4-Dimethylphenol	-		
2,4-Dinitrophenol	-		
2,4-Dinitrotoluene	-		
2,6-Dinitrotoluene	-		
2-Chloronaphthalene	-		
2-Chlorophenol	-		
2-Methylnaphthalene	-		
2-Methylphenol	-		
2-Nitroaniline	-		
2-Nitrophenol	-		
3,3-Dichlorobenzidine	-		
3-Nitroaniline	-		
4,6-Dinitro-2-methylphenol	-		
4-Bromophenyl-phenylether	-		
4-Chloro-3-methylphenol	-		
4-Chloroaniline	-		

TABLE B-AP14
ANALYTICAL RESULTS FOR GRID AP14
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP14		
Sample Name	P3IF-SS-IS-SO-AP614		
Date Collected	June 19, 2023		
Semivolatile Organic Compounds (mg/kg), continued			
4-Chlorophenyl-phenylether	-		
4-Nitroaniline	-		
4-Nitrophenol	-		
Acenaphthene	-		
Acenaphthylene	-		
Anthracene	-		
Benzo(a)anthracene	-		
Benzo(a)pyrene	-		
Benzo(b)fluoranthene	-		
Benzo(g,h,i)perylene	-		
Benzo(k)fluoranthene	-		
Benzoic acid	-		
Benzyl Alcohol	-		
Bis(2-chloro-1-methylethyl) ether	-		
Bis(2-chloroethoxy)methane	-		
Bis(2-chloroethyl)ether	-		
Bis(2-ethylhexyl)phthalate	-		
Butyl benzyl phthalate	-		
Carbazole	-		
Chrysene	-		
Di-n-butyl phthalate	-		
Di-n-octyl phthalate	-		
Dibenz(a,h)anthracene	-		
Dibenzofuran	-		
Diethyl phthalate	-		
Dimethyl phthalate	-		
Fluoranthene	-		
Fluorene	-		
Hexachlorobenzene	-		
Hexachlorobutadiene	-		
Hexachloroethane	-		
Indeno(1,2,3-cd)pyrene	-		
Isophorone	-		
n-Nitroso-di-n-propylamine	-		
n-Nitrosodimethylamine	-		
n-Nitrosodiphenylamine	-		
Naphthalene	-		
Nitrobenzene	-		
Pentachlorophenol	-		
Phenanthrene	-		
Phenol	-		
Pyrene	-		
Explosives (mg/kg)			
1,3,5-Trinitrobenzene	0.075	0.075	U
1,3-Dinitrobenzene	0.075	0.075	U
2,4,6-Trinitrotoluene	0.075	0.075	U
2,4-Dinitrotoluene	0.075	0.075	U
2,6-Dinitrotoluene	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	0.075	0.075	U
2-Nitrotoluene	0.075	0.075	U
3-Nitrotoluene	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	0.075	0.075	U
4-Nitrotoluene	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	0.52	0.075	J
Nitrobenzene	0.075	0.075	U
Nitroglycerin	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	0.25	0.25	U
Polychlorinated Biphenyls (mg/kg)			
Aroclor 1016	-		
Aroclor 1221	-		
Aroclor 1232	-		
Aroclor 1242	-		
Aroclor 1248	-		
Aroclor 1254	-		
Aroclor 1260	-		
Dioxins/Furans (mg/kg)			
Octachlorodibenzofuran (OCDF)	-		
Octachlorodibenzo-p-dioxin (OCDD)	-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	-		

TABLE B-AP14
ANALYTICAL RESULTS FOR GRID AP14
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP14		
Sample Name	P3IF-SS-IS-SO-AP614		
Date Collected	June 19, 2023		
Metals (mg/kg)			
Aluminum	12000	4.0	
Antimony	0.21	0.15	
Arsenic	1.2	0.30	
Barium	210	0.20	
Beryllium	0.70	0.30	J
Cadmium	0.58	0.080	
Calcium (Ca)	6900	15	
Chromium	8.8	0.20	
Cobalt	3.5	0.080	
Copper	65	0.20	
Iron (Fe)	8300	8.0	
Lead	14	0.050	
Magnesium (Mg)	4300	5.0	
Manganese (Mn)	440	0.080	
Mercury	0.050	0.045	J
Nickel	9.2	0.20	
Potassium (K)	1100	8.0	
Selenium	1.2	0.10	
Silver	0.092	0.050	J
Sodium (Na)	10	8.0	
Thallium	0.064	0.050	J
Vanadium	14	0.10	
Zinc	46	1.5	
Other Parameters (mg/kg)			
Cyanide (CN-)	-		
Nitrate	-		
Perchlorate	-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-AP16
ANALYTICAL RESULTS FOR GRID AP16
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP16			AP16			AP16		
Sample Name	P3IF-BA-GRID-AP016			P3IF-SS-IS-SO-AP016			P3IF-SS-IS-SO-AP516		
Date Collected	08 Jun 2023			08 Jun 2023			08 Jun 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)									
1,1,1,2-Tetrachloroethane	0.0021	0.0021	U	-			-		
1,1,1-Trichloroethane	0.0021	0.0021	U	-			-		
1,1,2,2-Tetrachloroethane	0.0021	0.0021	U	-			-		
1,1,2-Trichloroethane	0.0021	0.0021	U	-			-		
1,1-Dichloroethane	0.0021	0.0021	U	-			-		
1,1-Dichloroethene	0.0021	0.0021	U	-			-		
1,1-Dichloropropene	0.0021	0.0021	U	-			-		
1,2,3-Trichlorobenzene	0.0021	0.0021	U	-			-		
1,2,3-Trichloropropane	0.0053	0.0053	U	-			-		
1,2,4-Trichlorobenzene	0.0021	0.0021	U	-			-		
1,2,4-Trimethylbenzene	0.0021	0.0021	U	-			-		
1,2-Dibromo-3-chloropropane	0.0053	0.0053	U	-			-		
1,2-Dibromoethane	0.0021	0.0021	U	-			-		
1,2-Dichlorobenzene	0.0021	0.0021	U	-			-		
1,2-Dichloroethane	0.0021	0.0021	U	-			-		
1,2-Dichloropropane	0.0021	0.0021	U	-			-		
1,3,5-Trimethylbenzene	0.0021	0.0021	U	-			-		
1,3-Dichlorobenzene	0.0021	0.0021	U	-			-		
1,3-Dichloropropane	0.0021	0.0021	U	-			-		
1,4-Dichlorobenzene	0.0021	0.0021	U	-			-		
2,2-Dichloropropane	0.0021	0.0021	U	-			-		
2-Butanone	0.0032	0.0032	U	-			-		
2-Chlorotoluene	0.0021	0.0021	U	-			-		
2-Hexanone	0.0021	0.0021	U	-			-		
4-Chlorotoluene	0.0021	0.0021	U	-			-		
4-Methyl-2-pentanone	0.0021	0.0021	U	-			-		
Acetone	0.034	0.0053		-			-		
Benzene	0.0021	0.0021	U	-			-		
Bromobenzene	0.0021	0.0021	U	-			-		
Bromochloromethane	0.0021	0.0021	U	-			-		
Bromodichloromethane	0.0021	0.0021	U	-			-		
Bromoform	0.0021	0.0021	U	-			-		
Bromomethane	0.0021	0.0021	U	-			-		
Carbon disulfide	0.0021	0.0021	U	-			-		
Carbon tetrachloride	0.0021	0.0021	U	-			-		
Chlorobenzene	0.0021	0.0021	U	-			-		
Chloroethane	0.0021	0.0021	U	-			-		
Chloroform	0.0021	0.0021	U	-			-		
Chloromethane	0.0053	0.0053	U	-			-		
cis-1,2-Dichloroethene	0.0021	0.0021	U	-			-		
cis-1,3-Dichloropropene	0.0021	0.0021	U	-			-		
Dibromochloromethane	0.0021	0.0021	U	-			-		
Dibromomethane	0.0021	0.0021	U	-			-		
Dichlorodifluoromethane	0.0021	0.0021	U	-			-		
Ethylbenzene	0.0021	0.0021	U	-			-		
Hexachlorobutadiene	0.0021	0.0021	U	-			-		
Isopropylbenzene	0.0021	0.0021	U	-			-		
m+p-Xylene	0.0053	0.0053	U	-			-		
Methyl Tertiary Butyl Ether	0.0021	0.0021	U	-			-		
Methylene chloride	0.011	0.011	U	-			-		
n-Butylbenzene	0.0021	0.0021	U	-			-		
n-Propylbenzene	0.0021	0.0021	U	-			-		
Naphthalene	0.0021	0.0021	U	-			-		
o-Xylene	0.0027	0.0027	U	-			-		
4-Isopropyltoluene	0.0021	0.0021	U	-			-		
sec-Butylbenzene	0.0021	0.0021	U	-			-		
Styrene	0.0021	0.0021	U	-			-		
tert-Butylbenzene	0.0021	0.0021	U	-			-		
Tetrachloroethene	0.0021	0.0021	U	-			-		
Toluene	0.0021	0.0021	U	-			-		
trans-1,2-Dichloroethene	0.0021	0.0021	U	-			-		
trans-1,3-Dichloropropene	0.0021	0.0021	U	-			-		
Trichloroethene	0.0021	0.0021	U	-			-		
Trichlorofluoromethane	0.0021	0.0021	U	-			-		
Vinyl chloride	0.0021	0.0021	U	-			-		
Semivolatile Organic Compounds (mg/kg)									
1,2,4-Trichlorobenzene	0.2	0.2	U	-			-		
1,2-Dichlorobenzene	0.2	0.2	U	-			-		
1,3-Dichlorobenzene	0.2	0.2	U	-			-		
1,4-Dichlorobenzene	0.2	0.2	U	-			-		
2,4,5-Trichlorophenol	0.2	0.2	U	-			-		
2,4,6-Trichlorophenol	0.2	0.2	U	-			-		
2,4-Dichlorophenol	0.2	0.2	U	-			-		
2,4-Dimethylphenol	0.2	0.2	U	-			-		
2,4-Dinitrophenol	0.2	0.2	U	-			-		
2,4-Dinitrotoluene	0.2	0.2	U	-			-		
2,6-Dinitrotoluene	0.2	0.2	U	-			-		
2-Chloronaphthalene	0.2	0.2	U	-			-		
2-Chlorophenol	0.2	0.2	U	-			-		
2-Methylnaphthalene	0.2	0.2	U	-			-		
2-Methylphenol	0.2	0.2	U	-			-		
2-Nitroaniline	0.2	0.2	U	-			-		
2-Nitrophenol	0.2	0.2	U	-			-		
3,3-Dichlorobenzidine	0.2	0.2	U	-			-		
3-Nitroaniline	0.2	0.2	U	-			-		
4,6-Dinitro-2-methylphenol	0.2	0.2	U	-			-		
4-Bromophenyl-phenylether	0.2	0.2	U	-			-		
4-Chloro-3-methylphenol	0.2	0.2	U	-			-		
4-Chloroaniline	0.2	0.2	U	-			-		

TABLE B-AP16
ANALYTICAL RESULTS FOR GRID AP16
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP16			AP16			AP16		
Sample Name	P3IF-BA-GRID-AP016			P3IF-SS-IS-SO-AP016			P3IF-SS-IS-SO-AP516		
Date Collected	08 Jun 2023			08 Jun 2023			08 Jun 2023		
Semivolatile Organic Compounds (mg/kg), continued									
4-Chlorophenyl-phenylether	0.2	0.2	U	-			-		
4-Nitroaniline	0.2	0.2	U	-			-		
4-Nitrophenol	0.2	0.2	U	-			-		
Acenaphthene	0.2	0.2	U	-			-		
Acenaphthylene	0.2	0.2	U	-			-		
Anthracene	0.2	0.2	U	-			-		
Benzo(a)anthracene	0.2	0.2	U	-			-		
Benzo(a)pyrene	0.15	0.15	U	-			-		
Benzo(b)fluoranthene	0.2	0.2	U	-			-		
Benzo(g,h,i)perylene	0.2	0.2	U	-			-		
Benzo(k)fluoranthene	0.2	0.2	U	-			-		
Benzoic acid	0.2	0.2	U	-			-		
Benzyl Alcohol	0.2	0.2	U	-			-		
Bis(2-chloro-1-methylethyl) ether	0.2	0.2	U	-			-		
Bis(2-chloroethoxy)methane	0.2	0.2	U	-			-		
Bis(2-chloroethyl)ether	0.2	0.2	U	-			-		
Bis(2-ethylhexyl)phthalate	0.2	0.2	U	-			-		
Butyl benzyl phthalate	0.2	0.2	U	-			-		
Carbazole	0.2	0.2	U	-			-		
Chrysene	0.2	0.2	U	-			-		
Di-n-butyl phthalate	0.2	0.2	U	-			-		
Di-n-octyl phthalate	0.2	0.2	U	-			-		
Dibenz(a,h)anthracene	0.15	0.15	U	-			-		
Dibenzofuran	0.2	0.2	U	-			-		
Diethyl phthalate	0.2	0.2	U	-			-		
Dimethyl phthalate	0.2	0.2	U	-			-		
Fluoranthene	0.2	0.2	U	-			-		
Fluorene	0.2	0.2	U	-			-		
Hexachlorobenzene	0.2	0.2	U	-			-		
Hexachlorobutadiene	0.2	0.2	U	-			-		
Hexachloroethane	0.2	0.2	U	-			-		
Indeno(1,2,3-cd)pyrene	0.2	0.2	U	-			-		
Isophorone	0.2	0.2	U	-			-		
n-Nitroso-di-n-propylamine	0.2	0.2	U	-			-		
n-Nitrosodimethylamine	**0.024**	**0.024**	**U**	-			-		
n-Nitrosodiphenylamine	0.2	0.2	U	-			-		
Naphthalene	0.2	0.2	U	-			-		
Nitrobenzene	0.2	0.2	U	-			-		
Pentachlorophenol	0.2	0.2	U	-			-		
Phenanthrene	0.2	0.2	U	-			-		
Phenol	0.2	0.2	U	-			-		
Pyrene	0.2	0.2	U	-			-		
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	-			0.075	0.075	U	0.075	0.075	U
1,3-Dinitrobenzene	-			0.075	0.075	U	0.075	0.075	U
2,4,6-Trinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2,4-Dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2,6-Dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2-Nitrotoluene	-			0.075	0.075	U	0.075	0.075	U
3-Nitrotoluene	-			0.075	0.075	U	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
4-Nitrotoluene	-			0.075	0.075	U	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	-			0.075	0.075	U	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	-			0.075	0.075	U	0.075	0.075	U
Nitrobenzene	-			0.075	0.075	U	0.075	0.075	U
Nitroglycerin	-			0.15	0.15	U	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	-			0.075	0.075	U	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	-			0.25	0.25	U	0.25	0.25	U
Polychlorinated Biphenyls (mg/kg)									
Aroclor 1016	0.024	0.024	U	-			-		
Aroclor 1221	0.024	0.024	U	-			-		
Aroclor 1232	0.012	0.012	U	-			-		
Aroclor 1242	0.012	0.012	U	-			-		
Aroclor 1248	0.012	0.012	U	-			-		
Aroclor 1254	0.012	0.012	U	-			-		
Aroclor 1260	0.012	0.012	U	-			-		
Dioxins/Furans (mg/kg)									
Octachlorodibenzofuran (OCDF)	0.00000017	0.00000017	J	-			-		
Octachlorodibenzo-p-dioxin (OCDD)	0.0000045	0.0000045	J	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.000000065	0.000000065	U	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	0.00000056	0.00000056	U	-			-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.000000076	0.000000076	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000087	0.000000087	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000041	0.000000041	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000086	0.000000086	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000076	0.000000076	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.00000012	0.00000012	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000014	0.00000014	U	-			-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000014	0.00000014	U	-			-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.00000007	0.00000007	U	-			-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.00000016	0.00000016	U	-			-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000015	0.00000015	J	-			-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.00000056	0.00000056	U	-			-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.00000013	0.00000013	U	-			-		

TABLE B-AP16
ANALYTICAL RESULTS FOR GRID AP16
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP16			AP16			AP16		
Sample Name	P3IF-BA-GRID-AP016			P3IF-SS-IS-SO-AP016			P3IF-SS-IS-SO-AP516		
Date Collected	08 Jun 2023			08 Jun 2023			08 Jun 2023		
Metals (mg/kg)									
Aluminum	-			16000	4.0		18000	4.0	
Antimony	-			0.14	0.15	J	0.18	0.15	J
Arsenic	-			1.1	0.30	J	1.2	0.30	
Barium	-			210	0.20		210	0.20	
Beryllium	-			0.88	0.30	J	0.99	0.30	J
Cadmium	-			0.46	0.080	J	0.59	0.080	
Calcium (Ca)	-			5000	15	J	6100	15	
Chromium	-			11	0.20	J	12	0.20	
Cobalt	-			3.8	0.080	J	4.0	0.080	
Copper	-			50	0.20	J	63	0.20	
Iron (Fe)	-			9700	8.0		11000	8.0	
Lead	-			13	0.050	J	15	0.050	
Magnesium (Mg)	-			6100	5.0	J	6500	5.0	
Manganese (Mn)	-			350	0.080		380	0.080	
Mercury	-			0.074	0.044	J	0.065	0.044	J
Nickel	-			9.9	0.20	J	11	0.20	
Potassium (K)	-			1700	8.0		1900	8.0	
Selenium	-			1.3	0.10	J	1.3	0.10	
Silver	-			0.071	0.050	J	0.088	0.050	J
Sodium (Na)	-			16	8.0	J	21	8.0	
Thallium	-			0.057	0.050	J	0.063	0.050	J
Vanadium	-			15	0.10	J	16	0.10	
Zinc	-			43	1.5	J	46	1.5	
Other Parameters (mg/kg)									
Cyanide (CN-)	0.37	0.37	U	-			-		
Nitrate	1.8	2.3	J	-			-		
Perchlorate	0.0020	0.0020	UJ	-			-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-AP16
ANALYTICAL RESULTS FOR GRID AP16
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP16		
Sample Name	P3IF-SS-IS-SO-AP616		
Date Collected	June 19, 2023		
	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)			
1,1,1,2-Tetrachloroethane	-		
1,1,1-Trichloroethane	-		
1,1,2,2-Tetrachloroethane	-		
1,1,2-Trichloroethane	-		
1,1-Dichloroethane	-		
1,1-Dichloroethene	-		
1,1-Dichloropropene	-		
1,2,3-Trichlorobenzene	-		
1,2,3-Trichloropropane	-		
1,2,4-Trichlorobenzene	-		
1,2,4-Trimethylbenzene	-		
1,2-Dibromo-3-chloropropane	-		
1,2-Dibromoethane	-		
1,2-Dichlorobenzene	-		
1,2-Dichloroethane	-		
1,2-Dichloropropane	-		
1,3,5-Trimethylbenzene	-		
1,3-Dichlorobenzene	-		
1,3-Dichloropropane	-		
1,4-Dichlorobenzene	-		
2,2-Dichloropropane	-		
2-Butanone	-		
2-Chlorotoluene	-		
2-Hexanone	-		
4-Chlorotoluene	-		
4-Methyl-2-pentanone	-		
Acetone	-		
Benzene	-		
Bromobenzene	-		
Bromochloromethane	-		
Bromodichloromethane	-		
Bromoform	-		
Bromomethane	-		
Carbon disulfide	-		
Carbon tetrachloride	-		
Chlorobenzene	-		
Chloroethane	-		
Chloroform	-		
Chloromethane	-		
cis-1,2-Dichloroethene	-		
cis-1,3-Dichloropropene	-		
Dibromochloromethane	-		
Dibromomethane	-		
Dichlorodifluoromethane	-		
Ethylbenzene	-		
Hexachlorobutadiene	-		
Isopropylbenzene	-		
m+p-Xylene	-		
Methyl Tertiary Butyl Ether	-		
Methylene chloride	-		
n-Butylbenzene	-		
n-Propylbenzene	-		
Naphthalene	-		
o-Xylene	-		
4-Isopropyltoluene	-		
sec-Butylbenzene	-		
Styrene	-		
tert-Butylbenzene	-		
Tetrachloroethene	-		
Toluene	-		
trans-1,2-Dichloroethene	-		
trans-1,3-Dichloropropene	-		
Trichloroethene	-		
Trichlorofluoromethane	-		
Vinyl chloride	-		
Semivolatile Organic Compounds (mg/kg)			
1,2,4-Trichlorobenzene	-		
1,2-Dichlorobenzene	-		
1,3-Dichlorobenzene	-		
1,4-Dichlorobenzene	-		
2,4,5-Trichlorophenol	-		
2,4,6-Trichlorophenol	-		
2,4-Dichlorophenol	-		
2,4-Dimethylphenol	-		
2,4-Dinitrophenol	-		
2,4-Dinitrotoluene	-		
2,6-Dinitrotoluene	-		
2-Chloronaphthalene	-		
2-Chlorophenol	-		
2-Methylnaphthalene	-		
2-Methylphenol	-		
2-Nitroaniline	-		
2-Nitrophenol	-		
3,3-Dichlorobenzidine	-		
3-Nitroaniline	-		
4,6-Dinitro-2-methylphenol	-		
4-Bromophenyl-phenylether	-		
4-Chloro-3-methylphenol	-		
4-Chloroaniline	-		

TABLE B-AP16
ANALYTICAL RESULTS FOR GRID AP16
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP16		
Sample Name	P3IF-SS-IS-SO-AP616		
Date Collected	June 19, 2023		
Semivolatile Organic Compounds (mg/kg), continued			
4-Chlorophenyl-phenylether	-		
4-Nitroaniline	-		
4-Nitrophenol	-		
Acenaphthene	-		
Acenaphthylene	-		
Anthracene	-		
Benzo(a)anthracene	-		
Benzo(a)pyrene	-		
Benzo(b)fluoranthene	-		
Benzo(g,h,i)perylene	-		
Benzo(k)fluoranthene	-		
Benzoic acid	-		
Benzyl Alcohol	-		
Bis(2-chloro-1-methylethyl) ether	-		
Bis(2-chloroethoxy)methane	-		
Bis(2-chloroethyl)ether	-		
Bis(2-ethylhexyl)phthalate	-		
Butyl benzyl phthalate	-		
Carbazole	-		
Chrysene	-		
Di-n-butyl phthalate	-		
Di-n-octyl phthalate	-		
Dibenz(a,h)anthracene	-		
Dibenzofuran	-		
Diethyl phthalate	-		
Dimethyl phthalate	-		
Fluoranthene	-		
Fluorene	-		
Hexachlorobenzene	-		
Hexachlorobutadiene	-		
Hexachloroethane	-		
Indeno(1,2,3-cd)pyrene	-		
Isophorone	-		
n-Nitroso-di-n-propylamine	-		
n-Nitrosodimethylamine	-		
n-Nitrosodiphenylamine	-		
Naphthalene	-		
Nitrobenzene	-		
Pentachlorophenol	-		
Phenanthrene	-		
Phenol	-		
Pyrene	-		
Explosives (mg/kg)			
1,3,5-Trinitrobenzene	0.075	0.075	U
1,3-Dinitrobenzene	0.075	0.075	U
2,4,6-Trinitrotoluene	0.075	0.075	U
2,4-Dinitrotoluene	0.075	0.075	U
2,6-Dinitrotoluene	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	0.075	0.075	U
2-Nitrotoluene	0.075	0.075	U
3-Nitrotoluene	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	0.075	0.075	U
4-Nitrotoluene	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	U
Nitrobenzene	0.075	0.075	U
Nitroglycerin	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	0.25	0.25	U
Polychlorinated Biphenyls (mg/kg)			
Aroclor 1016	-		
Aroclor 1221	-		
Aroclor 1232	-		
Aroclor 1242	-		
Aroclor 1248	-		
Aroclor 1254	-		
Aroclor 1260	-		
Dioxins/Furans (mg/kg)			
Octachlorodibenzofuran (OCDF)	-		
Octachlorodibenzo-p-dioxin (OCDD)	-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	-		

TABLE B-AP16
ANALYTICAL RESULTS FOR GRID AP16
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP16		
Sample Name	P3IF-SS-IS-SO-AP616		
Date Collected	June 19, 2023		
Metals (mg/kg)			
Aluminum	15000	4.0	
Antimony	0.19	0.15	J
Arsenic	1.0	0.30	
Barium	210	0.20	
Beryllium	0.92	0.30	J
Cadmium	0.58	0.080	
Calcium (Ca)	6500	15	
Chromium	10	0.20	
Cobalt	3.6	0.080	
Copper	56	0.20	
Iron (Fe)	9500	8.0	
Lead	14	0.050	
Magnesium (Mg)	5700	5.0	
Manganese (Mn)	340	0.080	
Mercury	0.056	0.044	J
Nickel	9.3	0.20	
Potassium (K)	1600	8.0	
Selenium	1.4	0.10	
Silver	0.066	0.050	J
Sodium (Na)	16	8.0	
Thallium	0.057	0.050	J
Vanadium	13	0.10	
Zinc	43	1.5	
Other Parameters (mg/kg)			
Cyanide (CN-)	-		
Nitrate	-		
Perchlorate	-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-AP15
ANALYTICAL RESULTS FOR GRID AP15
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP15			AP15			AP15		
Sample Name	P3IF-BA-GRID-AP015			P3IF-SS-IS-SO-AP015			P3IF-SS-IS-SO-AP515		
Date Collected	June 7, 2023			June 7, 2023			June 7, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)									
1,1,1,2-Tetrachloroethane	0.0040	0.0040	U	-			-		
1,1,1-Trichloroethane	0.0040	0.0040	U	-			-		
1,1,2,2-Tetrachloroethane	0.0040	0.0040	U	-			-		
1,1,2-Trichloroethane	0.0040	0.0040	U	-			-		
1,1-Dichloroethane	0.0040	0.0040	U	-			-		
1,1-Dichloroethene	0.0040	0.0040	U	-			-		
1,1-Dichloropropene	0.0040	0.0040	U	-			-		
1,2,3-Trichlorobenzene	0.0040	0.0040	U	-			-		
1,2,3-Trichloropropane	0.010	0.010	U	-			-		
1,2,4-Trichlorobenzene	0.0040	0.0040	U	-			-		
1,2,4-Trimethylbenzene	0.0040	0.0040	U	-			-		
1,2-Dibromo-3-chloropropane	0.010	0.010	U	-			-		
1,2-Dibromoethane	0.0040	0.0040	U	-			-		
1,2-Dichlorobenzene	0.0040	0.0040	U	-			-		
1,2-Dichloroethane	0.0040	0.0040	U	-			-		
1,2-Dichloropropane	0.0040	0.0040	U	-			-		
1,3,5-Trimethylbenzene	0.0040	0.0040	U	-			-		
1,3-Dichlorobenzene	0.0040	0.0040	U	-			-		
1,3-Dichloropropane	0.0040	0.0040	U	-			-		
1,4-Dichlorobenzene	0.0040	0.0040	U	-			-		
2,2-Dichloropropane	0.0040	0.0040	U	-			-		
2-Butanone	0.0061	0.0061	U	-			-		
2-Chlorotoluene	0.0040	0.0040	U	-			-		
2-Hexanone	0.0040	0.0040	U	-			-		
4-Chlorotoluene	0.0040	0.0040	U	-			-		
4-Methyl-2-pentanone	0.0040	0.0040	U	-			-		
Acetone	0.093	0.010		-			-		
Benzene	0.0040	0.0040	U	-			-		
Bromobenzene	0.0040	0.0040	U	-			-		
Bromochloromethane	0.0040	0.0040	U	-			-		
Bromodichloromethane	0.0040	0.0040	U	-			-		
Bromoform	0.0040	0.0040	U	-			-		
Bromomethane	0.0040	0.0040	U	-			-		
Carbon disulfide	0.0040	0.0040	U	-			-		
Carbon tetrachloride	0.0040	0.0040	U	-			-		
Chlorobenzene	0.0040	0.0040	U	-			-		
Chloroethane	0.0040	0.0040	U	-			-		
Chloroform	0.0040	0.0040	U	-			-		
Chloromethane	0.010	0.010	U	-			-		
cis-1,2-Dichloroethene	0.0040	0.0040	U	-			-		
cis-1,3-Dichloropropene	0.0040	0.0040	U	-			-		
Dibromochloromethane	0.0040	0.0040	U	-			-		
Dibromomethane	0.0040	0.0040	U	-			-		
Dichlorodifluoromethane	0.0040	0.0040	U	-			-		
Ethylbenzene	0.0040	0.0040	U	-			-		
Hexachlorobutadiene	0.0040	0.0040	U	-			-		
Isopropylbenzene	0.0040	0.0040	U	-			-		
m+p-Xylene	0.010	0.010	U	-			-		
Methyl Tertiary Butyl Ether	0.0040	0.0040	U	-			-		
Methylene chloride	0.020	0.020	U	-			-		
n-Butylbenzene	0.0040	0.0040	U	-			-		
n-Propylbenzene	0.0040	0.0040	U	-			-		
Naphthalene	0.0040	0.0040	U	-			-		
o-Xylene	0.0051	0.0051	U	-			-		
4-Isopropyltoluene	0.0040	0.0040	U	-			-		
sec-Butylbenzene	0.0040	0.0040	U	-			-		
Styrene	0.0040	0.0040	U	-			-		
tert-Butylbenzene	0.0040	0.0040	U	-			-		
Tetrachloroethene	0.0040	0.0040	U	-			-		
Toluene	0.0040	0.0040	U	-			-		
trans-1,2-Dichloroethene	0.0040	0.0040	U	-			-		
trans-1,3-Dichloropropene	0.0040	0.0040	U	-			-		
Trichloroethene	0.0040	0.0040	U	-			-		
Trichlorofluoromethane	0.0040	0.0040	U	-			-		
Vinyl chloride	0.0040	0.0040	U	-			-		
Semivolatile Organic Compounds (mg/kg)									
1,2,4-Trichlorobenzene	0.18	0.18	UJ	-			-		
1,2-Dichlorobenzene	0.18	0.18	UJ	-			-		
1,3-Dichlorobenzene	0.18	0.18	UJ	-			-		
1,4-Dichlorobenzene	0.18	0.18	UJ	-			-		
2,4,5-Trichlorophenol	0.18	0.18	U	-			-		
2,4,6-Trichlorophenol	0.18	0.18	U	-			-		
2,4-Dichlorophenol	0.18	0.18	U	-			-		
2,4-Dimethylphenol	0.18	0.18	U	-			-		
2,4-Dinitrophenol	0.18	0.18	U	-			-		
2,4-Dinitrotoluene	0.18	0.18	UJ	-			-		
2,6-Dinitrotoluene	0.18	0.18	UJ	-			-		
2-Chloronaphthalene	0.18	0.18	UJ	-			-		
2-Chlorophenol	0.18	0.18	U	-			-		
2-Methylnaphthalene	0.18	0.18	UJ	-			-		
2-Methylphenol	0.18	0.18	U	-			-		
2-Nitroaniline	0.18	0.18	UJ	-			-		
2-Nitrophenol	0.18	0.18	U	-			-		
3,3-Dichlorobenzidine	0.18	0.18	UJ	-			-		
3-Nitroaniline	0.18	0.18	UJ	-			-		
4,6-Dinitro-2-methylphenol	0.18	0.18	U	-			-		
4-Bromophenyl-phenylether	0.18	0.18	UJ	-			-		
4-Chloro-3-methylphenol	0.18	0.18	U	-			-		
4-Chloroaniline	0.18	0.18	UJ	-			-		

TABLE B-AP15
ANALYTICAL RESULTS FOR GRID AP15
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP15			AP15			AP15		
Sample Name	P3IF-BA-GRID-AP015			P3IF-SS-IS-SO-AP015			P3IF-SS-IS-SO-AP515		
Date Collected	June 7, 2023			June 7, 2023			June 7, 2023		
Semivolatile Organic Compounds (mg/kg), continued									
4-Chlorophenyl-phenylether	0.18	0.18	UJ	-			-		
4-Nitroaniline	0.18	0.18	UJ	-			-		
4-Nitrophenol	0.18	0.18	U	-			-		
Acenaphthene	0.18	0.18	UJ	-			-		
Acenaphthylene	0.18	0.18	UJ	-			-		
Anthracene	0.18	0.18	UJ	-			-		
Benzo(a)anthracene	0.18	0.18	UJ	-			-		
Benzo(a)pyrene	0.14	0.14	UJ	-			-		
Benzo(b)fluoranthene	0.18	0.18	UJ	-			-		
Benzo(g,h,i)perylene	0.18	0.18	UJ	-			-		
Benzo(k)fluoranthene	0.18	0.18	UJ	-			-		
Benzoic acid	0.18	0.18	U	-			-		
Benzyl Alcohol	0.18	0.18	UJ	-			-		
Bis(2-chloro-1-methylethyl) ether	0.18	0.18	UJ	-			-		
Bis(2-chloroethoxy)methane	0.18	0.18	UJ	-			-		
Bis(2-chloroethyl)ether	0.18	0.18	UJ	-			-		
Bis(2-ethylhexyl)phthalate	0.18	0.18	UJ	-			-		
Butyl benzyl phthalate	0.18	0.18	UJ	-			-		
Carbazole	0.18	0.18	UJ	-			-		
Chrysene	0.18	0.18	UJ	-			-		
Di-n-butyl phthalate	0.18	0.18	UJ	-			-		
Di-n-octyl phthalate	0.18	0.18	UJ	-			-		
Dibenz(a,h)anthracene	0.14	0.14	UJ	-			-		
Dibenzofuran	0.18	0.18	UJ	-			-		
Diethyl phthalate	0.18	0.18	UJ	-			-		
Dimethyl phthalate	0.18	0.18	UJ	-			-		
Fluoranthene	0.18	0.18	UJ	-			-		
Fluorene	0.18	0.18	UJ	-			-		
Hexachlorobenzene	0.18	0.18	UJ	-			-		
Hexachlorobutadiene	0.18	0.18	UJ	-			-		
Hexachloroethane	0.18	0.18	UJ	-			-		
Indeno(1,2,3-cd)pyrene	0.18	0.18	UJ	-			-		
Isophorone	0.18	0.18	UJ	-			-		
n-Nitroso-di-n-propylamine	0.18	0.18	UJ	-			-		
n-Nitrosodimethylamine	0.022	0.022	U	-			-		
n-Nitrosodiphenylamine	0.18	0.18	UJ	-			-		
Naphthalene	0.18	0.18	UJ	-			-		
Nitrobenzene	0.18	0.18	UJ	-			-		
Pentachlorophenol	0.18	0.18	U	-			-		
Phenanthrene	0.18	0.18	UJ	-			-		
Phenol	0.18	0.18	U	-			-		
Pyrene	0.18	0.18	UJ	-			-		
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	-			0.075	0.075	U	0.075	0.075	U
1,3-Dinitrobenzene	-			0.075	0.075	U	0.075	0.075	U
2,4,6-Trinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2,4-Dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2,6-Dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2-Nitrotoluene	-			0.075	0.075	U	0.075	0.075	U
3-Nitrotoluene	-			0.075	0.075	U	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
4-Nitrotoluene	-			0.075	0.075	U	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	-			0.075	0.075	U	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	-			0.075	0.075	U	0.075	0.075	U
Nitrobenzene	-			0.075	0.075	U	0.075	0.075	U
Nitroglycerin	-			0.15	0.15	U	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	-			0.075	0.075	U	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	-			0.25	0.25	U	0.25	0.25	U
Polychlorinated Biphenyls (mg/kg)									
Aroclor 1016	0.022	0.022	U	-			-		
Aroclor 1221	0.022	0.022	U	-			-		
Aroclor 1232	0.011	0.011	U	-			-		
Aroclor 1242	0.011	0.011	U	-			-		
Aroclor 1248	0.011	0.011	U	-			-		
Aroclor 1254	0.011	0.011	U	-			-		
Aroclor 1260	0.011	0.011	U	-			-		
Dioxins/Furans (mg/kg)									
Octachlorodibenzofuran (OCDF)	0.00000021	0.00000021	U	-			-		
Octachlorodibenzo-p-dioxin (OCDD)	0.0000027	0.0000027	U	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.000000046	0.000000046	U	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	0.00000056	0.00000056	J	-			-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.000000054	0.000000054	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000057	0.000000057	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000088	0.000000088	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000056	0.000000056	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000091	0.000000091	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.000000066	0.000000066	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000011	0.00000011	U	-			-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.000000082	0.000000082	U	-			-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.000000083	0.000000083	U	-			-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000039	0.000000039	J	-			-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000008	0.00000008	U	-			-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.0000005	0.0000005	U	-			-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.00000014	0.00000014	U	-			-		

TABLE B-AP15
ANALYTICAL RESULTS FOR GRID AP15
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP15			AP15			AP15		
Sample Name	P3IF-BA-GRID-AP015			P3IF-SS-IS-SO-AP015			P3IF-SS-IS-SO-AP515		
Date Collected	June 7, 2023			June 7, 2023			June 7, 2023		
Metals (mg/kg)									
Aluminum	-			21000	4		23000	4	
Antimony	-			0.18	0.15	J	0.17	0.15	J
Arsenic	-			1.4	0.3		1.4	0.3	J
Barium	-			190	0.2		200	0.2	
Beryllium	-			0.92	0.3	J	0.91	0.3	J
Cadmium	-			0.44	0.08		0.52	0.08	J
Calcium (Ca)	-			3500	15		3700	15	J
Chromium	-			15	0.2		15	0.2	J
Cobalt	-			4.9	0.08		5	0.08	J
Copper	-			51	0.2		56	0.2	J
Iron (Fe)	-			13000	8		13000	8	
Lead	-			14	0.05		14	0.05	
Magnesium (Mg)	-			7400	5		7700	5	
Manganese (Mn)	-			380	0.08		380	0.08	
Mercury	-			0.061	0.044	J	0.063	0.045	J
Nickel	-			12	0.2		12	0.2	J
Potassium (K)	-			1900	8		2100	8	
Selenium	-			1.6	0.1		1.2	0.1	J
Silver	-			0.067	0.05	J	0.1	0.05	
Sodium (Na)	-			27	8		30	8	J
Thallium	-			0.08	0.05	J	0.077	0.05	J
Vanadium	-			22	0.1		22	0.1	J
Zinc	-			57	1.5		51	1.5	J
Other Parameters (mg/kg)									
Cyanide (CN-)	0.35	0.35	U	-			-		
Nitrate	2.9	2.1	J	-			-		
Perchlorate	0.0021	0.0021	UJ	-			-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-AP15
ANALYTICAL RESULTS FOR GRID AP15
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP15		
Sample Name	P3IF-SS-IS-SO-AP615		
Date Collected	June 7, 2023		
	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)			
1,1,1,2-Tetrachloroethane	-		
1,1,1-Trichloroethane	-		
1,1,2,2-Tetrachloroethane	-		
1,1,2-Trichloroethane	-		
1,1-Dichloroethane	-		
1,1-Dichloroethene	-		
1,1-Dichloropropene	-		
1,2,3-Trichlorobenzene	-		
1,2,3-Trichloropropane	-		
1,2,4-Trichlorobenzene	-		
1,2,4-Trimethylbenzene	-		
1,2-Dibromo-3-chloropropane	-		
1,2-Dibromoethane	-		
1,2-Dichlorobenzene	-		
1,2-Dichloroethane	-		
1,2-Dichloropropane	-		
1,3,5-Trimethylbenzene	-		
1,3-Dichlorobenzene	-		
1,3-Dichloropropane	-		
1,4-Dichlorobenzene	-		
2,2-Dichloropropane	-		
2-Butanone	-		
2-Chlorotoluene	-		
2-Hexanone	-		
4-Chlorotoluene	-		
4-Methyl-2-pentanone	-		
Acetone	-		
Benzene	-		
Bromobenzene	-		
Bromochloromethane	-		
Bromodichloromethane	-		
Bromoform	-		
Bromomethane	-		
Carbon disulfide	-		
Carbon tetrachloride	-		
Chlorobenzene	-		
Chloroethane	-		
Chloroform	-		
Chloromethane	-		
cis-1,2-Dichloroethene	-		
cis-1,3-Dichloropropene	-		
Dibromochloromethane	-		
Dibromomethane	-		
Dichlorodifluoromethane	-		
Ethylbenzene	-		
Hexachlorobutadiene	-		
Isopropylbenzene	-		
m+p-Xylene	-		
Methyl Tertiary Butyl Ether	-		
Methylene chloride	-		
n-Butylbenzene	-		
n-Propylbenzene	-		
Naphthalene	-		
o-Xylene	-		
4-Isopropyltoluene	-		
sec-Butylbenzene	-		
Styrene	-		
tert-Butylbenzene	-		
Tetrachloroethene	-		
Toluene	-		
trans-1,2-Dichloroethene	-		
trans-1,3-Dichloropropene	-		
Trichloroethene	-		
Trichlorofluoromethane	-		
Vinyl chloride	-		
Semivolatile Organic Compounds (mg/kg)			
1,2,4-Trichlorobenzene	-		
1,2-Dichlorobenzene	-		
1,3-Dichlorobenzene	-		
1,4-Dichlorobenzene	-		
2,4,5-Trichlorophenol	-		
2,4,6-Trichlorophenol	-		
2,4-Dichlorophenol	-		
2,4-Dimethylphenol	-		
2,4-Dinitrophenol	-		
2,4-Dinitrotoluene	-		
2,6-Dinitrotoluene	-		
2-Chloronaphthalene	-		
2-Chlorophenol	-		
2-Methylnaphthalene	-		
2-Methylphenol	-		
2-Nitroaniline	-		
2-Nitrophenol	-		
3,3-Dichlorobenzidine	-		
3-Nitroaniline	-		
4,6-Dinitro-2-methylphenol	-		
4-Bromophenyl-phenylether	-		
4-Chloro-3-methylphenol	-		
4-Chloroaniline	-		

TABLE B-AP15
ANALYTICAL RESULTS FOR GRID AP15
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP15		
Sample Name	P3IF-SS-IS-SO-AP615		
Date Collected	June 7, 2023		
Semivolatile Organic Compounds (mg/kg), continued			
4-Chlorophenyl-phenylether	-		
4-Nitroaniline	-		
4-Nitrophenol	-		
Acenaphthene	-		
Acenaphthylene	-		
Anthracene	-		
Benzo(a)anthracene	-		
Benzo(a)pyrene	-		
Benzo(b)fluoranthene	-		
Benzo(g,h,i)perylene	-		
Benzo(k)fluoranthene	-		
Benzoic acid	-		
Benzyl Alcohol	-		
Bis(2-chloro-1-methylethyl) ether	-		
Bis(2-chloroethoxy)methane	-		
Bis(2-chloroethyl)ether	-		
Bis(2-ethylhexyl)phthalate	-		
Butyl benzyl phthalate	-		
Carbazole	-		
Chrysene	-		
Di-n-butyl phthalate	-		
Di-n-octyl phthalate	-		
Dibenz(a,h)anthracene	-		
Dibenzofuran	-		
Diethyl phthalate	-		
Dimethyl phthalate	-		
Fluoranthene	-		
Fluorene	-		
Hexachlorobenzene	-		
Hexachlorobutadiene	-		
Hexachloroethane	-		
Indeno(1,2,3-cd)pyrene	-		
Isophorone	-		
n-Nitroso-di-n-propylamine	-		
n-Nitrosodimethylamine	-		
n-Nitrosodiphenylamine	-		
Naphthalene	-		
Nitrobenzene	-		
Pentachlorophenol	-		
Phenanthrene	-		
Phenol	-		
Pyrene	-		
Explosives (mg/kg)			
1,3,5-Trinitrobenzene	0.075	0.075	U
1,3-Dinitrobenzene	0.075	0.075	U
2,4,6-Trinitrotoluene	0.075	0.075	U
2,4-Dinitrotoluene	0.075	0.075	U
2,6-Dinitrotoluene	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	0.075	0.075	U
2-Nitrotoluene	0.075	0.075	U
3-Nitrotoluene	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	0.075	0.075	U
4-Nitrotoluene	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	U
Nitrobenzene	0.075	0.075	U
Nitroglycerin	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	0.25	0.25	U
Polychlorinated Biphenyls (mg/kg)			
Aroclor 1016	-		
Aroclor 1221	-		
Aroclor 1232	-		
Aroclor 1242	-		
Aroclor 1248	-		
Aroclor 1254	-		
Aroclor 1260	-		
Dioxins/Furans (mg/kg)			
Octachlorodibenzofuran (OCDF)	-		
Octachlorodibenzo-p-dioxin (OCDD)	-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	-		

TABLE B-AP15
ANALYTICAL RESULTS FOR GRID AP15
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP15		
Sample Name	P3IF-SS-IS-SO-AP615		
Date Collected	June 7, 2023		
Metals (mg/kg)			
Aluminum	21000	4	
Antimony	0.19	0.15	J
Arsenic	1.3	0.3	
Barium	200	0.2	
Beryllium	0.87	0.3	J
Cadmium	0.47	0.08	
Calcium (Ca)	3600	15	
Chromium	15	0.2	
Cobalt	5	0.08	
Copper	61	0.2	
Iron (Fe)	13000	8	
Lead	14	0.05	
Magnesium (Mg)	7400	5	
Manganese (Mn)	400	0.08	
Mercury	0.049	0.045	J
Nickel	12	0.2	
Potassium (K)	1800	8	
Selenium	1.4	0.1	
Silver	0.09	0.05	J
Sodium (Na)	27	8	
Thallium	0.079	0.05	J
Vanadium	22	0.1	
Zinc	57	1.5	
Other Parameters (mg/kg)			
Cyanide (CN-)	-		
Nitrate	-		
Perchlorate	-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-AP17
ANALYTICAL RESULTS FOR GRID AP17
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP17			AP17			AP17		
Sample Name	P3IF-BA-GRID-AP017			P3IF-SS-IS-SO-AP017			P3IF-SS-IS-SO-AP517		
Date Collected	June 8, 2023			June 8, 2023			June 8, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)									
1,1,1,2-Tetrachloroethane	0.0032	0.0032	U	-			-		
1,1,1-Trichloroethane	0.0032	0.0032	U	-			-		
1,1,2,2-Tetrachloroethane	0.0032	0.0032	U	-			-		
1,1,2-Trichloroethane	0.0032	0.0032	U	-			-		
1,1-Dichloroethane	0.0032	0.0032	U	-			-		
1,1-Dichloroethene	0.0032	0.0032	U	-			-		
1,1-Dichloropropene	0.0032	0.0032	U	-			-		
1,2,3-Trichlorobenzene	0.0032	0.0032	U	-			-		
1,2,3-Trichloropropane	0.0080	0.008	U	-			-		
1,2,4-Trichlorobenzene	0.0032	0.0032	U	-			-		
1,2,4-Trimethylbenzene	0.0032	0.0032	U	-			-		
1,2-Dibromo-3-chloropropane	0.0080	0.008	U	-			-		
1,2-Dibromoethane	0.0032	0.0032	U	-			-		
1,2-Dichlorobenzene	0.0032	0.0032	U	-			-		
1,2-Dichloroethane	0.0032	0.0032	U	-			-		
1,2-Dichloropropane	0.0032	0.0032	U	-			-		
1,3,5-Trimethylbenzene	0.0032	0.0032	U	-			-		
1,3-Dichlorobenzene	0.0032	0.0032	U	-			-		
1,3-Dichloropropane	0.0032	0.0032	U	-			-		
1,4-Dichlorobenzene	0.0032	0.0032	U	-			-		
2,2-Dichloropropane	0.0032	0.0032	U	-			-		
2-Butanone	0.0048	0.0048	U	-			-		
2-Chlorotoluene	0.0032	0.0032	U	-			-		
2-Hexanone	0.0032	0.0032	U	-			-		
4-Chlorotoluene	0.0032	0.0032	U	-			-		
4-Methyl-2-pentanone	0.0032	0.0032	U	-			-		
Acetone	0.0080	0.008	U	-			-		
Benzene	0.0032	0.0032	U	-			-		
Bromobenzene	0.0032	0.0032	U	-			-		
Bromochloromethane	0.0032	0.0032	U	-			-		
Bromodichloromethane	0.0032	0.0032	U	-			-		
Bromoform	0.0032	0.0032	U	-			-		
Bromomethane	0.0032	0.0032	U	-			-		
Carbon disulfide	0.0032	0.0032	U	-			-		
Carbon tetrachloride	0.0032	0.0032	U	-			-		
Chlorobenzene	0.0032	0.0032	U	-			-		
Chloroethane	0.0032	0.0032	U	-			-		
Chloroform	0.0032	0.0032	U	-			-		
Chloromethane	0.0080	0.008	U	-			-		
cis-1,2-Dichloroethene	0.0032	0.0032	U	-			-		
cis-1,3-Dichloropropene	0.0032	0.0032	U	-			-		
Dibromochloromethane	0.0032	0.0032	U	-			-		
Dibromomethane	0.0032	0.0032	U	-			-		
Dichlorodifluoromethane	0.0032	0.0032	U	-			-		
Ethylbenzene	0.0032	0.0032	U	-			-		
Hexachlorobutadiene	0.0032	0.0032	U	-			-		
Isopropylbenzene	0.0032	0.0032	U	-			-		
m+p-Xylene	0.0080	0.008	U	-			-		
Methyl Tertiary Butyl Ether	0.0032	0.0032	U	-			-		
Methylene chloride	0.016	0.016	U	-			-		
n-Butylbenzene	0.0032	0.0032	U	-			-		
n-Propylbenzene	0.0032	0.0032	U	-			-		
Naphthalene	0.0032	0.0032	U	-			-		
o-Xylene	0.0040	0.004	U	-			-		
4-Isopropyltoluene	0.0032	0.0032	U	-			-		
sec-Butylbenzene	0.0032	0.0032	U	-			-		
Styrene	0.0032	0.0032	U	-			-		
tert-Butylbenzene	0.0032	0.0032	U	-			-		
Tetrachloroethene	0.0032	0.0032	U	-			-		
Toluene	0.0032	0.0032	U	-			-		
trans-1,2-Dichloroethene	0.0032	0.0032	U	-			-		
trans-1,3-Dichloropropene	0.0032	0.0032	U	-			-		
Trichloroethene	0.0032	0.0032	U	-			-		
Trichlorofluoromethane	0.0032	0.0032	U	-			-		
Vinyl chloride	0.0032	0.0032	U	-			-		
Semivolatile Organic Compounds (mg/kg)									
1,2,4-Trichlorobenzene	0.19	0.19	U	-			-		
1,2-Dichlorobenzene	0.19	0.19	U	-			-		
1,3-Dichlorobenzene	0.19	0.19	U	-			-		
1,4-Dichlorobenzene	0.19	0.19	U	-			-		
2,4,5-Trichlorophenol	0.19	0.19	U	-			-		
2,4,6-Trichlorophenol	0.19	0.19	U	-			-		
2,4-Dichlorophenol	0.19	0.19	U	-			-		
2,4-Dimethylphenol	0.19	0.19	U	-			-		
2,4-Dinitrophenol	0.19	0.19	U	-			-		
2,4-Dinitrotoluene	0.19	0.19	U	-			-		
2,6-Dinitrotoluene	0.19	0.19	U	-			-		
2-Chloronaphthalene	0.19	0.19	U	-			-		
2-Chlorophenol	0.19	0.19	U	-			-		
2-Methylnaphthalene	0.19	0.19	U	-			-		
2-Methylphenol	0.19	0.19	U	-			-		
2-Nitroaniline	0.19	0.19	U	-			-		
2-Nitrophenol	0.19	0.19	U	-			-		
3,3-Dichlorobenzidine	0.19	0.19	U	-			-		
3-Nitroaniline	0.19	0.19	U	-			-		
4,6-Dinitro-2-methylphenol	0.19	0.19	U	-			-		
4-Bromophenyl-phenylether	0.19	0.19	U	-			-		
4-Chloro-3-methylphenol	0.19	0.19	U	-			-		
4-Chloroaniline	0.19	0.19	U	-			-		

TABLE B-AP17
ANALYTICAL RESULTS FOR GRID AP17
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP17			AP17			AP17		
Sample Name	P3IF-BA-GRID-AP017			P3IF-SS-IS-SO-AP017			P3IF-SS-IS-SO-AP517		
Date Collected	June 8, 2023			June 8, 2023			June 8, 2023		
Semivolatile Organic Compounds (mg/kg), continued									
4-Chlorophenyl-phenylether	0.19	0.19	U	-			-		
4-Nitroaniline	0.19	0.19	U	-			-		
4-Nitrophenol	0.19	0.19	U	-			-		
Acenaphthene	0.19	0.19	U	-			-		
Acenaphthylene	0.19	0.19	U	-			-		
Anthracene	0.19	0.19	U	-			-		
Benzo(a)anthracene	0.19	0.19	U	-			-		
Benzo(a)pyrene	0.14	0.14	U	-			-		
Benzo(b)fluoranthene	0.19	0.19	U	-			-		
Benzo(g,h,i)perylene	0.19	0.19	U	-			-		
Benzo(k)fluoranthene	0.19	0.19	U	-			-		
Benzoic acid	0.19	0.19	U	-			-		
Benzyl Alcohol	0.19	0.19	U	-			-		
Bis(2-chloro-1-methylethyl) ether	0.19	0.19	U	-			-		
Bis(2-chloroethoxy)methane	0.19	0.19	U	-			-		
Bis(2-chloroethyl)ether	0.19	0.19	U	-			-		
Bis(2-ethylhexyl)phthalate	0.19	0.19	U	-			-		
Butyl benzyl phthalate	0.19	0.19	U	-			-		
Carbazole	0.19	0.19	U	-			-		
Chrysene	0.19	0.19	U	-			-		
Di-n-butyl phthalate	0.19	0.19	U	-			-		
Di-n-octyl phthalate	0.19	0.19	U	-			-		
Dibenz(a,h)anthracene	0.14	0.14	U	-			-		
Dibenzofuran	0.19	0.19	U	-			-		
Diethyl phthalate	0.19	0.19	U	-			-		
Dimethyl phthalate	0.19	0.19	U	-			-		
Fluoranthene	0.19	0.19	U	-			-		
Fluorene	0.19	0.19	U	-			-		
Hexachlorobenzene	0.19	0.19	U	-			-		
Hexachlorobutadiene	0.19	0.19	U	-			-		
Hexachloroethane	0.19	0.19	U	-			-		
Indeno(1,2,3-cd)pyrene	0.19	0.19	U	-			-		
Isophorone	0.19	0.19	U	-			-		
n-Nitroso-di-n-propylamine	0.19	0.19	U	-			-		
n-Nitrosodimethylamine	0.022	0.022	U	-			-		
n-Nitrosodiphenylamine	0.19	0.19	U	-			-		
Naphthalene	0.19	0.19	U	-			-		
Nitrobenzene	0.19	0.19	U	-			-		
Pentachlorophenol	0.19	0.19	U	-			-		
Phenanthrene	0.19	0.19	U	-			-		
Phenol	0.19	0.19	U	-			-		
Pyrene	0.19	0.19	U	-			-		
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	-			0.075	0.075	U	0.075	0.075	U
1,3-Dinitrobenzene	-			0.075	0.075	U	0.075	0.075	U
2,4,6-Trinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2,4-Dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2,6-Dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2-Nitrotoluene	-			0.075	0.075	U	0.075	0.075	U
3-Nitrotoluene	-			0.075	0.075	U	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
4-Nitrotoluene	-			0.075	0.075	U	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	-			0.075	0.075	U	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	-			0.075	0.075	U	0.075	0.075	U
Nitrobenzene	-			0.075	0.075	U	0.075	0.075	U
Nitroglycerin	-			0.15	0.15	U	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	-			0.075	0.075	U	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	-			0.25	0.25	U	0.25	0.25	U
Polychlorinated Biphenyls (mg/kg)									
Aroclor 1016	0.022	0.022	U	-			-		
Aroclor 1221	0.022	0.022	U	-			-		
Aroclor 1232	0.011	0.011	U	-			-		
Aroclor 1242	0.011	0.011	U	-			-		
Aroclor 1248	0.011	0.011	U	-			-		
Aroclor 1254	0.011	0.011	U	-			-		
Aroclor 1260	0.011	0.011	U	-			-		
Dioxins/Furans (mg/kg)									
Octachlorodibenzofuran (OCDF)	0.00000075	0.00000075	J	-			-		
Octachlorodibenzo-p-dioxin (OCDD)	0.000015	0.000015	J	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.00000024	0.00000024	U	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	0.0000032	0.0000032	J	-			-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.000000061	0.000000061	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000093	0.000000093	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000058	0.000000058	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000092	0.000000092	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000069	0.000000069	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.00000011	0.00000011	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000096	0.000000096	U	-			-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000016	0.00000016	U	-			-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.00000014	0.00000014	U	-			-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.00000017	0.00000017	J	-			-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000013	0.00000013	U	-			-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.00000048	0.00000048	U	-			-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.00000012	0.00000012	U	-			-		

TABLE B-AP17
ANALYTICAL RESULTS FOR GRID AP17
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP17			AP17			AP17		
Sample Name	P3IF-BA-GRID-AP017			P3IF-SS-IS-SO-AP017			P3IF-SS-IS-SO-AP517		
Date Collected	June 8, 2023			June 8, 2023			June 8, 2023		
Metals (mg/kg)									
Aluminum	-			15000	4		17000	4	
Antimony	-			0.092	0.15	J	0.12	0.15	J
Arsenic	-			1.2	0.3		1.2	0.3	
Barium	-			180	0.2		220	0.2	
Beryllium	-			0.69	0.3	J	0.92	0.3	J
Cadmium	-			0.5	0.08		0.39	0.08	
Calcium (Ca)	-			5600	15	J	5900	15	
Chromium	-			11	0.2		12	0.2	
Cobalt	-			3.8	0.08		4	0.08	
Copper	-			58	0.2		51	0.2	
Iron (Fe)	-			9000	8		9800	8	
Lead	-			14	0.05		14	0.05	
Magnesium (Mg)	-			6600	5		7100	5	
Manganese (Mn)	-			280	0.08		300	0.08	
Mercury	-			0.039	0.043	J	0.046	0.044	J
Nickel	-			8.9	0.2		9.5	0.2	
Potassium (K)	-			930	8		1200	8	
Selenium	-			1.2	0.1		1.4	0.1	
Silver	-			0.08	0.05	J	0.074	0.05	J
Sodium (Na)	-			23	8		23	8	
Thallium	-			0.041	0.05	J	0.047	0.05	J
Vanadium	-			18	0.1		18	0.1	
Zinc	-			47	1.5		41	1.5	
Other Parameters (mg/kg)									
Cyanide (CN-)	0.35	0.35	U	-			-		
Nitrate	4.2	2.2	J	-			-		
Perchlorate	0.0022	0.0022	UJ	-			-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-AP17
ANALYTICAL RESULTS FOR GRID AP17
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP17		
Sample Name	P3IF-SS-IS-SO-AP617		
Date Collected	June 8, 2023		
	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)			
1,1,1,2-Tetrachloroethane	-		
1,1,1-Trichloroethane	-		
1,1,2,2-Tetrachloroethane	-		
1,1,2-Trichloroethane	-		
1,1-Dichloroethane	-		
1,1-Dichloroethene	-		
1,1-Dichloropropene	-		
1,2,3-Trichlorobenzene	-		
1,2,3-Trichloropropane	-		
1,2,4-Trichlorobenzene	-		
1,2,4-Trimethylbenzene	-		
1,2-Dibromo-3-chloropropane	-		
1,2-Dibromoethane	-		
1,2-Dichlorobenzene	-		
1,2-Dichloroethane	-		
1,2-Dichloropropane	-		
1,3,5-Trimethylbenzene	-		
1,3-Dichlorobenzene	-		
1,3-Dichloropropane	-		
1,4-Dichlorobenzene	-		
2,2-Dichloropropane	-		
2-Butanone	-		
2-Chlorotoluene	-		
2-Hexanone	-		
4-Chlorotoluene	-		
4-Methyl-2-pentanone	-		
Acetone	-		
Benzene	-		
Bromobenzene	-		
Bromochloromethane	-		
Bromodichloromethane	-		
Bromoform	-		
Bromomethane	-		
Carbon disulfide	-		
Carbon tetrachloride	-		
Chlorobenzene	-		
Chloroethane	-		
Chloroform	-		
Chloromethane	-		
cis-1,2-Dichloroethene	-		
cis-1,3-Dichloropropene	-		
Dibromochloromethane	-		
Dibromomethane	-		
Dichlorodifluoromethane	-		
Ethylbenzene	-		
Hexachlorobutadiene	-		
Isopropylbenzene	-		
m+p-Xylene	-		
Methyl Tertiary Butyl Ether	-		
Methylene chloride	-		
n-Butylbenzene	-		
n-Propylbenzene	-		
Naphthalene	-		
o-Xylene	-		
4-Isopropyltoluene	-		
sec-Butylbenzene	-		
Styrene	-		
tert-Butylbenzene	-		
Tetrachloroethene	-		
Toluene	-		
trans-1,2-Dichloroethene	-		
trans-1,3-Dichloropropene	-		
Trichloroethene	-		
Trichlorofluoromethane	-		
Vinyl chloride	-		
Semivolatile Organic Compounds (mg/kg)			
1,2,4-Trichlorobenzene	-		
1,2-Dichlorobenzene	-		
1,3-Dichlorobenzene	-		
1,4-Dichlorobenzene	-		
2,4,5-Trichlorophenol	-		
2,4,6-Trichlorophenol	-		
2,4-Dichlorophenol	-		
2,4-Dimethylphenol	-		
2,4-Dinitrophenol	-		
2,4-Dinitrotoluene	-		
2,6-Dinitrotoluene	-		
2-Chloronaphthalene	-		
2-Chlorophenol	-		
2-Methylnaphthalene	-		
2-Methylphenol	-		
2-Nitroaniline	-		
2-Nitrophenol	-		
3,3-Dichlorobenzidine	-		
3-Nitroaniline	-		
4,6-Dinitro-2-methylphenol	-		
4-Bromophenyl-phenylether	-		
4-Chloro-3-methylphenol	-		
4-Chloroaniline	-		

TABLE B-AP17
ANALYTICAL RESULTS FOR GRID AP17
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP17		
Sample Name	P3IF-SS-IS-SO-AP617		
Date Collected	June 8, 2023		
Semivolatile Organic Compounds (mg/kg), continued			
4-Chlorophenyl-phenylether	-		
4-Nitroaniline	-		
4-Nitrophenol	-		
Acenaphthene	-		
Acenaphthylene	-		
Anthracene	-		
Benzo(a)anthracene	-		
Benzo(a)pyrene	-		
Benzo(b)fluoranthene	-		
Benzo(g,h,i)perylene	-		
Benzo(k)fluoranthene	-		
Benzoic acid	-		
Benzyl Alcohol	-		
Bis(2-chloro-1-methylethyl) ether	-		
Bis(2-chloroethoxy)methane	-		
Bis(2-chloroethyl)ether	-		
Bis(2-ethylhexyl)phthalate	-		
Butyl benzyl phthalate	-		
Carbazole	-		
Chrysene	-		
Di-n-butyl phthalate	-		
Di-n-octyl phthalate	-		
Dibenz(a,h)anthracene	-		
Dibenzofuran	-		
Diethyl phthalate	-		
Dimethyl phthalate	-		
Fluoranthene	-		
Fluorene	-		
Hexachlorobenzene	-		
Hexachlorobutadiene	-		
Hexachloroethane	-		
Indeno(1,2,3-cd)pyrene	-		
Isophorone	-		
n-Nitroso-di-n-propylamine	-		
n-Nitrosodimethylamine	-		
n-Nitrosodiphenylamine	-		
Naphthalene	-		
Nitrobenzene	-		
Pentachlorophenol	-		
Phenanthrene	-		
Phenol	-		
Pyrene	-		
Explosives (mg/kg)			
1,3,5-Trinitrobenzene	0.075	0.075	U
1,3-Dinitrobenzene	0.075	0.075	U
2,4,6-Trinitrotoluene	0.075	0.075	U
2,4-Dinitrotoluene	0.075	0.075	U
2,6-Dinitrotoluene	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	0.075	0.075	U
2-Nitrotoluene	0.075	0.075	U
3-Nitrotoluene	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	0.075	0.075	U
4-Nitrotoluene	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	U
Nitrobenzene	0.075	0.075	U
Nitroglycerin	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	0.25	0.25	U
Polychlorinated Biphenyls (mg/kg)			
Aroclor 1016	-		
Aroclor 1221	-		
Aroclor 1232	-		
Aroclor 1242	-		
Aroclor 1248	-		
Aroclor 1254	-		
Aroclor 1260	-		
Dioxins/Furans (mg/kg)			
Octachlorodibenzofuran (OCDF)	-		
Octachlorodibenzo-p-dioxin (OCDD)	-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	-		

TABLE B-AP17
ANALYTICAL RESULTS FOR GRID AP17
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP17		
Sample Name	P3IF-SS-IS-SO-AP617		
Date Collected	June 8, 2023		
Metals (mg/kg)			
Aluminum	19000	4	
Antimony	0.16	0.15	J
Arsenic	1.1	0.3	
Barium	230	0.2	
Beryllium	1.1	0.3	
Cadmium	0.34	0.08	
Calcium (Ca)	13000	15	J
Chromium	13	0.2	
Cobalt	4.1	0.08	
Copper	47	0.2	
Iron (Fe)	10000	8	
Lead	13	0.05	
Magnesium (Mg)	7600	5	
Manganese (Mn)	300	0.08	
Mercury	0.054	0.044	J
Nickel	10	0.2	
Potassium (K)	1400	8	
Selenium	1.4	0.1	
Silver	0.061	0.05	J
Sodium (Na)	23	8	
Thallium	0.052	0.05	J
Vanadium	19	0.1	
Zinc	43	1.5	
Other Parameters (mg/kg)			
Cyanide (CN-)	-		
Nitrate	-		
Perchlorate	-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-AP18
ANALYTICAL RESULTS FOR GRID AP18
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP18			AP18			AP18		
Sample Name	P3IF-BA-GRID-AP018			P3IF-SS-IS-SO-AP018			P3IF-SS-IS-SO-AP518		
Date Collected	June 8, 2023			June 8, 2023			June 8, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)									
1,1,1,2-Tetrachloroethane	0.0022	0.0022	U	-			-		
1,1,1-Trichloroethane	0.0022	0.0022	U	-			-		
1,1,2,2-Tetrachloroethane	0.0022	0.0022	U	-			-		
1,1,2-Trichloroethane	0.0022	0.0022	U	-			-		
1,1-Dichloroethane	0.0022	0.0022	U	-			-		
1,1-Dichloroethene	0.0022	0.0022	U	-			-		
1,1-Dichloropropene	0.0022	0.0022	U	-			-		
1,2,3-Trichlorobenzene	0.0022	0.0022	U	-			-		
1,2,3-Trichloropropane	0.0054	0.0054	U	-			-		
1,2,4-Trichlorobenzene	0.0022	0.0022	U	-			-		
1,2,4-Trimethylbenzene	0.0022	0.0022	U	-			-		
1,2-Dibromo-3-chloropropane	0.0054	0.0054	U	-			-		
1,2-Dibromoethane	0.0022	0.0022	U	-			-		
1,2-Dichlorobenzene	0.0022	0.0022	U	-			-		
1,2-Dichloroethane	0.0022	0.0022	U	-			-		
1,2-Dichloropropane	0.0022	0.0022	U	-			-		
1,3,5-Trimethylbenzene	0.0022	0.0022	U	-			-		
1,3-Dichlorobenzene	0.0022	0.0022	U	-			-		
1,3-Dichloropropane	0.0022	0.0022	U	-			-		
1,4-Dichlorobenzene	0.0022	0.0022	U	-			-		
2,2-Dichloropropane	0.0022	0.0022	U	-			-		
2-Butanone	0.0032	0.0032	U	-			-		
2-Chlorotoluene	0.0022	0.0022	U	-			-		
2-Hexanone	0.0022	0.0022	U	-			-		
4-Chlorotoluene	0.0022	0.0022	U	-			-		
4-Methyl-2-pentanone	0.0022	0.0022	U	-			-		
Acetone	0.28	0.0054		-			-		
Benzene	0.0022	0.0022	U	-			-		
Bromobenzene	0.0022	0.0022	U	-			-		
Bromochloromethane	0.0022	0.0022	U	-			-		
Bromodichloromethane	0.0022	0.0022	U	-			-		
Bromoform	0.0022	0.0022	U	-			-		
Bromomethane	0.0022	0.0022	U	-			-		
Carbon disulfide	0.0022	0.0022	U	-			-		
Carbon tetrachloride	0.0022	0.0022	U	-			-		
Chlorobenzene	0.0022	0.0022	U	-			-		
Chloroethane	0.0022	0.0022	U	-			-		
Chloroform	0.0022	0.0022	U	-			-		
Chloromethane	0.0054	0.0054	U	-			-		
cis-1,2-Dichloroethene	0.0022	0.0022	U	-			-		
cis-1,3-Dichloropropene	0.0022	0.0022	U	-			-		
Dibromochloromethane	0.0022	0.0022	U	-			-		
Dibromomethane	0.0022	0.0022	U	-			-		
Dichlorodifluoromethane	0.0022	0.0022	U	-			-		
Ethylbenzene	0.0022	0.0022	U	-			-		
Hexachlorobutadiene	0.0022	0.0022	U	-			-		
Isopropylbenzene	0.0022	0.0022	U	-			-		
m+p-Xylene	0.0054	0.0054	U	-			-		
Methyl Tertiary Butyl Ether	0.0022	0.0022	U	-			-		
Methylene chloride	0.011	0.011	U	-			-		
n-Butylbenzene	0.0022	0.0022	U	-			-		
n-Propylbenzene	0.0022	0.0022	U	-			-		
Naphthalene	0.0022	0.0022	U	-			-		
o-Xylene	0.0027	0.0027	U	-			-		
4-Isopropyltoluene	0.0022	0.0022	U	-			-		
sec-Butylbenzene	0.0022	0.0022	U	-			-		
Styrene	0.0022	0.0022	U	-			-		
tert-Butylbenzene	0.0022	0.0022	U	-			-		
Tetrachloroethene	0.0022	0.0022	U	-			-		
Toluene	0.0022	0.0022	U	-			-		
trans-1,2-Dichloroethene	0.0022	0.0022	U	-			-		
trans-1,3-Dichloropropene	0.0022	0.0022	U	-			-		
Trichloroethene	0.0022	0.0022	U	-			-		
Trichlorofluoromethane	0.0022	0.0022	U	-			-		
Vinyl chloride	0.0022	0.0022	U	-			-		
Semivolatile Organic Compounds (mg/kg)									
1,2,4-Trichlorobenzene	0.18	0.18	U	-			-		
1,2-Dichlorobenzene	0.18	0.18	U	-			-		
1,3-Dichlorobenzene	0.18	0.18	U	-			-		
1,4-Dichlorobenzene	0.18	0.18	U	-			-		
2,4,5-Trichlorophenol	0.18	0.18	U	-			-		
2,4,6-Trichlorophenol	0.18	0.18	U	-			-		
2,4-Dichlorophenol	0.18	0.18	U	-			-		
2,4-Dimethylphenol	0.18	0.18	U	-			-		
2,4-Dinitrophenol	0.18	0.18	U	-			-		
2,4-Dinitrotoluene	0.18	0.18	U	-			-		
2,6-Dinitrotoluene	0.18	0.18	U	-			-		
2-Chloronaphthalene	0.18	0.18	U	-			-		
2-Chlorophenol	0.18	0.18	U	-			-		
2-Methylnaphthalene	0.18	0.18	U	-			-		
2-Methylphenol	0.18	0.18	U	-			-		
2-Nitroaniline	0.18	0.18	U	-			-		
2-Nitrophenol	0.18	0.18	U	-			-		
3,3-Dichlorobenzidine	0.18	0.18	U	-			-		
3-Nitroaniline	0.18	0.18	U	-			-		
4,6-Dinitro-2-methylphenol	0.18	0.18	U	-			-		
4-Bromophenyl-phenylether	0.18	0.18	U	-			-		
4-Chloro-3-methylphenol	0.18	0.18	U	-			-		
4-Chloroaniline	0.18	0.18	U	-			-		

TABLE B-AP18
ANALYTICAL RESULTS FOR GRID AP18
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP18			AP18			AP18		
Sample Name	P3IF-BA-GRID-AP018			P3IF-SS-IS-SO-AP018			P3IF-SS-IS-SO-AP518		
Date Collected	June 8, 2023			June 8, 2023			June 8, 2023		
Semivolatile Organic Compounds (mg/kg), continued									
4-Chlorophenyl-phenylether	0.18	0.18	U	-			-		
4-Nitroaniline	0.18	0.18	U	-			-		
4-Nitrophenol	0.18	0.18	U	-			-		
Acenaphthene	0.18	0.18	U	-			-		
Acenaphthylene	0.18	0.18	U	-			-		
Anthracene	0.18	0.18	U	-			-		
Benzo(a)anthracene	0.18	0.18	U	-			-		
Benzo(a)pyrene	0.14	0.14	U	-			-		
Benzo(b)fluoranthene	0.18	0.18	U	-			-		
Benzo(g,h,i)perylene	0.18	0.18	U	-			-		
Benzo(k)fluoranthene	0.18	0.18	U	-			-		
Benzoic acid	0.18	0.18	U	-			-		
Benzyl Alcohol	0.18	0.18	U	-			-		
Bis(2-chloro-1-methylethyl) ether	0.18	0.18	U	-			-		
Bis(2-chloroethoxy)methane	0.18	0.18	U	-			-		
Bis(2-chloroethyl)ether	0.18	0.18	U	-			-		
Bis(2-ethylhexyl)phthalate	0.18	0.18	U	-			-		
Butyl benzyl phthalate	0.18	0.18	U	-			-		
Carbazole	0.18	0.18	U	-			-		
Chrysene	0.18	0.18	U	-			-		
Di-n-butyl phthalate	0.18	0.18	U	-			-		
Di-n-octyl phthalate	0.18	0.18	U	-			-		
Dibenz(a,h)anthracene	0.14	0.14	U	-			-		
Dibenzofuran	0.18	0.18	U	-			-		
Diethyl phthalate	0.18	0.18	U	-			-		
Dimethyl phthalate	0.18	0.18	U	-			-		
Fluoranthene	0.18	0.18	U	-			-		
Fluorene	0.18	0.18	U	-			-		
Hexachlorobenzene	0.18	0.18	U	-			-		
Hexachlorobutadiene	0.18	0.18	U	-			-		
Hexachloroethane	0.18	0.18	U	-			-		
Indeno(1,2,3-cd)pyrene	0.18	0.18	U	-			-		
Isophorone	0.18	0.18	U	-			-		
n-Nitroso-di-n-propylamine	0.18	0.18	U	-			-		
n-Nitrosodimethylamine	0.022	0.022	UJ	-			-		
n-Nitrosodiphenylamine	0.18	0.18	U	-			-		
Naphthalene	0.18	0.18	U	-			-		
Nitrobenzene	0.18	0.18	U	-			-		
Pentachlorophenol	0.18	0.18	U	-			-		
Phenanthrene	0.18	0.18	U	-			-		
Phenol	0.18	0.18	U	-			-		
Pyrene	0.18	0.18	U	-			-		
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	-			0.075	0.075	U	0.075	0.075	U
1,3-Dinitrobenzene	-			0.075	0.075	U	0.075	0.075	U
2,4,6-Trinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2,4-Dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2,6-Dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2-Nitrotoluene	-			0.075	0.075	U	0.075	0.075	U
3-Nitrotoluene	-			0.075	0.075	U	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
4-Nitrotoluene	-			0.075	0.075	U	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	-			0.075	0.075	U	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	-			0.075	0.075	U	0.075	0.075	U
Nitrobenzene	-			0.075	0.075	U	0.075	0.075	U
Nitroglycerin	-			0.15	0.15	U	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	-			0.075	0.075	U	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	-			0.25	0.25	U	0.25	0.25	U
Polychlorinated Biphenyls (mg/kg)									
Aroclor 1016	0.21	0.21	U	-			-		
Aroclor 1221	0.21	0.21	U	-			-		
Aroclor 1232	0.11	0.11	U	-			-		
Aroclor 1242	0.11	0.11	U	-			-		
Aroclor 1248	0.11	0.11	U	-			-		
Aroclor 1254	0.11	0.11	U	-			-		
Aroclor 1260	0.11	0.11	U	-			-		
Dioxins/Furans (mg/kg)									
Octachlorodibenzofuran (OCDF)	0.00000058	0.00000058	U	-			-		
Octachlorodibenzo-p-dioxin (OCDD)	0.00001	0.00001	J	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.00000049	0.00000049	J	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	0.0000022	0.0000022	J	-			-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.000000067	0.000000067	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000076	0.000000076	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000012	0.00000012	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000073	0.000000073	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000013	0.00000013	UJ	-			-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.000000094	0.000000094	UJ	-			-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000013	0.00000013	U	-			-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000011	0.00000011	U	-			-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.000000086	0.000000086	U	-			-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.00000026	0.00000026	UJ	-			-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000011	0.00000011	U	-			-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.00000033	0.00000033	U	-			-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.000000051	0.000000051	U	-			-		

TABLE B-AP18
ANALYTICAL RESULTS FOR GRID AP18
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP18			AP18			AP18		
Sample Name	P3IF-BA-GRID-AP018			P3IF-SS-IS-SO-AP018			P3IF-SS-IS-SO-AP518		
Date Collected	June 8, 2023			June 8, 2023			June 8, 2023		
Metals (mg/kg)									
Aluminum	-			7600	4		11000	4	
Antimony	-			0.15	0.15	J	0.12	0.15	J
Arsenic	-			1	0.3		1.3	0.3	
Barium	-			180	0.2		210	0.2	
Beryllium	-			0.29	0.3	J	0.42	0.3	J
Cadmium	-			0.43	0.08		0.49	0.08	
Calcium (Ca)	-			3300	15		3900	15	
Chromium	-			7	0.2		9.6	0.2	
Cobalt	-			2.8	0.08		3.7	0.08	
Copper	-			61	0.2		72	0.2	
Iron (Fe)	-			6200	8		8100	8	
Lead	-			13	0.05		14	0.05	
Magnesium (Mg)	-			3100	5		4900	5	
Manganese (Mn)	-			240	0.08		270	0.08	
Mercury	-			0.035	0.043	J	0.03	0.043	J
Nickel	-			5.3	0.2		6.7	0.2	
Potassium (K)	-			780	8		950	8	
Selenium	-			0.75	0.1		0.96	0.1	
Silver	-			0.059	0.05	J	0.075	0.05	J
Sodium (Na)	-			46	8		63	8	
Thallium	-			0.036	0.05	J	0.15	0.05	
Vanadium	-			13	0.1		17	0.1	
Zinc	-			33	1.5		37	1.5	
Other Parameters (mg/kg)									
Cyanide (CN-)	0.35	0.35	U	-			-		
Nitrate	8.9	2.2	J	-			-		
Perchlorate	0.0022	0.0022	U	-			-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-AP18
ANALYTICAL RESULTS FOR GRID AP18
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP18		
Sample Name	P3IF-SS-IS-SO-AP618		
Date Collected	June 8, 2023		
	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)			
1,1,1,2-Tetrachloroethane	-		
1,1,1-Trichloroethane	-		
1,1,2,2-Tetrachloroethane	-		
1,1,2-Trichloroethane	-		
1,1-Dichloroethane	-		
1,1-Dichloroethene	-		
1,1-Dichloropropene	-		
1,2,3-Trichlorobenzene	-		
1,2,3-Trichloropropane	-		
1,2,4-Trichlorobenzene	-		
1,2,4-Trimethylbenzene	-		
1,2-Dibromo-3-chloropropane	-		
1,2-Dibromoethane	-		
1,2-Dichlorobenzene	-		
1,2-Dichloroethane	-		
1,2-Dichloropropane	-		
1,3,5-Trimethylbenzene	-		
1,3-Dichlorobenzene	-		
1,3-Dichloropropane	-		
1,4-Dichlorobenzene	-		
2,2-Dichloropropane	-		
2-Butanone	-		
2-Chlorotoluene	-		
2-Hexanone	-		
4-Chlorotoluene	-		
4-Methyl-2-pentanone	-		
Acetone	-		
Benzene	-		
Bromobenzene	-		
Bromochloromethane	-		
Bromodichloromethane	-		
Bromoform	-		
Bromomethane	-		
Carbon disulfide	-		
Carbon tetrachloride	-		
Chlorobenzene	-		
Chloroethane	-		
Chloroform	-		
Chloromethane	-		
cis-1,2-Dichloroethene	-		
cis-1,3-Dichloropropene	-		
Dibromochloromethane	-		
Dibromomethane	-		
Dichlorodifluoromethane	-		
Ethylbenzene	-		
Hexachlorobutadiene	-		
Isopropylbenzene	-		
m+p-Xylene	-		
Methyl Tertiary Butyl Ether	-		
Methylene chloride	-		
n-Butylbenzene	-		
n-Propylbenzene	-		
Naphthalene	-		
o-Xylene	-		
4-Isopropyltoluene	-		
sec-Butylbenzene	-		
Styrene	-		
tert-Butylbenzene	-		
Tetrachloroethene	-		
Toluene	-		
trans-1,2-Dichloroethene	-		
trans-1,3-Dichloropropene	-		
Trichloroethene	-		
Trichlorofluoromethane	-		
Vinyl chloride	-		
Semivolatile Organic Compounds (mg/kg)			
1,2,4-Trichlorobenzene	-		
1,2-Dichlorobenzene	-		
1,3-Dichlorobenzene	-		
1,4-Dichlorobenzene	-		
2,4,5-Trichlorophenol	-		
2,4,6-Trichlorophenol	-		
2,4-Dichlorophenol	-		
2,4-Dimethylphenol	-		
2,4-Dinitrophenol	-		
2,4-Dinitrotoluene	-		
2,6-Dinitrotoluene	-		
2-Chloronaphthalene	-		
2-Chlorophenol	-		
2-Methylnaphthalene	-		
2-Methylphenol	-		
2-Nitroaniline	-		
2-Nitrophenol	-		
3,3-Dichlorobenzidine	-		
3-Nitroaniline	-		
4,6-Dinitro-2-methylphenol	-		
4-Bromophenyl-phenylether	-		
4-Chloro-3-methylphenol	-		
4-Chloroaniline	-		

TABLE B-AP18
ANALYTICAL RESULTS FOR GRID AP18
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP18		
Sample Name	P3IF-SS-IS-SO-AP618		
Date Collected	June 8, 2023		
Semivolatile Organic Compounds (mg/kg), continued			
4-Chlorophenyl-phenylether	-		
4-Nitroaniline	-		
4-Nitrophenol	-		
Acenaphthene	-		
Acenaphthylene	-		
Anthracene	-		
Benzo(a)anthracene	-		
Benzo(a)pyrene	-		
Benzo(b)fluoranthene	-		
Benzo(g,h,i)perylene	-		
Benzo(k)fluoranthene	-		
Benzoic acid	-		
Benzyl Alcohol	-		
Bis(2-chloro-1-methylethyl) ether	-		
Bis(2-chloroethoxy)methane	-		
Bis(2-chloroethyl)ether	-		
Bis(2-ethylhexyl)phthalate	-		
Butyl benzyl phthalate	-		
Carbazole	-		
Chrysene	-		
Di-n-butyl phthalate	-		
Di-n-octyl phthalate	-		
Dibenz(a,h)anthracene	-		
Dibenzofuran	-		
Diethyl phthalate	-		
Dimethyl phthalate	-		
Fluoranthene	-		
Fluorene	-		
Hexachlorobenzene	-		
Hexachlorobutadiene	-		
Hexachloroethane	-		
Indeno(1,2,3-cd)pyrene	-		
Isophorone	-		
n-Nitroso-di-n-propylamine	-		
n-Nitrosodimethylamine	-		
n-Nitrosodiphenylamine	-		
Naphthalene	-		
Nitrobenzene	-		
Pentachlorophenol	-		
Phenanthrene	-		
Phenol	-		
Pyrene	-		
Explosives (mg/kg)			
1,3,5-Trinitrobenzene	0.075	0.075	U
1,3-Dinitrobenzene	0.075	0.075	U
2,4,6-Trinitrotoluene	0.075	0.075	U
2,4-Dinitrotoluene	0.075	0.075	U
2,6-Dinitrotoluene	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	0.075	0.075	U
2-Nitrotoluene	0.075	0.075	U
3-Nitrotoluene	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	0.075	0.075	U
4-Nitrotoluene	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	U
Nitrobenzene	0.075	0.075	U
Nitroglycerin	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	0.25	0.25	U
Polychlorinated Biphenyls (mg/kg)			
Aroclor 1016	-		
Aroclor 1221	-		
Aroclor 1232	-		
Aroclor 1242	-		
Aroclor 1248	-		
Aroclor 1254	-		
Aroclor 1260	-		
Dioxins/Furans (mg/kg)			
Octachlorodibenzofuran (OCDF)	-		
Octachlorodibenzo-p-dioxin (OCDD)	-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	-		

TABLE B-AP18
ANALYTICAL RESULTS FOR GRID AP18
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP18		
Sample Name	P3IF-SS-IS-SO-AP618		
Date Collected	June 8, 2023		
Metals (mg/kg)			
Aluminum	11000	4	
Antimony	0.1	0.15	J
Arsenic	1.1	0.3	
Barium	200	0.2	
Beryllium	0.42	0.3	J
Cadmium	0.4	0.08	
Calcium (Ca)	3600	15	
Chromium	8.7	0.2	
Cobalt	3.5	0.08	
Copper	61	0.2	
Iron (Fe)	7600	8	
Lead	13	0.05	
Magnesium (Mg)	4600	5	
Manganese (Mn)	250	0.08	
Mercury	0.04	0.043	J
Nickel	6.1	0.2	
Potassium (K)	920	8	
Selenium	0.86	0.1	
Silver	0.057	0.05	J
Sodium (Na)	54	8	
Thallium	0.038	0.05	J
Vanadium	16	0.1	
Zinc	33	1.5	
Other Parameters (mg/kg)			
Cyanide (CN-)	-		
Nitrate	-		
Perchlorate	-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-AP19
ANALYTICAL RESULTS FOR GRID AP19
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP19			AP19			AP19		
Sample Name	P3IF-BA-GRID-AP019			P3IF-BA-GRID-AP519			P3IF-SS-IS-SO-AP019		
Date Collected	June 8, 2023			June 8, 2023			June 8, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)									
1,1,1,2-Tetrachloroethane	0.0032	0.0032	U	0.0027	0.0027	U	-		
1,1,1-Trichloroethane	0.0032	0.0032	U	0.0027	0.0027	U	-		
1,1,2,2-Tetrachloroethane	0.0032	0.0032	U	0.0027	0.0027	U	-		
1,1,2-Trichloroethane	0.0032	0.0032	U	0.0027	0.0027	U	-		
1,1-Dichloroethane	0.0032	0.0032	U	0.0027	0.0027	U	-		
1,1-Dichloroethene	0.0032	0.0032	U	0.0027	0.0027	U	-		
1,1-Dichloropropene	0.0032	0.0032	U	0.0027	0.0027	U	-		
1,2,3-Trichlorobenzene	0.0032	0.0032	U	0.0027	0.0027	U	-		
1,2,3-Trichloropropane	0.008	0.008	U	0.0069	0.0069	U	-		
1,2,4-Trichlorobenzene	0.0032	0.0032	U	0.0027	0.0027	U	-		
1,2,4-Trimethylbenzene	0.0032	0.0032	U	0.0027	0.0027	U	-		
1,2-Dibromo-3-chloropropane	0.008	0.008	U	0.0069	0.0069	U	-		
1,2-Dibromoethane	0.0032	0.0032	U	0.0027	0.0027	U	-		
1,2-Dichlorobenzene	0.0032	0.0032	U	0.0027	0.0027	U	-		
1,2-Dichloroethane	0.0032	0.0032	U	0.0027	0.0027	U	-		
1,2-Dichloropropane	0.0032	0.0032	U	0.0027	0.0027	U	-		
1,3,5-Trimethylbenzene	0.0032	0.0032	U	0.0027	0.0027	U	-		
1,3-Dichlorobenzene	0.0032	0.0032	U	0.0027	0.0027	U	-		
1,3-Dichloropropane	0.0032	0.0032	U	0.0027	0.0027	U	-		
1,4-Dichlorobenzene	0.0032	0.0032	U	0.0027	0.0027	U	-		
2,2-Dichloropropane	0.0032	0.0032	U	0.0027	0.0027	U	-		
2-Butanone	0.0048	0.0048	U	0.0041	0.0041	U	-		
2-Chlorotoluene	0.0032	0.0032	U	0.0027	0.0027	U	-		
2-Hexanone	0.0032	0.0032	U	0.0027	0.0027	U	-		
4-Chlorotoluene	0.0032	0.0032	U	0.0027	0.0027	U	-		
4-Methyl-2-pentanone	0.0032	0.0032	U	0.0027	0.0027	U	-		
Acetone	1.1	0.008	J	0.8	0.0069	J	-		
Benzene	0.0032	0.0032	U	0.0027	0.0027	U	-		
Bromobenzene	0.0032	0.0032	U	0.0027	0.0027	U	-		
Bromochloromethane	0.0032	0.0032	U	0.0027	0.0027	U	-		
Bromodichloromethane	0.0032	0.0032	U	0.0027	0.0027	U	-		
Bromoform	0.0032	0.0032	U	0.0027	0.0027	U	-		
Bromomethane	0.0032	0.0032	U	0.0027	0.0027	U	-		
Carbon disulfide	0.0032	0.0032	U	0.0027	0.0027	U	-		
Carbon tetrachloride	0.0032	0.0032	U	0.0027	0.0027	U	-		
Chlorobenzene	0.0032	0.0032	U	0.0027	0.0027	U	-		
Chloroethane	0.0032	0.0032	U	0.0027	0.0027	U	-		
Chloroform	0.0032	0.0032	U	0.0027	0.0027	U	-		
Chloromethane	0.008	0.008	U	0.0069	0.0069	U	-		
cis-1,2-Dichloroethene	0.0032	0.0032	U	0.0027	0.0027	U	-		
cis-1,3-Dichloropropene	0.0032	0.0032	U	0.0027	0.0027	U	-		
Dibromochloromethane	0.0032	0.0032	U	0.0027	0.0027	U	-		
Dibromomethane	0.0032	0.0032	U	0.0027	0.0027	U	-		
Dichlorodifluoromethane	0.0032	0.0032	U	0.0027	0.0027	U	-		
Ethylbenzene	0.0032	0.0032	U	0.0027	0.0027	U	-		
Hexachlorobutadiene	0.0032	0.0032	U	0.0027	0.0027	U	-		
Isopropylbenzene	0.0032	0.0032	U	0.0027	0.0027	U	-		
m+p-Xylene	0.008	0.008	U	0.0069	0.0069	U	-		
Methyl Tertiary Butyl Ether	0.0032	0.0032	U	0.0027	0.0027	U	-		
Methylene chloride	0.016	0.016	U	0.014	0.014	U	-		
n-Butylbenzene	0.0032	0.0032	U	0.0027	0.0027	U	-		
n-Propylbenzene	0.0032	0.0032	U	0.0027	0.0027	U	-		
Naphthalene	0.0032	0.0032	U	0.0027	0.0027	U	-		
o-Xylene	0.004	0.004	U	0.0034	0.0034	U	-		
4-Isopropyltoluene	0.0032	0.0032	U	0.0027	0.0027	U	-		
sec-Butylbenzene	0.0032	0.0032	U	0.0027	0.0027	U	-		
Styrene	0.0032	0.0032	U	0.0027	0.0027	U	-		
tert-Butylbenzene	0.0032	0.0032	U	0.0027	0.0027	U	-		
Tetrachloroethene	0.0032	0.0032	U	0.0027	0.0027	U	-		
Toluene	0.015	0.0032	J	0.016	0.0027		-		
trans-1,2-Dichloroethene	0.0032	0.0032	U	0.0027	0.0027	U	-		
trans-1,3-Dichloropropene	0.0032	0.0032	U	0.0027	0.0027	U	-		
Trichloroethene	0.0032	0.0032	U	0.0027	0.0027	U	-		
Trichlorofluoromethane	0.0032	0.0032	U	0.0027	0.0027	U	-		
Vinyl chloride	0.0032	0.0032	U	0.0027	0.0027	U	-		
Semivolatile Organic Compounds (mg/kg)									
1,2,4-Trichlorobenzene	0.18	0.18	U	0.17	0.17	U	-		
1,2-Dichlorobenzene	0.18	0.18	U	0.17	0.17	U	-		
1,3-Dichlorobenzene	0.18	0.18	U	0.17	0.17	U	-		
1,4-Dichlorobenzene	0.18	0.18	U	0.17	0.17	U	-		
2,4,5-Trichlorophenol	0.18	0.18	U	0.17	0.17	U	-		
2,4,6-Trichlorophenol	0.18	0.18	U	0.17	0.17	U	-		
2,4-Dichlorophenol	0.18	0.18	U	0.17	0.17	U	-		
2,4-Dimethylphenol	0.18	0.18	U	0.17	0.17	U	-		
2,4-Dinitrophenol	0.18	0.18	U	0.17	0.17	U	-		
2,4-Dinitrotoluene	0.18	0.18	U	0.17	0.17	U	-		
2,6-Dinitrotoluene	0.18	0.18	U	0.17	0.17	U	-		
2-Chloronaphthalene	0.18	0.18	U	0.17	0.17	U	-		
2-Chlorophenol	0.18	0.18	U	0.17	0.17	U	-		
2-Methylnaphthalene	0.18	0.18	U	0.17	0.17	U	-		
2-Methylphenol	0.18	0.18	U	0.17	0.17	U	-		
2-Nitroaniline	0.18	0.18	U	0.17	0.17	U	-		
2-Nitrophenol	0.18	0.18	U	0.17	0.17	U	-		
3,3-Dichlorobenzidine	0.18	0.18	U	0.17	0.17	U	-		
3-Nitroaniline	0.18	0.18	U	0.17	0.17	U	-		
4,6-Dinitro-2-methylphenol	0.18	0.18	U	0.17	0.17	U	-		
4-Bromophenyl-phenylether	0.18	0.18	U	0.17	0.17	U	-		
4-Chloro-3-methylphenol	0.18	0.18	U	0.17	0.17	U	-		
4-Chloroaniline	0.18	0.18	U	0.17	0.17	U	-		

TABLE B-AP19
ANALYTICAL RESULTS FOR GRID AP19
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP19			AP19			AP19		
Sample Name	P3IF-BA-GRID-AP019			P3IF-BA-GRID-AP519			P3IF-SS-IS-SO-AP019		
Date Collected	June 8, 2023			June 8, 2023			June 8, 2023		
Semivolatile Organic Compounds (mg/kg), continued									
4-Chlorophenyl-phenylether	0.18	0.18	U	0.17	0.17	U	-		
4-Nitroaniline	0.18	0.18	U	0.17	0.17	U	-		
4-Nitrophenol	0.18	0.18	U	0.17	0.17	U	-		
Acenaphthene	0.18	0.18	U	0.17	0.17	U	-		
Acenaphthylene	0.18	0.18	U	0.17	0.17	U	-		
Anthracene	0.18	0.18	U	0.17	0.17	U	-		
Benzo(a)anthracene	0.18	0.18	U	0.17	0.17	U	-		
Benzo(a)pyrene	0.14	0.14	U	0.13	0.13	U	-		
Benzo(b)fluoranthene	0.18	0.18	U	0.17	0.17	U	-		
Benzo(g,h,i)perylene	0.18	0.18	U	0.17	0.17	U	-		
Benzo(k)fluoranthene	0.18	0.18	U	0.17	0.17	U	-		
Benzoic acid	0.18	0.18	U	0.17	0.17	U	-		
Benzyl Alcohol	0.18	0.18	U	0.17	0.17	U	-		
Bis(2-chloro-1-methylethyl) ether	0.18	0.18	U	0.17	0.17	U	-		
Bis(2-chloroethoxy)methane	0.18	0.18	U	0.17	0.17	U	-		
Bis(2-chloroethyl)ether	0.18	0.18	U	0.17	0.17	U	-		
Bis(2-ethylhexyl)phthalate	0.18	0.18	U	0.17	0.17	U	-		
Butyl benzyl phthalate	0.18	0.18	U	0.17	0.17	U	-		
Carbazole	0.18	0.18	U	0.17	0.17	U	-		
Chrysene	0.18	0.18	U	0.17	0.17	U	-		
Di-n-butyl phthalate	0.18	0.18	U	0.17	0.17	U	-		
Di-n-octyl phthalate	0.18	0.18	U	0.17	0.17	U	-		
Dibenz(a,h)anthracene	0.14	0.14	U	0.13	0.13	U	-		
Dibenzofuran	0.18	0.18	U	0.17	0.17	U	-		
Diethyl phthalate	0.18	0.18	U	0.17	0.17	U	-		
Dimethyl phthalate	0.18	0.18	U	0.17	0.17	U	-		
Fluoranthene	0.18	0.18	U	0.17	0.17	U	-		
Fluorene	0.18	0.18	U	0.17	0.17	U	-		
Hexachlorobenzene	0.18	0.18	U	0.17	0.17	U	-		
Hexachlorobutadiene	0.18	0.18	U	0.17	0.17	U	-		
Hexachloroethane	0.18	0.18	U	0.17	0.17	U	-		
Indeno(1,2,3-cd)pyrene	0.18	0.18	U	0.17	0.17	U	-		
Isophorone	0.18	0.18	U	0.17	0.17	U	-		
n-Nitroso-di-n-propylamine	0.18	0.18	U	0.17	0.17	U	-		
n-Nitrosodimethylamine	0.021	0.021	UJ	0.021	0.021	UJ	-		
n-Nitrosodiphenylamine	0.18	0.18	U	0.17	0.17	U	-		
Naphthalene	0.18	0.18	U	0.17	0.17	U	-		
Nitrobenzene	0.18	0.18	U	0.17	0.17	U	-		
Pentachlorophenol	0.18	0.18	U	0.17	0.17	U	-		
Phenanthrene	0.18	0.18	U	0.17	0.17	U	-		
Phenol	0.18	0.18	U	0.17	0.17	U	-		
Pyrene	0.18	0.18	U	0.17	0.17	U	-		
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	-			-			0.075	0.075	U
1,3-Dinitrobenzene	-			-			0.075	0.075	U
2,4,6-Trinitrotoluene	-			-			0.075	0.075	U
2,4-Dinitrotoluene	-			-			0.075	0.075	U
2,6-Dinitrotoluene	-			-			0.075	0.075	U
2-Amino-4,6-dinitrotoluene	-			-			0.075	0.075	U
2-Nitrotoluene	-			-			0.075	0.075	U
3-Nitrotoluene	-			-			0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	-			-			0.075	0.075	U
4-Nitrotoluene	-			-			0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	-			-			0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	-			-			0.075	0.075	U
Nitrobenzene	-			-			0.075	0.075	U
Nitroglycerin	-			-			0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	-			-			0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	-			-			0.25	0.25	U
Polychlorinated Biphenyls (mg/kg)									
Aroclor 1016	0.21	0.21	U	0.2	0.2	U	-		
Aroclor 1221	0.21	0.21	U	0.2	0.2	U	-		
Aroclor 1232	0.10	0.1	U	0.1	0.1	U	-		
Aroclor 1242	0.10	0.1	U	0.1	0.1	U	-		
Aroclor 1248	0.10	0.1	U	0.1	0.1	U	-		
Aroclor 1254	0.10	0.1	U	0.1	0.1	U	-		
Aroclor 1260	0.10	0.1	U	0.1	0.1	U	-		
Dioxins/Furans (mg/kg)									
Octachlorodibenzofuran (OCDF)	0.0000014	0.0000014	J	0.00000037	0.00000037	U	-		
Octachlorodibenzo-p-dioxin (OCDD)	0.000017	0.000017	J	0.000025	0.000025	U	-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.00000089	0.00000089	J	0.00000059	0.00000059	U	-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	0.000003	0.000003	J	0.0000023	0.0000023	U	-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.00000015	0.00000015	U	0.00000021	0.00000021	U	-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.00000017	0.00000017	U	0.00000016	0.00000016	U	-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000023	0.00000023	U	0.00000016	0.00000016	U	-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.00000016	0.00000016	U	0.00000016	0.00000016	U	-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000023	0.00000023	UJ	0.00000016	0.00000016	U	-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.00000021	0.00000021	UJ	0.0000002	0.0000002	U	-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000031	0.00000031	U	0.0000003	0.0000003	U	-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000012	0.00000012	U	0.0000003	0.0000003	U	-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.00000009	0.00000009	U	0.00000009	0.00000009	U	-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.00000029	0.00000029	UJ	0.00000011	0.00000011	U	-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000013	0.00000013	U	0.00000029	0.00000029	U	-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.00000018	0.00000018	U	0.00000028	0.00000028	U	-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.000000072	0.000000072	U	7.8E-08	7.8E-08	U	-		

TABLE B-AP19
ANALYTICAL RESULTS FOR GRID AP19
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP19			AP19			AP19		
Sample Name	P3IF-BA-GRID-AP019			P3IF-BA-GRID-AP519			P3IF-SS-IS-SO-AP019		
Date Collected	June 8, 2023			June 8, 2023			June 8, 2023		
Metals (mg/kg)									
Aluminum	-			-			12000	4	
Antimony	-			-			0.15	0.15	U
Arsenic	-			-			1.1	0.3	
Barium	-			-			170	0.2	
Beryllium	-			-			0.4	0.3	J
Cadmium	-			-			0.44	0.08	
Calcium (Ca)	-			-			2800	15	
Chromium	-			-			10	0.2	
Cobalt	-			-			4	0.08	
Copper	-			-			62	0.2	
Iron (Fe)	-			-			8100	8	
Lead	-			-			14	0.05	
Magnesium (Mg)	-			-			5500	5	
Manganese (Mn)	-			-			270	0.08	
Mercury	-			-			0.034	0.043	J
Nickel	-			-			6.9	0.2	
Potassium (K)	-			-			760	8	
Selenium	-			-			0.69	0.1	
Silver	-			-			0.063	0.05	J
Sodium (Na)	-			-			59	8	
Thallium	-			-			0.033	0.05	J
Vanadium	-			-			21	0.1	
Zinc	-			-			36	1.5	
Other Parameters (mg/kg)									
Cyanide (CN-)	0.33	0.33	U	0.33	0.33	U	-		
Nitrate	7.4	2.2	J	1.2	2.2	J	-		
Perchlorate	0.002	0.002	U	0.0021	0.0021	U	-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-AP19
ANALYTICAL RESULTS FOR GRID AP19
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP19			AP19		
Sample Name	P3IF-SS-IS-SO-AP519			P3IF-SS-IS-SO-AP619		
Date Collected	June 8, 2023			June 8, 2023		
	Result	LOD	Qual	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)						
1,1,1,2-Tetrachloroethane	-			-		
1,1,1-Trichloroethane	-			-		
1,1,2,2-Tetrachloroethane	-			-		
1,1,2-Trichloroethane	-			-		
1,1-Dichloroethane	-			-		
1,1-Dichloroethene	-			-		
1,1-Dichloropropene	-			-		
1,2,3-Trichlorobenzene	-			-		
1,2,3-Trichloropropane	-			-		
1,2,4-Trichlorobenzene	-			-		
1,2,4-Trimethylbenzene	-			-		
1,2-Dibromo-3-chloropropane	-			-		
1,2-Dibromoethane	-			-		
1,2-Dichlorobenzene	-			-		
1,2-Dichloroethane	-			-		
1,2-Dichloropropane	-			-		
1,3,5-Trimethylbenzene	-			-		
1,3-Dichlorobenzene	-			-		
1,3-Dichloropropane	-			-		
1,4-Dichlorobenzene	-			-		
2,2-Dichloropropane	-			-		
2-Butanone	-			-		
2-Chlorotoluene	-			-		
2-Hexanone	-			-		
4-Chlorotoluene	-			-		
4-Methyl-2-pentanone	-			-		
Acetone	-			-		
Benzene	-			-		
Bromobenzene	-			-		
Bromochloromethane	-			-		
Bromodichloromethane	-			-		
Bromoform	-			-		
Bromomethane	-			-		
Carbon disulfide	-			-		
Carbon tetrachloride	-			-		
Chlorobenzene	-			-		
Chloroethane	-			-		
Chloroform	-			-		
Chloromethane	-			-		
cis-1,2-Dichloroethene	-			-		
cis-1,3-Dichloropropene	-			-		
Dibromochloromethane	-			-		
Dibromomethane	-			-		
Dichlorodifluoromethane	-			-		
Ethylbenzene	-			-		
Hexachlorobutadiene	-			-		
Isopropylbenzene	-			-		
m+p-Xylene	-			-		
Methyl Tertiary Butyl Ether	-			-		
Methylene chloride	-			-		
n-Butylbenzene	-			-		
n-Propylbenzene	-			-		
Naphthalene	-			-		
o-Xylene	-			-		
4-Isopropyltoluene	-			-		
sec-Butylbenzene	-			-		
Styrene	-			-		
tert-Butylbenzene	-			-		
Tetrachloroethene	-			-		
Toluene	-			-		
trans-1,2-Dichloroethene	-			-		
trans-1,3-Dichloropropene	-			-		
Trichloroethene	-			-		
Trichlorofluoromethane	-			-		
Vinyl chloride	-			-		
Semivolatile Organic Compounds (mg/kg)						
1,2,4-Trichlorobenzene	-			-		
1,2-Dichlorobenzene	-			-		
1,3-Dichlorobenzene	-			-		
1,4-Dichlorobenzene	-			-		
2,4,5-Trichlorophenol	-			-		
2,4,6-Trichlorophenol	-			-		
2,4-Dichlorophenol	-			-		
2,4-Dimethylphenol	-			-		
2,4-Dinitrophenol	-			-		
2,4-Dinitrotoluene	-			-		
2,6-Dinitrotoluene	-			-		
2-Chloronaphthalene	-			-		
2-Chlorophenol	-			-		
2-Methylnaphthalene	-			-		
2-Methylphenol	-			-		
2-Nitroaniline	-			-		
2-Nitrophenol	-			-		
3,3-Dichlorobenzidine	-			-		
3-Nitroaniline	-			-		
4,6-Dinitro-2-methylphenol	-			-		
4-Bromophenyl-phenylether	-			-		
4-Chloro-3-methylphenol	-			-		
4-Chloroaniline	-			-		

TABLE B-AP19
ANALYTICAL RESULTS FOR GRID AP19
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP19			AP19		
Sample Name	P3IF-SS-IS-SO-AP519			P3IF-SS-IS-SO-AP619		
Date Collected	June 8, 2023			June 8, 2023		
Semivolatile Organic Compounds (mg/kg), continued						
4-Chlorophenyl-phenylether	-			-		
4-Nitroaniline	-			-		
4-Nitrophenol	-			-		
Acenaphthene	-			-		
Acenaphthylene	-			-		
Anthracene	-			-		
Benzo(a)anthracene	-			-		
Benzo(a)pyrene	-			-		
Benzo(b)fluoranthene	-			-		
Benzo(g,h,i)perylene	-			-		
Benzo(k)fluoranthene	-			-		
Benzoic acid	-			-		
Benzyl Alcohol	-			-		
Bis(2-chloro-1-methylethyl) ether	-			-		
Bis(2-chloroethoxy)methane	-			-		
Bis(2-chloroethyl)ether	-			-		
Bis(2-ethylhexyl)phthalate	-			-		
Butyl benzyl phthalate	-			-		
Carbazole	-			-		
Chrysene	-			-		
Di-n-butyl phthalate	-			-		
Di-n-octyl phthalate	-			-		
Dibenz(a,h)anthracene	-			-		
Dibenzofuran	-			-		
Diethyl phthalate	-			-		
Dimethyl phthalate	-			-		
Fluoranthene	-			-		
Fluorene	-			-		
Hexachlorobenzene	-			-		
Hexachlorobutadiene	-			-		
Hexachloroethane	-			-		
Indeno(1,2,3-cd)pyrene	-			-		
Isophorone	-			-		
n-Nitroso-di-n-propylamine	-			-		
n-Nitrosodimethylamine	-			-		
n-Nitrosodiphenylamine	-			-		
Naphthalene	-			-		
Nitrobenzene	-			-		
Pentachlorophenol	-			-		
Phenanthrene	-			-		
Phenol	-			-		
Pyrene	-			-		
Explosives (mg/kg)						
1,3,5-Trinitrobenzene	0.075	0.075	U	0.075	0.075	U
1,3-Dinitrobenzene	0.075	0.075	U	0.075	0.075	U
2,4,6-Trinitrotoluene	0.075	0.075	U	0.075	0.075	U
2,4-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U
2,6-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	0.075	0.075	U	0.075	0.075	U
2-Nitrotoluene	0.075	0.075	U	0.075	0.075	U
3-Nitrotoluene	0.075	0.075	U	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U
4-Nitrotoluene	0.075	0.075	U	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	U	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	U	0.075	0.075	U
Nitrobenzene	0.075	0.075	U	0.075	0.075	U
Nitroglycerin	0.15	0.15	U	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	U	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	0.25	0.25	U	0.25	0.25	U
Polychlorinated Biphenyls (mg/kg)						
Aroclor 1016	-			-		
Aroclor 1221	-			-		
Aroclor 1232	-			-		
Aroclor 1242	-			-		
Aroclor 1248	-			-		
Aroclor 1254	-			-		
Aroclor 1260	-			-		
Dioxins/Furans (mg/kg)						
Octachlorodibenzofuran (OCDF)	-			-		
Octachlorodibenzo-p-dioxin (OCDD)	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	-			-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	-			-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	-			-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-			-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	-			-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-			-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	-			-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	-			-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	-			-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	-			-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	-			-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	-			-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	-			-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	-			-		

TABLE B-AP19
ANALYTICAL RESULTS FOR GRID AP19
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP19			AP19		
Sample Name	P3IF-SS-IS-SO-AP519			P3IF-SS-IS-SO-AP619		
Date Collected	June 8, 2023			June 8, 2023		
Metals (mg/kg)						
Aluminum	9200	4		11000	4	
Antimony	0.099	0.15	J	0.15	0.15	U
Arsenic	1.1	0.3		1.2	0.3	
Barium	170	0.2		170	0.2	
Beryllium	0.35	0.3	J	0.42	0.3	J
Cadmium	0.4	0.08		0.43	0.08	
Calcium (Ca)	2900	15		2400	15	
Chromium	8.1	0.2		9	0.2	
Cobalt	3.4	0.08		3.8	0.08	
Copper	57	0.2		57	0.2	
Iron (Fe)	6800	8		7500	8	
Lead	12	0.05		13	0.05	
Magnesium (Mg)	3900	5		4700	5	
Manganese (Mn)	240	0.08		260	0.08	
Mercury	0.029	0.043	J	1.9	0.042	J
Nickel	5.7	0.2		6.2	0.2	
Potassium (K)	680	8		730	8	
Selenium	0.84	0.1		1	0.1	
Silver	0.061	0.05	J	0.062	0.05	J
Sodium (Na)	52	8		52	8	
Thallium	0.069	0.05	J	0.03	0.05	J
Vanadium	18	0.1		20	0.1	
Zinc	30	1.5		31	1.5	
Other Parameters (mg/kg)						
Cyanide (CN-)	-			-		
Nitrate	-			-		
Perchlorate	-			-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-AP20
ANALYTICAL RESULTS FOR GRID AP20
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP20			AP20			AP20		
Sample Name	P3IF-BA-GRID-AP020			P3IF-SS-IS-SO-AP020			P3IF-SS-IS-SO-AP520		
Date Collected	June 9, 2023			June 9, 2023			June 9, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)									
1,1,1,2-Tetrachloroethane	0.0032	0.0032	U	-			-		
1,1,1-Trichloroethane	0.0032	0.0032	U	-			-		
1,1,2,2-Tetrachloroethane	0.0032	0.0032	U	-			-		
1,1,2-Trichloroethane	0.0032	0.0032	U	-			-		
1,1-Dichloroethane	0.0032	0.0032	U	-			-		
1,1-Dichloroethene	0.0032	0.0032	U	-			-		
1,1-Dichloropropene	0.0032	0.0032	U	-			-		
1,2,3-Trichlorobenzene	0.0032	0.0032	U	-			-		
1,2,3-Trichloropropane	0.008	0.008	U	-			-		
1,2,4-Trichlorobenzene	0.0032	0.0032	U	-			-		
1,2,4-Trimethylbenzene	0.0032	0.0032	U	-			-		
1,2-Dibromo-3-chloropropane	0.008	0.008	U	-			-		
1,2-Dibromoethane	0.0032	0.0032	U	-			-		
1,2-Dichlorobenzene	0.0032	0.0032	U	-			-		
1,2-Dichloroethane	0.0032	0.0032	U	-			-		
1,2-Dichloropropane	0.0032	0.0032	U	-			-		
1,3,5-Trimethylbenzene	0.0032	0.0032	U	-			-		
1,3-Dichlorobenzene	0.0032	0.0032	U	-			-		
1,3-Dichloropropane	0.0032	0.0032	U	-			-		
1,4-Dichlorobenzene	0.0032	0.0032	U	-			-		
2,2-Dichloropropane	0.0032	0.0032	U	-			-		
2-Butanone	0.0048	0.0048	U	-			-		
2-Chlorotoluene	0.0032	0.0032	U	-			-		
2-Hexanone	0.0032	0.0032	U	-			-		
4-Chlorotoluene	0.0032	0.0032	U	-			-		
4-Methyl-2-pentanone	0.0032	0.0032	U	-			-		
Acetone	1.5	0.008	J	-			-		
Benzene	0.0032	0.0032	U	-			-		
Bromobenzene	0.0032	0.0032	U	-			-		
Bromochloromethane	0.0032	0.0032	U	-			-		
Bromodichloromethane	0.0032	0.0032	U	-			-		
Bromoform	0.0032	0.0032	U	-			-		
Bromomethane	0.0069	0.0032	J	-			-		
Carbon disulfide	0.0032	0.0032	U	-			-		
Carbon tetrachloride	0.0032	0.0032	U	-			-		
Chlorobenzene	0.0032	0.0032	U	-			-		
Chloroethane	0.0032	0.0032	U	-			-		
Chloroform	0.0032	0.0032	U	-			-		
Chloromethane	0.0081	0.008	J	-			-		
cis-1,2-Dichloroethene	0.0032	0.0032	U	-			-		
cis-1,3-Dichloropropene	0.0032	0.0032	U	-			-		
Dibromochloromethane	0.0032	0.0032	U	-			-		
Dibromomethane	0.0032	0.0032	U	-			-		
Dichlorodifluoromethane	0.0032	0.0032	U	-			-		
Ethylbenzene	0.0032	0.0032	U	-			-		
Hexachlorobutadiene	0.0032	0.0032	U	-			-		
Isopropylbenzene	0.0032	0.0032	U	-			-		
m+p-Xylene	0.008	0.008	U	-			-		
Methyl Tertiary Butyl Ether	0.0032	0.0032	U	-			-		
Methylene chloride	0.016	0.016	U	-			-		
n-Butylbenzene	0.0032	0.0032	U	-			-		
n-Propylbenzene	0.0032	0.0032	U	-			-		
Naphthalene	0.0032	0.0032	U	-			-		
o-Xylene	0.004	0.004	U	-			-		
4-Isopropyltoluene	0.0032	0.0032	U	-			-		
sec-Butylbenzene	0.0032	0.0032	U	-			-		
Styrene	0.0032	0.0032	U	-			-		
tert-Butylbenzene	0.0032	0.0032	U	-			-		
Tetrachloroethene	0.0032	0.0032	U	-			-		
Toluene	0.021	0.0032	J	-			-		
trans-1,2-Dichloroethene	0.0032	0.0032	U	-			-		
trans-1,3-Dichloropropene	0.0032	0.0032	U	-			-		
Trichloroethene	0.0032	0.0032	U	-			-		
Trichlorofluoromethane	0.0032	0.0032	U	-			-		
Vinyl chloride	0.0032	0.0032	U	-			-		
Semivolatile Organic Compounds (mg/kg)									
1,2,4-Trichlorobenzene	0.36	0.36	U	-			-		
1,2-Dichlorobenzene	0.36	0.36	U	-			-		
1,3-Dichlorobenzene	0.36	0.36	U	-			-		
1,4-Dichlorobenzene	0.36	0.36	U	-			-		
2,4,5-Trichlorophenol	0.36	0.36	U	-			-		
2,4,6-Trichlorophenol	0.36	0.36	U	-			-		
2,4-Dichlorophenol	0.36	0.36	U	-			-		
2,4-Dimethylphenol	0.36	0.36	U	-			-		
2,4-Dinitrophenol	0.36	0.36	U	-			-		
2,4-Dinitrotoluene	0.36	0.36	U	-			-		
2,6-Dinitrotoluene	0.36	0.36	U	-			-		
2-Chloronaphthalene	0.36	0.36	U	-			-		
2-Chlorophenol	0.36	0.36	U	-			-		
2-Methylnaphthalene	0.36	0.36	U	-			-		
2-Methylphenol	0.36	0.36	U	-			-		
2-Nitroaniline	0.36	0.36	U	-			-		
2-Nitrophenol	0.36	0.36	U	-			-		
3,3-Dichlorobenzidine	0.36	0.36	U	-			-		
3-Nitroaniline	0.36	0.36	U	-			-		
4,6-Dinitro-2-methylphenol	0.36	0.36	U	-			-		
4-Bromophenyl-phenylether	0.36	0.36	U	-			-		
4-Chloro-3-methylphenol	0.36	0.36	U	-			-		
4-Chloroaniline	0.36	0.36	U	-			-		

TABLE B-AP20
ANALYTICAL RESULTS FOR GRID AP20
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP20			AP20			AP20		
Sample Name	P3IF-BA-GRID-AP020			P3IF-SS-IS-SO-AP020			P3IF-SS-IS-SO-AP520		
Date Collected	June 9, 2023			June 9, 2023			June 9, 2023		
Semivolatile Organic Compounds (mg/kg), continued									
4-Chlorophenyl-phenylether	0.36	0.36	U	-			-		
4-Nitroaniline	0.36	0.36	U	-			-		
4-Nitrophenol	0.36	0.36	U	-			-		
Acenaphthene	0.36	0.36	U	-			-		
Acenaphthylene	0.36	0.36	U	-			-		
Anthracene	0.36	0.36	U	-			-		
Benzo(a)anthracene	0.36	0.36	U	-			-		
Benzo(a)pyrene	0.28	0.28	U	-			-		
Benzo(b)fluoranthene	0.36	0.36	U	-			-		
Benzo(g,h,i)perylene	0.36	0.36	U	-			-		
Benzo(k)fluoranthene	0.36	0.36	U	-			-		
Benzoic acid	0.36	0.36	U	-			-		
Benzyl Alcohol	0.36	0.36	U	-			-		
Bis(2-chloro-1-methylethyl) ether	0.36	0.36	U	-			-		
Bis(2-chloroethoxy)methane	0.36	0.36	U	-			-		
Bis(2-chloroethyl)ether	0.36	0.36	U	-			-		
Bis(2-ethylhexyl)phthalate	0.36	0.36	U	-			-		
Butyl benzyl phthalate	0.36	0.36	U	-			-		
Carbazole	0.36	0.36	U	-			-		
Chrysene	0.36	0.36	U	-			-		
Di-n-butyl phthalate	0.36	0.36	U	-			-		
Di-n-octyl phthalate	0.36	0.36	U	-			-		
Dibenz(a,h)anthracene	**0.28**	**0.28**	**U**	-			-		
Dibenzofuran	0.36	0.36	U	-			-		
Diethyl phthalate	0.36	0.36	U	-			-		
Dimethyl phthalate	0.36	0.36	U	-			-		
Fluoranthene	0.36	0.36	U	-			-		
Fluorene	0.36	0.36	U	-			-		
Hexachlorobenzene	0.36	0.36	U	-			-		
Hexachlorobutadiene	0.36	0.36	U	-			-		
Hexachloroethane	0.36	0.36	U	-			-		
Indeno(1,2,3-cd)pyrene	0.36	0.36	U	-			-		
Isophorone	0.36	0.36	U	-			-		
n-Nitroso-di-n-propylamine	0.36	0.36	U	-			-		
n-Nitrosodimethylamine	**0.043**	**0.043**	**UJ**	-			-		
n-Nitrosodiphenylamine	0.36	0.36	U	-			-		
Naphthalene	0.36	0.36	U	-			-		
Nitrobenzene	0.36	0.36	U	-			-		
Pentachlorophenol	0.36	0.36	U	-			-		
Phenanthrene	0.36	0.36	U	-			-		
Phenol	0.36	0.36	U	-			-		
Pyrene	0.36	0.36	U	-			-		
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	-			0.075	0.075	U	0.075	0.075	U
1,3-Dinitrobenzene	-			0.075	0.075	U	0.075	0.075	U
2,4,6-Trinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2,4-Dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2,6-Dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2-Nitrotoluene	-			0.075	0.075	U	0.075	0.075	U
3-Nitrotoluene	-			0.075	0.075	U	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
4-Nitrotoluene	-			0.075	0.075	U	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	-			0.075	0.075	U	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	-			0.075	0.075	U	0.075	0.075	U
Nitrobenzene	-			0.075	0.075	U	0.075	0.075	U
Nitroglycerin	-			0.15	0.15	U	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	-			0.075	0.075	U	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	-			0.25	0.25	U	0.25	0.25	U
Polychlorinated Biphenyls (mg/kg)									
Aroclor 1016	0.21	0.21	U	-			-		
Aroclor 1221	0.21	0.21	U	-			-		
Aroclor 1232	0.11	0.11	U	-			-		
Aroclor 1242	0.11	0.11	U	-			-		
Aroclor 1248	0.11	0.11	U	-			-		
Aroclor 1254	0.11	0.11	U	-			-		
Aroclor 1260	0.11	0.11	U	-			-		
Dioxins/Furans (mg/kg)									
Octachlorodibenzofuran (OCDF)	0.0000012	0.0000012	U	-			-		
Octachlorodibenzo-p-dioxin (OCDD)	0.000026	0.000013		-			-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.0000012	0.0000012	J	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	0.0000054	0.0000054	J	-			-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.00000021	0.00000021	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.00000014	0.00000014	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000021	0.00000021	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.00000014	0.00000014	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000021	0.00000021	UJ	-			-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.00000018	0.00000018	UJ	-			-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000021	0.00000021	U	-			-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000015	0.00000015	U	-			-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.000000097	0.000000097	U	-			-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.00000045	0.00000045	UJ	-			-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000015	0.00000015	U	-			-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.00000031	0.00000031	U	-			-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.000000099	0.000000099	U	-			-		

TABLE B-AP20
ANALYTICAL RESULTS FOR GRID AP20
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP20			AP20			AP20		
Sample Name	P3IF-BA-GRID-AP020			P3IF-SS-IS-SO-AP020			P3IF-SS-IS-SO-AP520		
Date Collected	June 9, 2023			June 9, 2023			June 9, 2023		
Metals (mg/kg)									
Aluminum	-			14000	4		13000	4	
Antimony	-			0.13	0.15	J	0.27	0.15	
Arsenic	-			1.2	0.3		1.1	0.3	
Barium	-			170	0.2		170	0.2	
Beryllium	-			0.47	0.3	J	0.44	0.3	J
Cadmium	-			0.59	0.08	J	0.37	0.08	J
Calcium (Ca)	-			2700	15		2600	15	
Chromium	-			10	0.2		10	0.2	
Cobalt	-			4.3	0.08		4.2	0.08	
Copper	-			55	0.2		53	0.2	
Iron (Fe)	-			8200	8		8500	8	
Lead	-			15	0.05		14	0.05	
Magnesium (Mg)	-			5900	5		5700	5	
Manganese (Mn)	-			310	0.08		300	0.08	
Mercury	-			0.069	0.042	J	0.045	0.042	J
Nickel	-			7.2	0.2		6.8	0.2	
Potassium (K)	-			1000	8		950	8	
Selenium	-			0.8	0.1		0.79	0.1	
Silver	-			0.06	0.05	J	0.07	0.05	J
Sodium (Na)	-			55	8		54	8	
Thallium	-			0.049	0.05	J	0.06	0.05	J
Vanadium	-			20	0.1		20	0.1	
Zinc	-			39	1.5		35	1.5	
Other Parameters (mg/kg)									
Cyanide (CN-)	0.34	0.34	U	-			-		
Nitrate	11	2.2		-			-		
Perchlorate	0.0043	0.0043	U	-			-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-AP20
ANALYTICAL RESULTS FOR GRID AP20
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP20		
Sample Name	P3IF-SS-IS-SO-AP620		
Date Collected	June 9, 2023		
	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)			
1,1,1,2-Tetrachloroethane	-		
1,1,1-Trichloroethane	-		
1,1,2,2-Tetrachloroethane	-		
1,1,2-Trichloroethane	-		
1,1-Dichloroethane	-		
1,1-Dichloroethene	-		
1,1-Dichloropropene	-		
1,2,3-Trichlorobenzene	-		
1,2,3-Trichloropropane	-		
1,2,4-Trichlorobenzene	-		
1,2,4-Trimethylbenzene	-		
1,2-Dibromo-3-chloropropane	-		
1,2-Dibromoethane	-		
1,2-Dichlorobenzene	-		
1,2-Dichloroethane	-		
1,2-Dichloropropane	-		
1,3,5-Trimethylbenzene	-		
1,3-Dichlorobenzene	-		
1,3-Dichloropropane	-		
1,4-Dichlorobenzene	-		
2,2-Dichloropropane	-		
2-Butanone	-		
2-Chlorotoluene	-		
2-Hexanone	-		
4-Chlorotoluene	-		
4-Methyl-2-pentanone	-		
Acetone	-		
Benzene	-		
Bromobenzene	-		
Bromochloromethane	-		
Bromodichloromethane	-		
Bromoform	-		
Bromomethane	-		
Carbon disulfide	-		
Carbon tetrachloride	-		
Chlorobenzene	-		
Chloroethane	-		
Chloroform	-		
Chloromethane	-		
cis-1,2-Dichloroethene	-		
cis-1,3-Dichloropropene	-		
Dibromochloromethane	-		
Dibromomethane	-		
Dichlorodifluoromethane	-		
Ethylbenzene	-		
Hexachlorobutadiene	-		
Isopropylbenzene	-		
m+p-Xylene	-		
Methyl Tertiary Butyl Ether	-		
Methylene chloride	-		
n-Butylbenzene	-		
n-Propylbenzene	-		
Naphthalene	-		
o-Xylene	-		
4-Isopropyltoluene	-		
sec-Butylbenzene	-		
Styrene	-		
tert-Butylbenzene	-		
Tetrachloroethene	-		
Toluene	-		
trans-1,2-Dichloroethene	-		
trans-1,3-Dichloropropene	-		
Trichloroethene	-		
Trichlorofluoromethane	-		
Vinyl chloride	-		
Semivolatile Organic Compounds (mg/kg)			
1,2,4-Trichlorobenzene	-		
1,2-Dichlorobenzene	-		
1,3-Dichlorobenzene	-		
1,4-Dichlorobenzene	-		
2,4,5-Trichlorophenol	-		
2,4,6-Trichlorophenol	-		
2,4-Dichlorophenol	-		
2,4-Dimethylphenol	-		
2,4-Dinitrophenol	-		
2,4-Dinitrotoluene	-		
2,6-Dinitrotoluene	-		
2-Chloronaphthalene	-		
2-Chlorophenol	-		
2-Methylnaphthalene	-		
2-Methylphenol	-		
2-Nitroaniline	-		
2-Nitrophenol	-		
3,3-Dichlorobenzidine	-		
3-Nitroaniline	-		
4,6-Dinitro-2-methylphenol	-		
4-Bromophenyl-phenylether	-		
4-Chloro-3-methylphenol	-		
4-Chloroaniline	-		

TABLE B-AP20
ANALYTICAL RESULTS FOR GRID AP20
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP20		
Sample Name	P3IF-SS-IS-SO-AP620		
Date Collected	June 9, 2023		
Semivolatile Organic Compounds (mg/kg), continued			
4-Chlorophenyl-phenylether	-		
4-Nitroaniline	-		
4-Nitrophenol	-		
Acenaphthene	-		
Acenaphthylene	-		
Anthracene	-		
Benzo(a)anthracene	-		
Benzo(a)pyrene	-		
Benzo(b)fluoranthene	-		
Benzo(g,h,i)perylene	-		
Benzo(k)fluoranthene	-		
Benzoic acid	-		
Benzyl Alcohol	-		
Bis(2-chloro-1-methylethyl) ether	-		
Bis(2-chloroethoxy)methane	-		
Bis(2-chloroethyl)ether	-		
Bis(2-ethylhexyl)phthalate	-		
Butyl benzyl phthalate	-		
Carbazole	-		
Chrysene	-		
Di-n-butyl phthalate	-		
Di-n-octyl phthalate	-		
Dibenz(a,h)anthracene	-		
Dibenzofuran	-		
Diethyl phthalate	-		
Dimethyl phthalate	-		
Fluoranthene	-		
Fluorene	-		
Hexachlorobenzene	-		
Hexachlorobutadiene	-		
Hexachloroethane	-		
Indeno(1,2,3-cd)pyrene	-		
Isophorone	-		
n-Nitroso-di-n-propylamine	-		
n-Nitrosodimethylamine	-		
n-Nitrosodiphenylamine	-		
Naphthalene	-		
Nitrobenzene	-		
Pentachlorophenol	-		
Phenanthrene	-		
Phenol	-		
Pyrene	-		
Explosives (mg/kg)			
1,3,5-Trinitrobenzene	0.075	0.075	U
1,3-Dinitrobenzene	0.075	0.075	U
2,4,6-Trinitrotoluene	0.075	0.075	U
2,4-Dinitrotoluene	0.075	0.075	U
2,6-Dinitrotoluene	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	0.075	0.075	U
2-Nitrotoluene	0.075	0.075	U
3-Nitrotoluene	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	0.075	0.075	U
4-Nitrotoluene	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	U
Nitrobenzene	0.075	0.075	U
Nitroglycerin	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	0.25	0.25	U
Polychlorinated Biphenyls (mg/kg)			
Aroclor 1016	-		
Aroclor 1221	-		
Aroclor 1232	-		
Aroclor 1242	-		
Aroclor 1248	-		
Aroclor 1254	-		
Aroclor 1260	-		
Dioxins/Furans (mg/kg)			
Octachlorodibenzofuran (OCDF)	-		
Octachlorodibenzo-p-dioxin (OCDD)	-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	-		

TABLE B-AP20
ANALYTICAL RESULTS FOR GRID AP20
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP20		
Sample Name	P3IF-SS-IS-SO-AP620		
Date Collected	June 9, 2023		
Metals (mg/kg)			
Aluminum	14000	4	
Antimony	0.085	0.15	J
Arsenic	1.1	0.3	
Barium	170	0.2	
Beryllium	0.46	0.3	J
Cadmium	0.32	0.08	
Calcium (Ca)	2400	15	
Chromium	11	0.2	
Cobalt	4.3	0.08	
Copper	52	0.2	
Iron (Fe)	8900	8	
Lead	14	0.05	
Magnesium (Mg)	6100	5	
Manganese (Mn)	300	0.08	
Mercury	0.048	0.043	J
Nickel	7.1	0.2	
Potassium (K)	940	8	
Selenium	0.97	0.1	
Silver	0.063	0.05	J
Sodium (Na)	54	8	
Thallium	0.039	0.05	J
Vanadium	20	0.1	
Zinc	35	1.5	
Other Parameters (mg/kg)			
Cyanide (CN-)	-		
Nitrate	-		
Perchlorate	-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-AP21
ANALYTICAL RESULTS FOR GRID AP21
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP21			AP21			AP21		
Sample Name	P3IF-BA-GRID-AP021			P3IF-SS-IS-SO-AP021			P3IF-SS-IS-SO-AP521		
Date Collected	June 9, 2023			June 9, 2023			June 9, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)									
1,1,1,2-Tetrachloroethane	0.0027	0.0027	U	-			-		
1,1,1-Trichloroethane	0.0027	0.0027	U	-			-		
1,1,2,2-Tetrachloroethane	0.0027	0.0027	U	-			-		
1,1,2-Trichloroethane	0.0027	0.0027	U	-			-		
1,1-Dichloroethane	0.0027	0.0027	U	-			-		
1,1-Dichloroethene	0.0027	0.0027	U	-			-		
1,1-Dichloropropene	0.0027	0.0027	U	-			-		
1,2,3-Trichlorobenzene	0.0027	0.0027	U	-			-		
1,2,3-Trichloropropane	0.0068	0.0068	U	-			-		
1,2,4-Trichlorobenzene	0.0027	0.0027	U	-			-		
1,2,4-Trimethylbenzene	0.0027	0.0027	U	-			-		
1,2-Dibromo-3-chloropropane	0.0068	0.0068	U	-			-		
1,2-Dibromoethane	0.0027	0.0027	U	-			-		
1,2-Dichlorobenzene	0.0027	0.0027	U	-			-		
1,2-Dichloroethane	0.0027	0.0027	U	-			-		
1,2-Dichloropropane	0.0027	0.0027	U	-			-		
1,3,5-Trimethylbenzene	0.0027	0.0027	U	-			-		
1,3-Dichlorobenzene	0.0027	0.0027	U	-			-		
1,3-Dichloropropane	0.0027	0.0027	U	-			-		
1,4-Dichlorobenzene	0.0027	0.0027	U	-			-		
2,2-Dichloropropane	0.0027	0.0027	U	-			-		
2-Butanone	0.0041	0.0041	U	-			-		
2-Chlorotoluene	0.0027	0.0027	U	-			-		
2-Hexanone	0.0027	0.0027	U	-			-		
4-Chlorotoluene	0.0027	0.0027	U	-			-		
4-Methyl-2-pentanone	0.0027	0.0027	U	-			-		
Acetone	0.99	0.0068	J	-			-		
Benzene	0.0027	0.0027	U	-			-		
Bromobenzene	0.0027	0.0027	U	-			-		
Bromochloromethane	0.0027	0.0027	U	-			-		
Bromodichloromethane	0.0027	0.0027	U	-			-		
Bromoform	0.0027	0.0027	U	-			-		
Bromomethane	0.0027	0.0027	U	-			-		
Carbon disulfide	0.0027	0.0027	U	-			-		
Carbon tetrachloride	0.0027	0.0027	U	-			-		
Chlorobenzene	0.0027	0.0027	U	-			-		
Chloroethane	0.0027	0.0027	U	-			-		
Chloroform	0.0027	0.0027	U	-			-		
Chloromethane	0.0068	0.0068	U	-			-		
cis-1,2-Dichloroethene	0.0027	0.0027	U	-			-		
cis-1,3-Dichloropropene	0.0027	0.0027	U	-			-		
Dibromochloromethane	0.0027	0.0027	U	-			-		
Dibromomethane	0.0027	0.0027	U	-			-		
Dichlorodifluoromethane	0.0027	0.0027	U	-			-		
Ethylbenzene	0.0027	0.0027	U	-			-		
Hexachlorobutadiene	0.0027	0.0027	U	-			-		
Isopropylbenzene	0.0027	0.0027	U	-			-		
m+p-Xylene	0.0068	0.0068	U	-			-		
Methyl Tertiary Butyl Ether	0.0027	0.0027	U	-			-		
Methylene chloride	0.014	0.014	U	-			-		
n-Butylbenzene	0.0027	0.0027	U	-			-		
n-Propylbenzene	0.0027	0.0027	U	-			-		
Naphthalene	0.0027	0.0027	U	-			-		
o-Xylene	0.0034	0.0034	U	-			-		
4-Isopropyltoluene	0.0027	0.0027	U	-			-		
sec-Butylbenzene	0.0027	0.0027	U	-			-		
Styrene	0.0027	0.0027	U	-			-		
tert-Butylbenzene	0.0027	0.0027	U	-			-		
Tetrachloroethene	0.0027	0.0027	U	-			-		
Toluene	0.014	0.0027		-			-		
trans-1,2-Dichloroethene	0.0027	0.0027	U	-			-		
trans-1,3-Dichloropropene	0.0027	0.0027	U	-			-		
Trichloroethene	0.0027	0.0027	U	-			-		
Trichlorofluoromethane	0.0027	0.0027	U	-			-		
Vinyl chloride	0.0027	0.0027	U	-			-		
Semivolatile Organic Compounds (mg/kg)									
1,2,4-Trichlorobenzene	0.18	0.18	U	-			-		
1,2-Dichlorobenzene	0.18	0.18	U	-			-		
1,3-Dichlorobenzene	0.18	0.18	U	-			-		
1,4-Dichlorobenzene	0.18	0.18	U	-			-		
2,4,5-Trichlorophenol	0.18	0.18	U	-			-		
2,4,6-Trichlorophenol	0.18	0.18	U	-			-		
2,4-Dichlorophenol	0.18	0.18	U	-			-		
2,4-Dimethylphenol	0.18	0.18	U	-			-		
2,4-Dinitrophenol	0.18	0.18	U	-			-		
2,4-Dinitrotoluene	0.18	0.18	U	-			-		
2,6-Dinitrotoluene	0.18	0.18	U	-			-		
2-Chloronaphthalene	0.18	0.18	U	-			-		
2-Chlorophenol	0.18	0.18	U	-			-		
2-Methylnaphthalene	0.18	0.18	U	-			-		
2-Methylphenol	0.18	0.18	U	-			-		
2-Nitroaniline	0.18	0.18	U	-			-		
2-Nitrophenol	0.18	0.18	U	-			-		
3,3-Dichlorobenzidine	0.18	0.18	U	-			-		
3-Nitroaniline	0.18	0.18	U	-			-		
4,6-Dinitro-2-methylphenol	0.18	0.18	U	-			-		
4-Bromophenyl-phenylether	0.18	0.18	U	-			-		
4-Chloro-3-methylphenol	0.18	0.18	U	-			-		
4-Chloroaniline	0.18	0.18	U	-			-		

TABLE B-AP21
ANALYTICAL RESULTS FOR GRID AP21
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP21			AP21			AP21		
Sample Name	P3IF-BA-GRID-AP021			P3IF-SS-IS-SO-AP021			P3IF-SS-IS-SO-AP521		
Date Collected	June 9, 2023			June 9, 2023			June 9, 2023		
Semivolatile Organic Compounds (mg/kg), continued									
4-Chlorophenyl-phenylether	0.18	0.18	U	-			-		
4-Nitroaniline	0.18	0.18	U	-			-		
4-Nitrophenol	0.18	0.18	U	-			-		
Acenaphthene	0.18	0.18	U	-			-		
Acenaphthylene	0.18	0.18	U	-			-		
Anthracene	0.18	0.18	U	-			-		
Benzo(a)anthracene	0.18	0.18	U	-			-		
Benzo(a)pyrene	0.14	0.14	U	-			-		
Benzo(b)fluoranthene	0.18	0.18	U	-			-		
Benzo(g,h,i)perylene	0.18	0.18	U	-			-		
Benzo(k)fluoranthene	0.18	0.18	U	-			-		
Benzoic acid	0.18	0.18	U	-			-		
Benzyl Alcohol	0.18	0.18	U	-			-		
Bis(2-chloro-1-methylethyl) ether	0.18	0.18	U	-			-		
Bis(2-chloroethoxy)methane	0.18	0.18	U	-			-		
Bis(2-chloroethyl)ether	0.18	0.18	U	-			-		
Bis(2-ethylhexyl)phthalate	0.18	0.18	U	-			-		
Butyl benzyl phthalate	0.18	0.18	U	-			-		
Carbazole	0.18	0.18	U	-			-		
Chrysene	0.18	0.18	U	-			-		
Di-n-butyl phthalate	0.18	0.18	U	-			-		
Di-n-octyl phthalate	0.18	0.18	U	-			-		
Dibenz(a,h)anthracene	0.14	0.14	U	-			-		
Dibenzofuran	0.18	0.18	U	-			-		
Diethyl phthalate	0.18	0.18	U	-			-		
Dimethyl phthalate	0.18	0.18	U	-			-		
Fluoranthene	0.18	0.18	U	-			-		
Fluorene	0.18	0.18	U	-			-		
Hexachlorobenzene	0.18	0.18	U	-			-		
Hexachlorobutadiene	0.18	0.18	U	-			-		
Hexachloroethane	0.18	0.18	U	-			-		
Indeno(1,2,3-cd)pyrene	0.18	0.18	U	-			-		
Isophorone	0.18	0.18	U	-			-		
n-Nitroso-di-n-propylamine	0.18	0.18	U	-			-		
n-Nitrosodimethylamine	0.022	0.022	UJ	-			-		
n-Nitrosodiphenylamine	0.18	0.18	U	-			-		
Naphthalene	0.18	0.18	U	-			-		
Nitrobenzene	0.18	0.18	U	-			-		
Pentachlorophenol	0.18	0.18	U	-			-		
Phenanthrene	0.18	0.18	U	-			-		
Phenol	0.18	0.18	U	-			-		
Pyrene	0.18	0.18	U	-			-		
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	-			0.075	0.075	U	0.075	0.075	U
1,3-Dinitrobenzene	-			0.075	0.075	U	0.075	0.075	U
2,4,6-Trinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2,4-Dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2,6-Dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2-Nitrotoluene	-			0.075	0.075	U	0.075	0.075	U
3-Nitrotoluene	-			0.075	0.075	U	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
4-Nitrotoluene	-			0.075	0.075	U	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	-			0.075	0.075	U	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	-			0.075	0.075	U	0.075	0.075	U
Nitrobenzene	-			0.075	0.075	U	0.075	0.075	U
Nitroglycerin	-			0.15	0.15	U	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	-			0.075	0.075	U	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	-			0.25	0.25	U	0.25	0.25	U
Polychlorinated Biphenyls (mg/kg)									
Aroclor 1016	0.22	0.22	U	-			-		
Aroclor 1221	0.22	0.22	U	-			-		
Aroclor 1232	0.11	0.11	U	-			-		
Aroclor 1242	0.11	0.11	U	-			-		
Aroclor 1248	0.11	0.11	U	-			-		
Aroclor 1254	0.11	0.11	U	-			-		
Aroclor 1260	0.11	0.11	U	-			-		
Dioxins/Furans (mg/kg)									
Octachlorodibenzofuran (OCDF)	0.0000015	0.0000015	J	-			-		
Octachlorodibenzo-p-dioxin (OCDD)	0.000041	0.000013		-			-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.000001	0.000001	J	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	0.0000093	0.0000093	J	-			-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.0000001	0.0000001	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.0000001	0.0000001	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000017	0.00000017	J	-			-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000098	0.000000098	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000021	0.00000021	UJ	-			-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.00000012	0.00000012	UJ	-			-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000016	0.00000016	U	-			-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.000000075	0.000000075	U	-			-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.000000077	0.000000077	U	-			-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.00000011	0.00000011	UJ	-			-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.000000077	0.000000077	U	-			-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.000005	0.000005	U	-			-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.00000007	0.00000007	U	-			-		

TABLE B-AP21
ANALYTICAL RESULTS FOR GRID AP21
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP21			AP21			AP21		
Sample Name	P3IF-BA-GRID-AP021			P3IF-SS-IS-SO-AP021			P3IF-SS-IS-SO-AP521		
Date Collected	June 9, 2023			June 9, 2023			June 9, 2023		
Metals (mg/kg)									
Aluminum	-			11000	4		12000	4	
Antimony	-			0.15	0.15	U	0.15	0.15	U
Arsenic	-			0.96	0.3		0.98	0.3	
Barium	-			170	0.2		190	0.2	
Beryllium	-			0.35	0.3	J	0.41	0.3	J
Cadmium	-			0.43	0.08		0.39	0.08	
Calcium (Ca)	-			2300	15		2600	15	
Chromium	-			9.4	0.2		10	0.2	
Cobalt	-			3.6	0.08		3.7	0.08	
Copper	-			57	0.2		59	0.2	
Iron (Fe)	-			6900	8		7300	8	
Lead	-			14	0.05		13	0.05	
Magnesium (Mg)	-			4900	5		5300	5	
Manganese (Mn)	-			250	0.08		270	0.08	
Mercury	-			0.028	0.043	J	0.04	0.044	J
Nickel	-			6	0.2		6.4	0.2	
Potassium (K)	-			800	8		890	8	
Selenium	-			0.81	0.1		0.81	0.1	
Silver	-			0.068	0.05	J	0.064	0.05	J
Sodium (Na)	-			50	8		51	8	
Thallium	-			0.027	0.05	J	0.032	0.05	J
Vanadium	-			15	0.1		16	0.1	
Zinc	-			57	1.5	J	32	1.5	J
Other Parameters (mg/kg)									
Cyanide (CN-)	0.35	0.35	U	-			-		
Nitrate	6.7	2.3	J	-			-		
Perchlorate	0.002	0.002	U	-			-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-AP21
ANALYTICAL RESULTS FOR GRID AP21
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP21		
Sample Name	P3IF-SS-IS-SO-AP621		
Date Collected	June 9, 2023		
	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)			
1,1,1,2-Tetrachloroethane	-		
1,1,1-Trichloroethane	-		
1,1,2,2-Tetrachloroethane	-		
1,1,2-Trichloroethane	-		
1,1-Dichloroethane	-		
1,1-Dichloroethene	-		
1,1-Dichloropropene	-		
1,2,3-Trichlorobenzene	-		
1,2,3-Trichloropropane	-		
1,2,4-Trichlorobenzene	-		
1,2,4-Trimethylbenzene	-		
1,2-Dibromo-3-chloropropane	-		
1,2-Dibromoethane	-		
1,2-Dichlorobenzene	-		
1,2-Dichloroethane	-		
1,2-Dichloropropane	-		
1,3,5-Trimethylbenzene	-		
1,3-Dichlorobenzene	-		
1,3-Dichloropropane	-		
1,4-Dichlorobenzene	-		
2,2-Dichloropropane	-		
2-Butanone	-		
2-Chlorotoluene	-		
2-Hexanone	-		
4-Chlorotoluene	-		
4-Methyl-2-pentanone	-		
Acetone	-		
Benzene	-		
Bromobenzene	-		
Bromochloromethane	-		
Bromodichloromethane	-		
Bromoform	-		
Bromomethane	-		
Carbon disulfide	-		
Carbon tetrachloride	-		
Chlorobenzene	-		
Chloroethane	-		
Chloroform	-		
Chloromethane	-		
cis-1,2-Dichloroethene	-		
cis-1,3-Dichloropropene	-		
Dibromochloromethane	-		
Dibromomethane	-		
Dichlorodifluoromethane	-		
Ethylbenzene	-		
Hexachlorobutadiene	-		
Isopropylbenzene	-		
m+p-Xylene	-		
Methyl Tertiary Butyl Ether	-		
Methylene chloride	-		
n-Butylbenzene	-		
n-Propylbenzene	-		
Naphthalene	-		
o-Xylene	-		
4-Isopropyltoluene	-		
sec-Butylbenzene	-		
Styrene	-		
tert-Butylbenzene	-		
Tetrachloroethene	-		
Toluene	-		
trans-1,2-Dichloroethene	-		
trans-1,3-Dichloropropene	-		
Trichloroethene	-		
Trichlorofluoromethane	-		
Vinyl chloride	-		
Semivolatile Organic Compounds (mg/kg)			
1,2,4-Trichlorobenzene	-		
1,2-Dichlorobenzene	-		
1,3-Dichlorobenzene	-		
1,4-Dichlorobenzene	-		
2,4,5-Trichlorophenol	-		
2,4,6-Trichlorophenol	-		
2,4-Dichlorophenol	-		
2,4-Dimethylphenol	-		
2,4-Dinitrophenol	-		
2,4-Dinitrotoluene	-		
2,6-Dinitrotoluene	-		
2-Chloronaphthalene	-		
2-Chlorophenol	-		
2-Methylnaphthalene	-		
2-Methylphenol	-		
2-Nitroaniline	-		
2-Nitrophenol	-		
3,3-Dichlorobenzidine	-		
3-Nitroaniline	-		
4,6-Dinitro-2-methylphenol	-		
4-Bromophenyl-phenylether	-		
4-Chloro-3-methylphenol	-		
4-Chloroaniline	-		

TABLE B-AP21
ANALYTICAL RESULTS FOR GRID AP21
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP21		
Sample Name	P3IF-SS-IS-SO-AP621		
Date Collected	June 9, 2023		
Semivolatile Organic Compounds (mg/kg), continued			
4-Chlorophenyl-phenylether	-		
4-Nitroaniline	-		
4-Nitrophenol	-		
Acenaphthene	-		
Acenaphthylene	-		
Anthracene	-		
Benzo(a)anthracene	-		
Benzo(a)pyrene	-		
Benzo(b)fluoranthene	-		
Benzo(g,h,i)perylene	-		
Benzo(k)fluoranthene	-		
Benzoic acid	-		
Benzyl Alcohol	-		
Bis(2-chloro-1-methylethyl) ether	-		
Bis(2-chloroethoxy)methane	-		
Bis(2-chloroethyl)ether	-		
Bis(2-ethylhexyl)phthalate	-		
Butyl benzyl phthalate	-		
Carbazole	-		
Chrysene	-		
Di-n-butyl phthalate	-		
Di-n-octyl phthalate	-		
Dibenz(a,h)anthracene	-		
Dibenzofuran	-		
Diethyl phthalate	-		
Dimethyl phthalate	-		
Fluoranthene	-		
Fluorene	-		
Hexachlorobenzene	-		
Hexachlorobutadiene	-		
Hexachloroethane	-		
Indeno(1,2,3-cd)pyrene	-		
Isophorone	-		
n-Nitroso-di-n-propylamine	-		
n-Nitrosodimethylamine	-		
n-Nitrosodiphenylamine	-		
Naphthalene	-		
Nitrobenzene	-		
Pentachlorophenol	-		
Phenanthrene	-		
Phenol	-		
Pyrene	-		
Explosives (mg/kg)			
1,3,5-Trinitrobenzene	0.075	0.075	U
1,3-Dinitrobenzene	0.075	0.075	U
2,4,6-Trinitrotoluene	0.075	0.075	U
2,4-Dinitrotoluene	0.075	0.075	U
2,6-Dinitrotoluene	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	0.075	0.075	U
2-Nitrotoluene	0.075	0.075	U
3-Nitrotoluene	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	0.075	0.075	U
4-Nitrotoluene	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	U
Nitrobenzene	0.075	0.075	U
Nitroglycerin	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	0.25	0.25	U
Polychlorinated Biphenyls (mg/kg)			
Aroclor 1016	-		
Aroclor 1221	-		
Aroclor 1232	-		
Aroclor 1242	-		
Aroclor 1248	-		
Aroclor 1254	-		
Aroclor 1260	-		
Dioxins/Furans (mg/kg)			
Octachlorodibenzofuran (OCDF)	-		
Octachlorodibenzo-p-dioxin (OCDD)	-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	-		

TABLE B-AP21
ANALYTICAL RESULTS FOR GRID AP21
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP21		
Sample Name	P3IF-SS-IS-SO-AP621		
Date Collected	June 9, 2023		
Metals (mg/kg)			
Aluminum	9900	4	
Antimony	0.14	0.15	J
Arsenic	0.95	0.3	
Barium	190	0.2	
Beryllium	0.35	0.3	J
Cadmium	0.37	0.08	
Calcium (Ca)	2500	15	
Chromium	8.3	0.2	
Cobalt	3.4	0.08	
Copper	50	0.2	
Iron (Fe)	7000	8	
Lead	13	0.05	
Magnesium (Mg)	4300	5	
Manganese (Mn)	260	0.08	
Mercury	0.03	0.042	J
Nickel	5.6	0.2	
Potassium (K)	760	8	
Selenium	0.71	0.1	
Silver	0.069	0.05	J
Sodium (Na)	48	8	
Thallium	0.034	0.05	J
Vanadium	15	0.1	
Zinc	32	1.5	J
Other Parameters (mg/kg)			
Cyanide (CN-)	-		
Nitrate	-		
Perchlorate	-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-AP22
ANALYTICAL RESULTS FOR GRID AP22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP22			AP22			AP22		
Sample Name	P3IF-BA-GRID-AP022			P3IF-SS-IS-SO-AP022			P3IF-SS-IS-SO-AP522		
Date Collected	June 9, 2023			June 9, 2023			June 9, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)									
1,1,1,2-Tetrachloroethane	0.0022	0.0022	U	-			-		
1,1,1-Trichloroethane	0.0022	0.0022	U	-			-		
1,1,2,2-Tetrachloroethane	0.0022	0.0022	U	-			-		
1,1,2-Trichloroethane	0.0022	0.0022	U	-			-		
1,1-Dichloroethane	0.0022	0.0022	U	-			-		
1,1-Dichloroethene	0.0022	0.0022	U	-			-		
1,1-Dichloropropene	0.0022	0.0022	U	-			-		
1,2,3-Trichlorobenzene	0.0022	0.0022	U	-			-		
1,2,3-Trichloropropane	0.0054	0.0054	U	-			-		
1,2,4-Trichlorobenzene	0.0022	0.0022	U	-			-		
1,2,4-Trimethylbenzene	0.0022	0.0022	U	-			-		
1,2-Dibromo-3-chloropropane	0.0054	0.0054	U	-			-		
1,2-Dibromoethane	0.0022	0.0022	U	-			-		
1,2-Dichlorobenzene	0.0022	0.0022	U	-			-		
1,2-Dichloroethane	0.0022	0.0022	U	-			-		
1,2-Dichloropropane	0.0022	0.0022	U	-			-		
1,3,5-Trimethylbenzene	0.0022	0.0022	U	-			-		
1,3-Dichlorobenzene	0.0022	0.0022	U	-			-		
1,3-Dichloropropane	0.0022	0.0022	U	-			-		
1,4-Dichlorobenzene	0.0022	0.0022	U	-			-		
2,2-Dichloropropane	0.0022	0.0022	U	-			-		
2-Butanone	0.0033	0.0033	U	-			-		
2-Chlorotoluene	0.0022	0.0022	U	-			-		
2-Hexanone	0.0022	0.0022	U	-			-		
4-Chlorotoluene	0.0022	0.0022	U	-			-		
4-Methyl-2-pentanone	0.0022	0.0022	U	-			-		
Acetone	0.57	0.0054	J	-			-		
Benzene	0.0022	0.0022	U	-			-		
Bromobenzene	0.0022	0.0022	U	-			-		
Bromochloromethane	0.0022	0.0022	U	-			-		
Bromodichloromethane	0.0022	0.0022	U	-			-		
Bromoform	0.0022	0.0022	U	-			-		
Bromomethane	0.0022	0.0022	U	-			-		
Carbon disulfide	0.0022	0.0022	U	-			-		
Carbon tetrachloride	0.0022	0.0022	U	-			-		
Chlorobenzene	0.0022	0.0022	U	-			-		
Chloroethane	0.0022	0.0022	U	-			-		
Chloroform	0.0022	0.0022	U	-			-		
Chloromethane	0.0054	0.0054	U	-			-		
cis-1,2-Dichloroethene	0.0022	0.0022	U	-			-		
cis-1,3-Dichloropropene	0.0022	0.0022	U	-			-		
Dibromochloromethane	0.0022	0.0022	U	-			-		
Dibromomethane	0.0022	0.0022	U	-			-		
Dichlorodifluoromethane	0.0022	0.0022	U	-			-		
Ethylbenzene	0.0022	0.0022	U	-			-		
Hexachlorobutadiene	0.0022	0.0022	U	-			-		
Isopropylbenzene	0.0022	0.0022	U	-			-		
m+p-Xylene	0.0054	0.0054	U	-			-		
Methyl Tertiary Butyl Ether	0.0022	0.0022	U	-			-		
Methylene chloride	0.011	0.011	U	-			-		
n-Butylbenzene	0.0022	0.0022	U	-			-		
n-Propylbenzene	0.0022	0.0022	U	-			-		
Naphthalene	0.0022	0.0022	U	-			-		
o-Xylene	0.0027	0.0027	U	-			-		
4-Isopropyltoluene	0.0022	0.0022	U	-			-		
sec-Butylbenzene	0.0022	0.0022	U	-			-		
Styrene	0.0022	0.0022	U	-			-		
tert-Butylbenzene	0.0022	0.0022	U	-			-		
Tetrachloroethene	0.0022	0.0022	U	-			-		
Toluene	0.0046	0.0022	J	-			-		
trans-1,2-Dichloroethene	0.0022	0.0022	U	-			-		
trans-1,3-Dichloropropene	0.0022	0.0022	U	-			-		
Trichloroethene	0.0022	0.0022	U	-			-		
Trichlorofluoromethane	0.0022	0.0022	U	-			-		
Vinyl chloride	0.0022	0.0022	U	-			-		
Semivolatile Organic Compounds (mg/kg)									
1,2,4-Trichlorobenzene	0.18	0.18	U	-			-		
1,2-Dichlorobenzene	0.18	0.18	U	-			-		
1,3-Dichlorobenzene	0.18	0.18	U	-			-		
1,4-Dichlorobenzene	0.18	0.18	U	-			-		
2,4,5-Trichlorophenol	0.18	0.18	U	-			-		
2,4,6-Trichlorophenol	0.18	0.18	U	-			-		
2,4-Dichlorophenol	0.18	0.18	U	-			-		
2,4-Dimethylphenol	0.18	0.18	U	-			-		
2,4-Dinitrophenol	0.18	0.18	U	-			-		
2,4-Dinitrotoluene	0.18	0.18	U	-			-		
2,6-Dinitrotoluene	0.18	0.18	U	-			-		
2-Chloronaphthalene	0.18	0.18	U	-			-		
2-Chlorophenol	0.18	0.18	U	-			-		
2-Methylnaphthalene	0.18	0.18	U	-			-		
2-Methylphenol	0.18	0.18	U	-			-		
2-Nitroaniline	0.18	0.18	U	-			-		
2-Nitrophenol	0.18	0.18	U	-			-		
3,3-Dichlorobenzidine	0.18	0.18	U	-			-		
3-Nitroaniline	0.18	0.18	U	-			-		
4,6-Dinitro-2-methylphenol	0.18	0.18	U	-			-		
4-Bromophenyl-phenylether	0.18	0.18	U	-			-		
4-Chloro-3-methylphenol	0.18	0.18	U	-			-		
4-Chloroaniline	0.18	0.18	U	-			-		

TABLE B-AP22
ANALYTICAL RESULTS FOR GRID AP22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP22			AP22			AP22		
Sample Name	P3IF-BA-GRID-AP022			P3IF-SS-IS-SO-AP022			P3IF-SS-IS-SO-AP522		
Date Collected	June 9, 2023			June 9, 2023			June 9, 2023		
Semivolatile Organic Compounds (mg/kg), continued									
4-Chlorophenyl-phenylether	0.18	0.18	U	-			-		
4-Nitroaniline	0.18	0.18	U	-			-		
4-Nitrophenol	0.18	0.18	U	-			-		
Acenaphthene	0.18	0.18	U	-			-		
Acenaphthylene	0.18	0.18	U	-			-		
Anthracene	0.18	0.18	U	-			-		
Benzo(a)anthracene	0.18	0.18	U	-			-		
Benzo(a)pyrene	0.14	0.14	U	-			-		
Benzo(b)fluoranthene	0.18	0.18	U	-			-		
Benzo(g,h,i)perylene	0.18	0.18	U	-			-		
Benzo(k)fluoranthene	0.18	0.18	U	-			-		
Benzoic acid	0.18	0.18	U	-			-		
Benzyl Alcohol	0.18	0.18	U	-			-		
Bis(2-chloro-1-methylethyl) ether	0.18	0.18	U	-			-		
Bis(2-chloroethoxy)methane	0.18	0.18	U	-			-		
Bis(2-chloroethyl)ether	0.18	0.18	U	-			-		
Bis(2-ethylhexyl)phthalate	0.18	0.18	U	-			-		
Butyl benzyl phthalate	0.18	0.18	U	-			-		
Carbazole	0.18	0.18	U	-			-		
Chrysene	0.18	0.18	U	-			-		
Di-n-butyl phthalate	0.18	0.18	U	-			-		
Di-n-octyl phthalate	0.18	0.18	U	-			-		
Dibenz(a,h)anthracene	0.14	0.14	U	-			-		
Dibenzofuran	0.18	0.18	U	-			-		
Diethyl phthalate	0.18	0.18	U	-			-		
Dimethyl phthalate	0.18	0.18	U	-			-		
Fluoranthene	0.18	0.18	U	-			-		
Fluorene	0.18	0.18	U	-			-		
Hexachlorobenzene	0.18	0.18	U	-			-		
Hexachlorobutadiene	0.18	0.18	U	-			-		
Hexachloroethane	0.18	0.18	U	-			-		
Indeno(1,2,3-cd)pyrene	0.18	0.18	U	-			-		
Isophorone	0.18	0.18	U	-			-		
n-Nitroso-di-n-propylamine	0.18	0.18	U	-			-		
n-Nitrosodimethylamine	0.022	0.022	UJ	-			-		
n-Nitrosodiphenylamine	0.18	0.18	U	-			-		
Naphthalene	0.18	0.18	U	-			-		
Nitrobenzene	0.18	0.18	U	-			-		
Pentachlorophenol	0.18	0.18	U	-			-		
Phenanthrene	0.18	0.18	U	-			-		
Phenol	0.18	0.18	U	-			-		
Pyrene	0.18	0.18	U	-			-		
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	-			0.075	0.075	U	0.075	0.075	U
1,3-Dinitrobenzene	-			0.075	0.075	U	0.075	0.075	U
2,4,6-Trinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2,4-Dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2,6-Dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2-Nitrotoluene	-			0.075	0.075	U	0.075	0.075	U
3-Nitrotoluene	-			0.075	0.075	U	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
4-Nitrotoluene	-			0.075	0.075	U	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	-			0.075	0.075	U	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	-			0.075	0.075	U	0.075	0.075	U
Nitrobenzene	-			0.075	0.075	U	0.075	0.075	U
Nitroglycerin	-			0.15	0.15	U	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	-			0.075	0.075	U	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	-			0.25	0.25	U	0.25	0.25	U
Polychlorinated Biphenyls (mg/kg)									
Aroclor 1016	0.21	0.21	U	-			-		
Aroclor 1221	0.21	0.21	U	-			-		
Aroclor 1232	0.11	0.11	U	-			-		
Aroclor 1242	0.11	0.11	U	-			-		
Aroclor 1248	0.11	0.11	U	-			-		
Aroclor 1254	0.11	0.11	U	-			-		
Aroclor 1260	0.11	0.11	U	-			-		
Dioxins/Furans (mg/kg)									
Octachlorodibenzofuran (OCDF)	0.0000013	0.0000013	J	-			-		
Octachlorodibenzo-p-dioxin (OCDD)	0.000016	0.000016	J	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.00000088	0.00000088	U	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	0.0000026	0.0000026	J	-			-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.000000095	0.000000095	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.00000017	0.00000017	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000098	0.000000098	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.00000016	0.00000016	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000098	0.000000098	UJ	-			-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.00000021	0.00000021	UJ	-			-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000014	0.00000014	U	-			-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000019	0.00000019	U	-			-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.00000013	0.00000013	U	-			-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.0000003	0.0000003	UJ	-			-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.0000002	0.0000002	U	-			-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.00000027	0.00000027	U	-			-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.00000013	0.00000013	U	-			-		

TABLE B-AP22
ANALYTICAL RESULTS FOR GRID AP22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP22			AP22			AP22		
Sample Name	P3IF-BA-GRID-AP022			P3IF-SS-IS-SO-AP022			P3IF-SS-IS-SO-AP522		
Date Collected	June 9, 2023			June 9, 2023			June 9, 2023		
Metals (mg/kg)									
Aluminum	-			11000	4		12000	4	
Antimony	-			0.21	0.15		0.15	0.15	U
Arsenic	-			0.93	0.3		1	0.3	
Barium	-			170	0.2		200	0.2	
Beryllium	-			0.37	0.3	J	0.44	0.3	J
Cadmium	-			0.39	0.08		0.4	0.08	
Calcium (Ca)	-			2500	15		2700	15	
Chromium	-			9	0.2		9.9	0.2	
Cobalt	-			3.4	0.08		3.8	0.08	
Copper	-			56	0.2		58	0.2	
Iron (Fe)	-			7200	8		7800	8	
Lead	-			13	0.05		15	0.05	
Magnesium (Mg)	-			4700	5		5400	5	
Manganese (Mn)	-			240	0.08		270	0.08	
Mercury	-			0.027	0.042	J	0.029	0.042	J
Nickel	-			6.1	0.2		6.6	0.2	
Potassium (K)	-			750	8		900	8	
Selenium	-			0.82	0.1		0.95	0.1	
Silver	-			0.073	0.05	J	0.084	0.05	J
Sodium (Na)	-			49	8		54	8	
Thallium	-			0.04	0.05	J	0.037	0.05	J
Vanadium	-			16	0.1		17	0.1	
Zinc	-			31	1.5		35	1.5	
Other Parameters (mg/kg)									
Cyanide (CN-)	0.21	0.35	J	-			-		
Nitrate	7.2	2.1	J	-			-		
Perchlorate	0.002	0.002	U	-			-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-AP22
ANALYTICAL RESULTS FOR GRID AP22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP22		
Sample Name	P3IF-SS-IS-SO-AP622		
Date Collected	June 9, 2023		
	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)			
1,1,1,2-Tetrachloroethane	-		
1,1,1-Trichloroethane	-		
1,1,2,2-Tetrachloroethane	-		
1,1,2-Trichloroethane	-		
1,1-Dichloroethane	-		
1,1-Dichloroethene	-		
1,1-Dichloropropene	-		
1,2,3-Trichlorobenzene	-		
1,2,3-Trichloropropane	-		
1,2,4-Trichlorobenzene	-		
1,2,4-Trimethylbenzene	-		
1,2-Dibromo-3-chloropropane	-		
1,2-Dibromoethane	-		
1,2-Dichlorobenzene	-		
1,2-Dichloroethane	-		
1,2-Dichloropropane	-		
1,3,5-Trimethylbenzene	-		
1,3-Dichlorobenzene	-		
1,3-Dichloropropane	-		
1,4-Dichlorobenzene	-		
2,2-Dichloropropane	-		
2-Butanone	-		
2-Chlorotoluene	-		
2-Hexanone	-		
4-Chlorotoluene	-		
4-Methyl-2-pentanone	-		
Acetone	-		
Benzene	-		
Bromobenzene	-		
Bromochloromethane	-		
Bromodichloromethane	-		
Bromoform	-		
Bromomethane	-		
Carbon disulfide	-		
Carbon tetrachloride	-		
Chlorobenzene	-		
Chloroethane	-		
Chloroform	-		
Chloromethane	-		
cis-1,2-Dichloroethene	-		
cis-1,3-Dichloropropene	-		
Dibromochloromethane	-		
Dibromomethane	-		
Dichlorodifluoromethane	-		
Ethylbenzene	-		
Hexachlorobutadiene	-		
Isopropylbenzene	-		
m+p-Xylene	-		
Methyl Tertiary Butyl Ether	-		
Methylene chloride	-		
n-Butylbenzene	-		
n-Propylbenzene	-		
Naphthalene	-		
o-Xylene	-		
4-Isopropyltoluene	-		
sec-Butylbenzene	-		
Styrene	-		
tert-Butylbenzene	-		
Tetrachloroethene	-		
Toluene	-		
trans-1,2-Dichloroethene	-		
trans-1,3-Dichloropropene	-		
Trichloroethene	-		
Trichlorofluoromethane	-		
Vinyl chloride	-		
Semivolatile Organic Compounds (mg/kg)			
1,2,4-Trichlorobenzene	-		
1,2-Dichlorobenzene	-		
1,3-Dichlorobenzene	-		
1,4-Dichlorobenzene	-		
2,4,5-Trichlorophenol	-		
2,4,6-Trichlorophenol	-		
2,4-Dichlorophenol	-		
2,4-Dimethylphenol	-		
2,4-Dinitrophenol	-		
2,4-Dinitrotoluene	-		
2,6-Dinitrotoluene	-		
2-Chloronaphthalene	-		
2-Chlorophenol	-		
2-Methylnaphthalene	-		
2-Methylphenol	-		
2-Nitroaniline	-		
2-Nitrophenol	-		
3,3-Dichlorobenzidine	-		
3-Nitroaniline	-		
4,6-Dinitro-2-methylphenol	-		
4-Bromophenyl-phenylether	-		
4-Chloro-3-methylphenol	-		
4-Chloroaniline	-		

TABLE B-AP22
ANALYTICAL RESULTS FOR GRID AP22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP22		
Sample Name	P3IF-SS-IS-SO-AP622		
Date Collected	June 9, 2023		
Semivolatile Organic Compounds (mg/kg), continued			
4-Chlorophenyl-phenylether	-		
4-Nitroaniline	-		
4-Nitrophenol	-		
Acenaphthene	-		
Acenaphthylene	-		
Anthracene	-		
Benzo(a)anthracene	-		
Benzo(a)pyrene	-		
Benzo(b)fluoranthene	-		
Benzo(g,h,i)perylene	-		
Benzo(k)fluoranthene	-		
Benzoic acid	-		
Benzyl Alcohol	-		
Bis(2-chloro-1-methylethyl) ether	-		
Bis(2-chloroethoxy)methane	-		
Bis(2-chloroethyl)ether	-		
Bis(2-ethylhexyl)phthalate	-		
Butyl benzyl phthalate	-		
Carbazole	-		
Chrysene	-		
Di-n-butyl phthalate	-		
Di-n-octyl phthalate	-		
Dibenz(a,h)anthracene	-		
Dibenzofuran	-		
Diethyl phthalate	-		
Dimethyl phthalate	-		
Fluoranthene	-		
Fluorene	-		
Hexachlorobenzene	-		
Hexachlorobutadiene	-		
Hexachloroethane	-		
Indeno(1,2,3-cd)pyrene	-		
Isophorone	-		
n-Nitroso-di-n-propylamine	-		
n-Nitrosodimethylamine	-		
n-Nitrosodiphenylamine	-		
Naphthalene	-		
Nitrobenzene	-		
Pentachlorophenol	-		
Phenanthrene	-		
Phenol	-		
Pyrene	-		
Explosives (mg/kg)			
1,3,5-Trinitrobenzene	0.075	0.075	U
1,3-Dinitrobenzene	0.075	0.075	U
2,4,6-Trinitrotoluene	0.075	0.075	U
2,4-Dinitrotoluene	0.075	0.075	U
2,6-Dinitrotoluene	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	0.075	0.075	U
2-Nitrotoluene	0.075	0.075	U
3-Nitrotoluene	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	0.075	0.075	U
4-Nitrotoluene	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	U
Nitrobenzene	0.075	0.075	U
Nitroglycerin	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	0.25	0.25	U
Polychlorinated Biphenyls (mg/kg)			
Aroclor 1016	-		
Aroclor 1221	-		
Aroclor 1232	-		
Aroclor 1242	-		
Aroclor 1248	-		
Aroclor 1254	-		
Aroclor 1260	-		
Dioxins/Furans (mg/kg)			
Octachlorodibenzofuran (OCDF)	-		
Octachlorodibenzo-p-dioxin (OCDD)	-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	-		

TABLE B-AP22
ANALYTICAL RESULTS FOR GRID AP22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP22		
Sample Name	P3IF-SS-IS-SO-AP622		
Date Collected	June 9, 2023		
Metals (mg/kg)			
Aluminum	8800	4	
Antimony	0.099	0.15	J
Arsenic	0.96	0.3	
Barium	170	0.2	
Beryllium	0.31	0.3	J
Cadmium	0.33	0.08	
Calcium (Ca)	2500	15	
Chromium	7.7	0.2	
Cobalt	3.1	0.08	
Copper	49	0.2	
Iron (Fe)	6800	8	
Lead	13	0.05	
Magnesium (Mg)	3700	5	
Manganese (Mn)	250	0.08	
Mercury	0.025	0.042	J
Nickel	5.3	0.2	
Potassium (K)	690	8	
Selenium	0.77	0.1	
Silver	0.063	0.05	J
Sodium (Na)	54	8	
Thallium	0.031	0.05	J
Vanadium	15	0.1	
Zinc	28	1.5	
Other Parameters (mg/kg)			
Cyanide (CN-)	-		
Nitrate	-		
Perchlorate	-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-AP25
ANALYTICAL RESULTS FOR GRID AP25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP25			AP25			AP25		
Sample Name	P3IF-BA-GRID-AP025			P3IF-BA-GRID-AP525			P3IF-SS-IS-SO-AP025		
Date Collected	June 22, 2023			June 22, 2023			June 22, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)									
1,1,1,2-Tetrachloroethane	0.002	0.002	UJ	0.0022	0.0022	UJ	-		
1,1,1-Trichloroethane	0.002	0.002	UJ	0.0022	0.0022	U	-		
1,1,2,2-Tetrachloroethane	0.002	0.002	U	0.0022	0.0022	U	-		
1,1,2-Trichloroethane	0.002	0.002	UJ	0.0022	0.0022	U	-		
1,1-Dichloroethane	0.002	0.002	UJ	0.0022	0.0022	U	-		
1,1-Dichloroethene	0.002	0.002	UJ	0.0022	0.0022	U	-		
1,1-Dichloropropene	0.002	0.002	UJ	0.0022	0.0022	U	-		
1,2,3-Trichlorobenzene	0.002	0.002	U	0.0022	0.0022	U	-		
1,2,3-Trichloropropane	0.005	0.005	U	0.0054	0.0054	U	-		
1,2,4-Trichlorobenzene	0.002	0.002	U	0.0022	0.0022	U	-		
1,2,4-Trimethylbenzene	0.002	0.002	U	0.0022	0.0022	U	-		
1,2-Dibromo-3-chloropropane	0.005	0.005	U	0.0054	0.0054	U	-		
1,2-Dibromoethane	0.002	0.002	UJ	0.0022	0.0022	UJ	-		
1,2-Dichlorobenzene	0.002	0.002	U	0.0022	0.0022	U	-		
1,2-Dichloroethane	0.002	0.002	UJ	0.0022	0.0022	U	-		
1,2-Dichloropropane	0.002	0.002	UJ	0.0022	0.0022	U	-		
1,3,5-Trimethylbenzene	0.002	0.002	U	0.0022	0.0022	U	-		
1,3-Dichlorobenzene	0.002	0.002	U	0.0022	0.0022	U	-		
1,3-Dichloropropane	0.002	0.002	UJ	0.0022	0.0022	UJ	-		
1,4-Dichlorobenzene	0.002	0.002	U	0.0022	0.0022	U	-		
2,2-Dichloropropane	0.002	0.002	UJ	0.0022	0.0022	U	-		
2-Butanone	0.003	0.003	UJ	0.0033	0.0033	U	-		
2-Chlorotoluene	0.002	0.002	U	0.0022	0.0022	U	-		
2-Hexanone	0.002	0.002	UJ	0.0022	0.0022	U	-		
4-Chlorotoluene	0.002	0.002	U	0.0022	0.0022	U	-		
4-Methyl-2-pentanone	0.002	0.002	UJ	0.0022	0.0022	U	-		
Acetone	0.1	0.005	J	0.069	0.0054		-		
Benzene	0.002	0.002	UJ	0.0022	0.0022	U	-		
Bromobenzene	0.002	0.002	U	0.0022	0.0022	U	-		
Bromochloromethane	0.002	0.002	UJ	0.0022	0.0022	U	-		
Bromodichloromethane	0.002	0.002	UJ	0.0022	0.0022	U	-		
Bromoform	0.002	0.002	UJ	0.0022	0.0022	UJ	-		
Bromomethane	0.002	0.002	UJ	0.0022	0.0022	U	-		
Carbon disulfide	0.002	0.002	UJ	0.0022	0.0022	U	-		
Carbon tetrachloride	0.002	0.002	UJ	0.0022	0.0022	U	-		
Chlorobenzene	0.002	0.002	UJ	0.0022	0.0022	UJ	-		
Chloroethane	0.002	0.002	UJ	0.0022	0.0022	U	-		
Chloroform	0.002	0.002	UJ	0.0022	0.0022	U	-		
Chloromethane	0.005	0.005	UJ	0.0054	0.0054	U	-		
cis-1,2-Dichloroethene	0.002	0.002	UJ	0.0022	0.0022	U	-		
cis-1,3-Dichloropropene	0.002	0.002	UJ	0.0022	0.0022	U	-		
Dibromochloromethane	0.002	0.002	UJ	0.0022	0.0022	UJ	-		
Dibromomethane	0.002	0.002	UJ	0.0022	0.0022	U	-		
Dichlorodifluoromethane	0.002	0.002	UJ	0.0022	0.0022	U	-		
Ethylbenzene	0.002	0.002	UJ	0.0022	0.0022	UJ	-		
Hexachlorobutadiene	0.002	0.002	U	0.0022	0.0022	U	-		
Isopropylbenzene	0.002	0.002	U	0.0022	0.0022	U	-		
m+p-Xylene	0.005	0.005	UJ	0.0054	0.0054	UJ	-		
Methyl Tertiary Butyl Ether	0.002	0.002	UJ	0.0022	0.0022	U	-		
Methylene chloride	0.0099	0.0099	UJ	0.011	0.011	U	-		
n-Butylbenzene	0.002	0.002	U	0.0022	0.0022	U	-		
n-Propylbenzene	0.002	0.002	U	0.0022	0.0022	U	-		
Naphthalene	0.002	0.002	U	0.0022	0.0022	U	-		
o-Xylene	0.0025	0.0025	UJ	0.0027	0.0027	UJ	-		
4-Isopropyltoluene	0.002	0.002	U	0.0022	0.0022	U	-		
sec-Butylbenzene	0.002	0.002	U	0.0022	0.0022	U	-		
Styrene	0.002	0.002	UJ	0.0022	0.0022	UJ	-		
tert-Butylbenzene	0.002	0.002	U	0.0022	0.0022	U	-		
Tetrachloroethene	0.002	0.002	UJ	0.0022	0.0022	UJ	-		
Toluene	0.002	0.002	UJ	0.0022	0.0022	U	-		
trans-1,2-Dichloroethene	0.002	0.002	UJ	0.0022	0.0022	U	-		
trans-1,3-Dichloropropene	0.002	0.002	UJ	0.0022	0.0022	U	-		
Trichloroethene	0.002	0.002	UJ	0.0022	0.0022	U	-		
Trichlorofluoromethane	0.002	0.002	UJ	0.0022	0.0022	U	-		
Vinyl chloride	0.002	0.002	UJ	0.0022	0.0022	U	-		
Semivolatile Organic Compounds (mg/kg)									
1,2,4-Trichlorobenzene	0.17	0.17	UJ	0.17	0.17	UJ	-		
1,2-Dichlorobenzene	0.17	0.17	UJ	0.17	0.17	UJ	-		
1,3-Dichlorobenzene	0.17	0.17	UJ	0.17	0.17	UJ	-		
1,4-Dichlorobenzene	0.17	0.17	UJ	0.17	0.17	UJ	-		
2,4,5-Trichlorophenol	0.17	0.17	UJ	0.17	0.17	UJ	-		
2,4,6-Trichlorophenol	0.17	0.17	UJ	0.17	0.17	UJ	-		
2,4-Dichlorophenol	0.17	0.17	UJ	0.17	0.17	UJ	-		
2,4-Dimethylphenol	0.17	0.17	UJ	0.17	0.17	UJ	-		
2,4-Dinitrophenol	0.17	0.17	UJ	0.17	0.17	UJ	-		
2,4-Dinitrotoluene	0.17	0.17	UJ	0.17	0.17	UJ	-		
2,6-Dinitrotoluene	0.17	0.17	UJ	0.17	0.17	UJ	-		
2-Chloronaphthalene	0.17	0.17	UJ	0.17	0.17	UJ	-		
2-Chlorophenol	0.17	0.17	UJ	0.17	0.17	UJ	-		
2-Methylnaphthalene	0.17	0.17	UJ	0.17	0.17	UJ	-		
2-Methylphenol	0.17	0.17	UJ	0.17	0.17	UJ	-		
2-Nitroaniline	0.17	0.17	UJ	0.17	0.17	UJ	-		
2-Nitrophenol	0.17	0.17	UJ	0.17	0.17	UJ	-		
3,3-Dichlorobenzidine	0.17	0.17	UJ	0.17	0.17	UJ	-		
3-Nitroaniline	0.17	0.17	UJ	0.17	0.17	UJ	-		
4,6-Dinitro-2-methylphenol	0.17	0.17	UJ	0.17	0.17	UJ	-		
4-Bromophenyl-phenylether	0.17	0.17	UJ	0.17	0.17	UJ	-		
4-Chloro-3-methylphenol	0.17	0.17	UJ	0.17	0.17	UJ	-		
4-Chloroaniline	0.17	0.17	UJ	0.17	0.17	UJ	-		

TABLE B-AP25
ANALYTICAL RESULTS FOR GRID AP25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP25			AP25			AP25		
Sample Name	P3IF-BA-GRID-AP025			P3IF-BA-GRID-AP525			P3IF-SS-IS-SO-AP025		
Date Collected	June 22, 2023			June 22, 2023			June 22, 2023		
Semivolatile Organic Compounds (mg/kg), continued									
4-Chlorophenyl-phenylether	0.17	0.17	UJ	0.17	0.17	UJ	-		
4-Nitroaniline	0.17	0.17	UJ	0.17	0.17	UJ	-		
4-Nitrophenol	0.17	0.17	UJ	0.17	0.17	UJ	-		
Acenaphthene	0.17	0.17	UJ	0.17	0.17	UJ	-		
Acenaphthylene	0.17	0.17	UJ	0.17	0.17	UJ	-		
Anthracene	0.17	0.17	UJ	0.17	0.17	UJ	-		
Benzo(a)anthracene	0.17	0.17	UJ	0.17	0.17	UJ	-		
Benzo(a)pyrene	0.13	0.13	UJ	0.13	0.13	UJ	-		
Benzo(b)fluoranthene	0.17	0.17	UJ	0.17	0.17	UJ	-		
Benzo(g,h,i)perylene	0.17	0.17	UJ	0.17	0.17	UJ	-		
Benzo(k)fluoranthene	0.17	0.17	UJ	0.17	0.17	UJ	-		
Benzoic acid	0.17	0.17	UJ	0.17	0.17	UJ	-		
Benzyl Alcohol	0.17	0.17	UJ	0.17	0.17	UJ	-		
Bis(2-chloro-1-methylethyl) ether	0.17	0.17	UJ	0.17	0.17	UJ	-		
Bis(2-chloroethoxy)methane	0.17	0.17	UJ	0.17	0.17	UJ	-		
Bis(2-chloroethyl)ether	0.17	0.17	UJ	0.17	0.17	UJ	-		
Bis(2-ethylhexyl)phthalate	0.17	0.17	UJ	0.17	0.17	UJ	-		
Butyl benzyl phthalate	0.17	0.17	UJ	0.17	0.17	UJ	-		
Carbazole	0.17	0.17	UJ	0.17	0.17	UJ	-		
Chrysene	0.17	0.17	UJ	0.17	0.17	UJ	-		
Di-n-butyl phthalate	0.17	0.17	UJ	0.17	0.17	UJ	-		
Di-n-octyl phthalate	0.17	0.17	UJ	0.17	0.17	UJ	-		
Dibenz(a,h)anthracene	0.13	0.13	UJ	0.13	0.13	UJ	-		
Dibenzofuran	0.17	0.17	UJ	0.17	0.17	UJ	-		
Diethyl phthalate	0.17	0.17	UJ	0.17	0.17	UJ	-		
Dimethyl phthalate	0.17	0.17	UJ	0.17	0.17	UJ	-		
Fluoranthene	0.17	0.17	UJ	0.17	0.17	UJ	-		
Fluorene	0.17	0.17	UJ	0.17	0.17	UJ	-		
Hexachlorobenzene	0.17	0.17	UJ	0.17	0.17	UJ	-		
Hexachlorobutadiene	0.17	0.17	UJ	0.17	0.17	UJ	-		
Hexachloroethane	0.17	0.17	UJ	0.17	0.17	UJ	-		
Indeno(1,2,3-cd)pyrene	0.17	0.17	UJ	0.17	0.17	UJ	-		
Isophorone	0.17	0.17	UJ	0.17	0.17	UJ	-		
n-Nitroso-di-n-propylamine	0.17	0.17	UJ	0.17	0.17	UJ	-		
n-Nitrosodimethylamine	0.02	0.02	UJ	0.02	0.02	UJ	-		
n-Nitrosodiphenylamine	0.17	0.17	UJ	0.17	0.17	UJ	-		
Naphthalene	0.17	0.17	UJ	0.17	0.17	UJ	-		
Nitrobenzene	0.17	0.17	UJ	0.17	0.17	UJ	-		
Pentachlorophenol	0.17	0.17	UJ	0.17	0.17	UJ	-		
Phenanthrene	0.17	0.17	UJ	0.17	0.17	UJ	-		
Phenol	0.17	0.17	UJ	0.17	0.17	UJ	-		
Pyrene	0.17	0.17	UJ	0.17	0.17	UJ	-		
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	-			-			0.075	0.075	UJ
1,3-Dinitrobenzene	-			-			0.075	0.075	UJ
2,4,6-Trinitrotoluene	-			-			0.075	0.075	UJ
2,4-Dinitrotoluene	-			-			0.075	0.075	UJ
2,6-Dinitrotoluene	-			-			0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	-			-			0.075	0.075	UJ
2-Nitrotoluene	-			-			0.075	0.075	UJ
3-Nitrotoluene	-			-			0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	-			-			0.075	0.075	UJ
4-Nitrotoluene	-			-			0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	-			-			0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	-			-			0.075	0.075	UJ
Nitrobenzene	-			-			0.075	0.075	UJ
Nitroglycerin	-			-			0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	-			-			0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	-			-			0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)									
Aroclor 1016	0.019	0.019	U	0.018	0.018	U	-		
Aroclor 1221	0.019	0.019	U	0.018	0.018	U	-		
Aroclor 1232	0.0097	0.0097	U	0.0092	0.0092	U	-		
Aroclor 1242	0.0097	0.0097	U	0.0092	0.0092	U	-		
Aroclor 1248	0.0097	0.0097	U	0.0092	0.0092	U	-		
Aroclor 1254	0.0097	0.0097	U	0.0092	0.0092	U	-		
Aroclor 1260	0.0097	0.0097	U	0.0092	0.0092	U	-		
Dioxins/Furans (mg/kg)									
Octachlorodibenzofuran (OCDF)	0.00000013	0.00000013	U	0.0000003	0.0000003	U	-		
Octachlorodibenzo-p-dioxin (OCDD)	0.0000046	0.0000046	J	0.0000085	0.0000085	U	-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.00000021	0.00000021	U	7.7E-08	7.7E-08	U	-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	0.00000076	0.00000076	J	0.00000061	0.00000061	U	-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.000000054	0.000000054	U	0.00000016	0.00000016	U	-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.00000008	0.00000008	U	9.7E-08	9.7E-08	J	-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000005	0.00000005	U	6.6E-08	6.6E-08	U	-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000075	0.000000075	U	8.1E-08	8.1E-08	U	-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000045	0.000000045	U	7.5E-08	7.5E-08	U	-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.000000098	0.000000098	U	0.00000012	0.00000012	U	-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000011	0.00000011	J	0.00000016	0.00000016	J	-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000011	0.00000011	U	0.00000019	0.00000019	U	-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.00000008	0.00000008	U	0.00000006	0.00000006	U	-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000082	0.000000082	U	8.6E-08	8.6E-08	U	-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000011	0.00000011	U	0.00000019	0.00000019	U	-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.00000025	0.00000025	U	0.00000031	0.00000031	U	-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.000000052	0.000000052	U	7.8E-08	7.8E-08	U	-		

TABLE B-AP25
ANALYTICAL RESULTS FOR GRID AP25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP25			AP25			AP25		
Sample Name	P3IF-BA-GRID-AP025			P3IF-BA-GRID-AP525			P3IF-SS-IS-SO-AP025		
Date Collected	June 22, 2023			June 22, 2023			June 22, 2023		
Metals (mg/kg)									
Aluminum	-			-			14000	4	
Antimony	-			-			0.13	0.15	J
Arsenic	-			-			1	0.3	
Barium	-			-			110	0.2	
Beryllium	-			-			0.28	0.3	J
Cadmium	-			-			0.34	0.08	
Calcium (Ca)	-			-			2000	15	
Chromium	-			-			11	0.2	
Cobalt	-			-			4.2	0.08	
Copper	-			-			50	0.2	
Iron (Fe)	-			-			9300	8	
Lead	-			-			13	0.05	
Magnesium (Mg)	-			-			6500	5	
Manganese (Mn)	-			-			300	0.08	
Mercury	-			-			0.023	0.041	J
Nickel	-			-			7	0.2	
Potassium (K)	-			-			660	8	
Selenium	-			-			0.8	0.1	
Silver	-			-			0.079	0.05	J
Sodium (Na)	-			-			58	8	
Thallium	-			-			0.036	0.05	J
Vanadium	-			-			18	0.1	
Zinc	-			-			31	1.5	
Other Parameters (mg/kg)									
Cyanide (CN-)	0.3	0.3	U	0.31	0.31	U	-		
Nitrate	3.2	2.1	J	6.2	2.1	J	-		
Perchlorate	0.0019	0.0019	UJ	0.0018	0.0018	UJ	-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-AP25
ANALYTICAL RESULTS FOR GRID AP25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP25			AP25		
Sample Name	P3IF-SS-IS-SO-AP525			P3IF-SS-IS-SO-AP625		
Date Collected	June 22, 2023			June 22, 2023		
	Result	LOD	Qual	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)						
1,1,1,2-Tetrachloroethane	-			-		
1,1,1-Trichloroethane	-			-		
1,1,2,2-Tetrachloroethane	-			-		
1,1,2-Trichloroethane	-			-		
1,1-Dichloroethane	-			-		
1,1-Dichloroethene	-			-		
1,1-Dichloropropene	-			-		
1,2,3-Trichlorobenzene	-			-		
1,2,3-Trichloropropane	-			-		
1,2,4-Trichlorobenzene	-			-		
1,2,4-Trimethylbenzene	-			-		
1,2-Dibromo-3-chloropropane	-			-		
1,2-Dibromoethane	-			-		
1,2-Dichlorobenzene	-			-		
1,2-Dichloroethane	-			-		
1,2-Dichloropropane	-			-		
1,3,5-Trimethylbenzene	-			-		
1,3-Dichlorobenzene	-			-		
1,3-Dichloropropane	-			-		
1,4-Dichlorobenzene	-			-		
2,2-Dichloropropane	-			-		
2-Butanone	-			-		
2-Chlorotoluene	-			-		
2-Hexanone	-			-		
4-Chlorotoluene	-			-		
4-Methyl-2-pentanone	-			-		
Acetone	-			-		
Benzene	-			-		
Bromobenzene	-			-		
Bromochloromethane	-			-		
Bromodichloromethane	-			-		
Bromoform	-			-		
Bromomethane	-			-		
Carbon disulfide	-			-		
Carbon tetrachloride	-			-		
Chlorobenzene	-			-		
Chloroethane	-			-		
Chloroform	-			-		
Chloromethane	-			-		
cis-1,2-Dichloroethene	-			-		
cis-1,3-Dichloropropene	-			-		
Dibromochloromethane	-			-		
Dibromomethane	-			-		
Dichlorodifluoromethane	-			-		
Ethylbenzene	-			-		
Hexachlorobutadiene	-			-		
Isopropylbenzene	-			-		
m+p-Xylene	-			-		
Methyl Tertiary Butyl Ether	-			-		
Methylene chloride	-			-		
n-Butylbenzene	-			-		
n-Propylbenzene	-			-		
Naphthalene	-			-		
o-Xylene	-			-		
4-Isopropyltoluene	-			-		
sec-Butylbenzene	-			-		
Styrene	-			-		
tert-Butylbenzene	-			-		
Tetrachloroethene	-			-		
Toluene	-			-		
trans-1,2-Dichloroethene	-			-		
trans-1,3-Dichloropropene	-			-		
Trichloroethene	-			-		
Trichlorofluoromethane	-			-		
Vinyl chloride	-			-		
Semivolatile Organic Compounds (mg/kg)						
1,2,4-Trichlorobenzene	-			-		
1,2-Dichlorobenzene	-			-		
1,3-Dichlorobenzene	-			-		
1,4-Dichlorobenzene	-			-		
2,4,5-Trichlorophenol	-			-		
2,4,6-Trichlorophenol	-			-		
2,4-Dichlorophenol	-			-		
2,4-Dimethylphenol	-			-		
2,4-Dinitrophenol	-			-		
2,4-Dinitrotoluene	-			-		
2,6-Dinitrotoluene	-			-		
2-Chloronaphthalene	-			-		
2-Chlorophenol	-			-		
2-Methylnaphthalene	-			-		
2-Methylphenol	-			-		
2-Nitroaniline	-			-		
2-Nitrophenol	-			-		
3,3-Dichlorobenzidine	-			-		
3-Nitroaniline	-			-		
4,6-Dinitro-2-methylphenol	-			-		
4-Bromophenyl-phenylether	-			-		
4-Chloro-3-methylphenol	-			-		
4-Chloroaniline	-			-		

TABLE B-AP25
ANALYTICAL RESULTS FOR GRID AP25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP25			AP25		
Sample Name	P3IF-SS-IS-SO-AP525			P3IF-SS-IS-SO-AP625		
Date Collected	June 22, 2023			June 22, 2023		
Semivolatile Organic Compounds (mg/kg), continued						
4-Chlorophenyl-phenylether	-			-		
4-Nitroaniline	-			-		
4-Nitrophenol	-			-		
Acenaphthene	-			-		
Acenaphthylene	-			-		
Anthracene	-			-		
Benzo(a)anthracene	-			-		
Benzo(a)pyrene	-			-		
Benzo(b)fluoranthene	-			-		
Benzo(g,h,i)perylene	-			-		
Benzo(k)fluoranthene	-			-		
Benzoic acid	-			-		
Benzyl Alcohol	-			-		
Bis(2-chloro-1-methylethyl) ether	-			-		
Bis(2-chloroethoxy)methane	-			-		
Bis(2-chloroethyl)ether	-			-		
Bis(2-ethylhexyl)phthalate	-			-		
Butyl benzyl phthalate	-			-		
Carbazole	-			-		
Chrysene	-			-		
Di-n-butyl phthalate	-			-		
Di-n-octyl phthalate	-			-		
Dibenz(a,h)anthracene	-			-		
Dibenzofuran	-			-		
Diethyl phthalate	-			-		
Dimethyl phthalate	-			-		
Fluoranthene	-			-		
Fluorene	-			-		
Hexachlorobenzene	-			-		
Hexachlorobutadiene	-			-		
Hexachloroethane	-			-		
Indeno(1,2,3-cd)pyrene	-			-		
Isophorone	-			-		
n-Nitroso-di-n-propylamine	-			-		
n-Nitrosodimethylamine	-			-		
n-Nitrosodiphenylamine	-			-		
Naphthalene	-			-		
Nitrobenzene	-			-		
Pentachlorophenol	-			-		
Phenanthrene	-			-		
Phenol	-			-		
Pyrene	-			-		
Explosives (mg/kg)						
1,3,5-Trinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ
2,4,6-Trinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ
2,4-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ
2-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ
3-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ
4-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	UJ	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ
Nitroglycerin	0.15	0.15	UJ	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	UJ	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.25	0.25	UJ	0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)						
Aroclor 1016	-			-		
Aroclor 1221	-			-		
Aroclor 1232	-			-		
Aroclor 1242	-			-		
Aroclor 1248	-			-		
Aroclor 1254	-			-		
Aroclor 1260	-			-		
Dioxins/Furans (mg/kg)						
Octachlorodibenzofuran (OCDF)	-			-		
Octachlorodibenzo-p-dioxin (OCDD)	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	-			-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	-			-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	-			-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-			-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	-			-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-			-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	-			-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	-			-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	-			-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	-			-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	-			-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	-			-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	-			-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	-			-		

TABLE B-AP25
ANALYTICAL RESULTS FOR GRID AP25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AP25			AP25		
Sample Name	P3IF-SS-IS-SO-AP525			P3IF-SS-IS-SO-AP625		
Date Collected	June 22, 2023			June 22, 2023		
Metals (mg/kg)						
Aluminum	13000	4		13000	4	
Antimony	0.075	0.15	J	0.15	0.15	U
Arsenic	0.94	0.3		0.95	0.3	
Barium	110	0.2		110	0.2	
Beryllium	0.27	0.3	J	0.29	0.3	J
Cadmium	0.32	0.08		0.29	0.08	
Calcium (Ca)	1900	15		2000	15	
Chromium	11	0.2		10	0.2	
Cobalt	4.1	0.08		4.1	0.08	
Copper	51	0.2		45	0.2	
Iron (Fe)	9100	8		9200	8	
Lead	12	0.05		12	0.05	
Magnesium (Mg)	6200	5		6100	5	
Manganese (Mn)	300	0.08		300	0.08	
Mercury	0.024	0.04	J	0.025	0.04	J
Nickel	6.7	0.2		6.7	0.2	
Potassium (K)	630	8		640	8	
Selenium	0.67	0.1		0.75	0.1	
Silver	0.078	0.05	J	0.073	0.05	J
Sodium (Na)	56	8		58	8	
Thallium	0.032	0.05	J	0.031	0.05	J
Vanadium	18	0.1		17	0.1	
Zinc	29	1.5		30	1.5	
Other Parameters (mg/kg)						
Cyanide (CN-)	-			-		
Nitrate	-			-		
Perchlorate	-			-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-AQ23
ANALYTICAL RESULTS FOR GRID AQ23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AQ23			AQ23			AQ23		
Sample Name	P3IF-BA-GRID-AQ023			P3IF-SS-IS-SO-AQ023			P3IF-SS-IS-SO-AQ523		
Date Collected	June 9, 2023			June 9, 2023			June 9, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)									
1,1,1,2-Tetrachloroethane	0.0023	0.0023	U	-			-		
1,1,1-Trichloroethane	0.0023	0.0023	U	-			-		
1,1,2,2-Tetrachloroethane	0.0023	0.0023	U	-			-		
1,1,2-Trichloroethane	0.0023	0.0023	U	-			-		
1,1-Dichloroethane	0.0023	0.0023	U	-			-		
1,1-Dichloroethene	0.0023	0.0023	U	-			-		
1,1-Dichloropropene	0.0023	0.0023	U	-			-		
1,2,3-Trichlorobenzene	0.0023	0.0023	U	-			-		
1,2,3-Trichloropropane	0.0058	0.0058	U	-			-		
1,2,4-Trichlorobenzene	0.0023	0.0023	U	-			-		
1,2,4-Trimethylbenzene	0.0023	0.0023	U	-			-		
1,2-Dibromo-3-chloropropane	0.0058	0.0058	U	-			-		
1,2-Dibromoethane	0.0023	0.0023	U	-			-		
1,2-Dichlorobenzene	0.0023	0.0023	U	-			-		
1,2-Dichloroethane	0.0023	0.0023	U	-			-		
1,2-Dichloropropane	0.0023	0.0023	U	-			-		
1,3,5-Trimethylbenzene	0.0023	0.0023	U	-			-		
1,3-Dichlorobenzene	0.0023	0.0023	U	-			-		
1,3-Dichloropropane	0.0023	0.0023	U	-			-		
1,4-Dichlorobenzene	0.0023	0.0023	U	-			-		
2,2-Dichloropropane	0.0023	0.0023	U	-			-		
2-Butanone	0.0035	0.0035	U	-			-		
2-Chlorotoluene	0.0023	0.0023	U	-			-		
2-Hexanone	0.0023	0.0023	U	-			-		
4-Chlorotoluene	0.0023	0.0023	U	-			-		
4-Methyl-2-pentanone	0.0023	0.0023	U	-			-		
Acetone	0.87	0.0058	J	-			-		
Benzene	0.0039	0.0023	J	-			-		
Bromobenzene	0.0023	0.0023	U	-			-		
Bromochloromethane	0.0023	0.0023	U	-			-		
Bromodichloromethane	0.0023	0.0023	U	-			-		
Bromoform	0.0023	0.0023	U	-			-		
Bromomethane	0.0023	0.0023	U	-			-		
Carbon disulfide	0.0023	0.0023	U	-			-		
Carbon tetrachloride	0.0023	0.0023	U	-			-		
Chlorobenzene	0.0023	0.0023	U	-			-		
Chloroethane	0.0023	0.0023	U	-			-		
Chloroform	0.0023	0.0023	U	-			-		
Chloromethane	0.0058	0.0058	U	-			-		
cis-1,2-Dichloroethene	0.0023	0.0023	U	-			-		
cis-1,3-Dichloropropene	0.0023	0.0023	U	-			-		
Dibromochloromethane	0.0023	0.0023	U	-			-		
Dibromomethane	0.0023	0.0023	U	-			-		
Dichlorodifluoromethane	0.0023	0.0023	U	-			-		
Ethylbenzene	0.0023	0.0023	U	-			-		
Hexachlorobutadiene	0.0023	0.0023	U	-			-		
Isopropylbenzene	0.0023	0.0023	U	-			-		
m+p-Xylene	0.0058	0.0058	U	-			-		
Methyl Tertiary Butyl Ether	0.0023	0.0023	U	-			-		
Methylene chloride	0.012	0.012	U	-			-		
n-Butylbenzene	0.0023	0.0023	U	-			-		
n-Propylbenzene	0.0023	0.0023	U	-			-		
Naphthalene	0.0023	0.0023	U	-			-		
o-Xylene	0.0029	0.0029	U	-			-		
4-Isopropyltoluene	0.0023	0.0023	U	-			-		
sec-Butylbenzene	0.0023	0.0023	U	-			-		
Styrene	0.0023	0.0023	U	-			-		
tert-Butylbenzene	0.0023	0.0023	U	-			-		
Tetrachloroethene	0.0023	0.0023	U	-			-		
Toluene	0.0048	0.0023	J	-			-		
trans-1,2-Dichloroethene	0.0023	0.0023	U	-			-		
trans-1,3-Dichloropropene	0.0023	0.0023	U	-			-		
Trichloroethene	0.0023	0.0023	U	-			-		
Trichlorofluoromethane	0.0023	0.0023	U	-			-		
Vinyl chloride	0.0023	0.0023	U	-			-		
Semivolatile Organic Compounds (mg/kg)									
1,2,4-Trichlorobenzene	0.18	0.18	U	-			-		
1,2-Dichlorobenzene	0.18	0.18	U	-			-		
1,3-Dichlorobenzene	0.18	0.18	U	-			-		
1,4-Dichlorobenzene	0.18	0.18	U	-			-		
2,4,5-Trichlorophenol	0.18	0.18	U	-			-		
2,4,6-Trichlorophenol	0.18	0.18	U	-			-		
2,4-Dichlorophenol	0.18	0.18	U	-			-		
2,4-Dimethylphenol	0.18	0.18	U	-			-		
2,4-Dinitrophenol	0.18	0.18	U	-			-		
2,4-Dinitrotoluene	0.18	0.18	U	-			-		
2,6-Dinitrotoluene	0.18	0.18	U	-			-		
2-Chloronaphthalene	0.18	0.18	U	-			-		
2-Chlorophenol	0.18	0.18	U	-			-		
2-Methylnaphthalene	0.18	0.18	U	-			-		
2-Methylphenol	0.18	0.18	U	-			-		
2-Nitroaniline	0.18	0.18	U	-			-		
2-Nitrophenol	0.18	0.18	U	-			-		
3,3-Dichlorobenzidine	0.18	0.18	U	-			-		
3-Nitroaniline	0.18	0.18	U	-			-		
4,6-Dinitro-2-methylphenol	0.18	0.18	U	-			-		
4-Bromophenyl-phenylether	0.18	0.18	U	-			-		
4-Chloro-3-methylphenol	0.18	0.18	U	-			-		
4-Chloroaniline	0.18	0.18	U	-			-		

TABLE B-AQ23
ANALYTICAL RESULTS FOR GRID AQ23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AQ23			AQ23			AQ23		
Sample Name	P3IF-BA-GRID-AQ023			P3IF-SS-IS-SO-AQ023			P3IF-SS-IS-SO-AQ523		
Date Collected	June 9, 2023			June 9, 2023			June 9, 2023		
Semivolatile Organic Compounds (mg/kg), continued									
4-Chlorophenyl-phenylether	0.18	0.18	U	-			-		
4-Nitroaniline	0.18	0.18	U	-			-		
4-Nitrophenol	0.18	0.18	U	-			-		
Acenaphthene	0.18	0.18	U	-			-		
Acenaphthylene	0.18	0.18	U	-			-		
Anthracene	0.18	0.18	U	-			-		
Benzo(a)anthracene	0.18	0.18	U	-			-		
Benzo(a)pyrene	0.14	0.14	U	-			-		
Benzo(b)fluoranthene	0.18	0.18	U	-			-		
Benzo(g,h,i)perylene	0.18	0.18	U	-			-		
Benzo(k)fluoranthene	0.18	0.18	U	-			-		
Benzoic acid	0.18	0.18	U	-			-		
Benzyl Alcohol	0.18	0.18	U	-			-		
Bis(2-chloro-1-methylethyl) ether	0.18	0.18	U	-			-		
Bis(2-chloroethoxy)methane	0.18	0.18	U	-			-		
Bis(2-chloroethyl)ether	0.18	0.18	U	-			-		
Bis(2-ethylhexyl)phthalate	0.18	0.18	U	-			-		
Butyl benzyl phthalate	0.18	0.18	U	-			-		
Carbazole	0.18	0.18	U	-			-		
Chrysene	0.18	0.18	U	-			-		
Di-n-butyl phthalate	0.18	0.18	U	-			-		
Di-n-octyl phthalate	0.18	0.18	U	-			-		
Dibenz(a,h)anthracene	0.14	0.14	U	-			-		
Dibenzofuran	0.18	0.18	U	-			-		
Diethyl phthalate	0.18	0.18	U	-			-		
Dimethyl phthalate	0.18	0.18	U	-			-		
Fluoranthene	0.18	0.18	U	-			-		
Fluorene	0.18	0.18	U	-			-		
Hexachlorobenzene	0.18	0.18	U	-			-		
Hexachlorobutadiene	0.18	0.18	U	-			-		
Hexachloroethane	0.18	0.18	U	-			-		
Indeno(1,2,3-cd)pyrene	0.18	0.18	U	-			-		
Isophorone	0.18	0.18	U	-			-		
n-Nitroso-di-n-propylamine	0.18	0.18	U	-			-		
n-Nitrosodimethylamine	0.022	0.022	UJ	-			-		
n-Nitrosodiphenylamine	0.18	0.18	U	-			-		
Naphthalene	0.18	0.18	U	-			-		
Nitrobenzene	0.18	0.18	U	-			-		
Pentachlorophenol	0.18	0.18	U	-			-		
Phenanthrene	0.18	0.18	U	-			-		
Phenol	0.18	0.18	U	-			-		
Pyrene	0.18	0.18	U	-			-		
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	-			0.075	0.075	U	0.075	0.075	U
1,3-Dinitrobenzene	-			0.075	0.075	U	0.075	0.075	U
2,4,6-Trinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2,4-Dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2,6-Dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2-Nitrotoluene	-			0.075	0.075	U	0.075	0.075	U
3-Nitrotoluene	-			0.075	0.075	U	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
4-Nitrotoluene	-			0.075	0.075	U	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	-			0.075	0.075	U	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	-			0.075	0.075	U	0.075	0.075	U
Nitrobenzene	-			0.075	0.075	U	0.075	0.075	U
Nitroglycerin	-			0.15	0.15	U	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	-			0.075	0.075	U	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	-			0.25	0.25	U	0.25	0.25	U
Polychlorinated Biphenyls (mg/kg)									
Aroclor 1016	0.21	0.21	U	-			-		
Aroclor 1221	0.21	0.21	U	-			-		
Aroclor 1232	0.1	0.1	U	-			-		
Aroclor 1242	0.1	0.1	U	-			-		
Aroclor 1248	0.1	0.1	U	-			-		
Aroclor 1254	0.1	0.1	U	-			-		
Aroclor 1260	0.1	0.1	U	-			-		
Dioxins/Furans (mg/kg)									
Octachlorodibenzofuran (OCDF)	0.00000021	0.00000021	U	-			-		
Octachlorodibenzo-p-dioxin (OCDD)	0.000019	0.000019	J	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.00000064	0.00000064	U	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	0.000003	0.000003	U	-			-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.000000071	0.000000071	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000091	0.000000091	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000013	0.00000013	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000088	0.000000088	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000013	0.00000013	UJ	-			-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.00000011	0.00000011	UJ	-			-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000019	0.00000019	U	-			-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.0000002	0.0000002	U	-			-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.00000017	0.00000017	U	-			-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.00000015	0.00000015	J	-			-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000017	0.00000017	U	-			-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.00000053	0.00000053	U	-			-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.000000079	0.000000079	U	-			-		

TABLE B-AQ23
ANALYTICAL RESULTS FOR GRID AQ23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AQ23			AQ23			AQ23		
Sample Name	P3IF-BA-GRID-AQ023			P3IF-SS-IS-SO-AQ023			P3IF-SS-IS-SO-AQ523		
Date Collected	June 9, 2023			June 9, 2023			June 9, 2023		
Metals (mg/kg)									
Aluminum	-			14000	4		12000	4	
Antimony	-			0.15	0.15	U	0.1	0.15	J
Arsenic	-			0.96	0.3		0.92	0.3	
Barium	-			170	0.2		170	0.2	
Beryllium	-			0.46	0.3	J	0.35	0.3	J
Cadmium	-			0.32	0.08		0.27	0.08	
Calcium (Ca)	-			2700	15		2700	15	
Chromium	-			11	0.2		10	0.2	
Cobalt	-			4	0.08		3.7	0.08	
Copper	-			47	0.2		41	0.2	
Iron (Fe)	-			8400	8		7800	8	
Lead	-			13	0.05		12	0.05	
Magnesium (Mg)	-			6100	5		5300	5	
Manganese (Mn)	-			290	0.08		270	0.08	
Mercury	-			0.035	0.042	J	0.037	0.042	J
Nickel	-			7	0.2		6.6	0.2	
Potassium (K)	-			950	8		870	8	
Selenium	-			0.68	0.1		0.75	0.1	
Silver	-			0.073	0.05	J	0.063	0.05	J
Sodium (Na)	-			52	8		46	8	
Thallium	-			0.041	0.05	J	0.046	0.05	J
Vanadium	-			16	0.1		14	0.1	
Zinc	-			31	1.5		27	1.5	
Other Parameters (mg/kg)									
Cyanide (CN-)	0.33	0.33	U	-			-		
Nitrate	24	2.2		-			-		
Perchlorate	0.0044	0.0044	U	-			-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-AQ23
ANALYTICAL RESULTS FOR GRID AQ23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AQ23		
Sample Name	P3IF-SS-IS-SO-AQ623		
Date Collected	June 9, 2023		
	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)			
1,1,1,2-Tetrachloroethane	-		
1,1,1-Trichloroethane	-		
1,1,2,2-Tetrachloroethane	-		
1,1,2-Trichloroethane	-		
1,1-Dichloroethane	-		
1,1-Dichloroethene	-		
1,1-Dichloropropene	-		
1,2,3-Trichlorobenzene	-		
1,2,3-Trichloropropane	-		
1,2,4-Trichlorobenzene	-		
1,2,4-Trimethylbenzene	-		
1,2-Dibromo-3-chloropropane	-		
1,2-Dibromoethane	-		
1,2-Dichlorobenzene	-		
1,2-Dichloroethane	-		
1,2-Dichloropropane	-		
1,3,5-Trimethylbenzene	-		
1,3-Dichlorobenzene	-		
1,3-Dichloropropane	-		
1,4-Dichlorobenzene	-		
2,2-Dichloropropane	-		
2-Butanone	-		
2-Chlorotoluene	-		
2-Hexanone	-		
4-Chlorotoluene	-		
4-Methyl-2-pentanone	-		
Acetone	-		
Benzene	-		
Bromobenzene	-		
Bromochloromethane	-		
Bromodichloromethane	-		
Bromoform	-		
Bromomethane	-		
Carbon disulfide	-		
Carbon tetrachloride	-		
Chlorobenzene	-		
Chloroethane	-		
Chloroform	-		
Chloromethane	-		
cis-1,2-Dichloroethene	-		
cis-1,3-Dichloropropene	-		
Dibromochloromethane	-		
Dibromomethane	-		
Dichlorodifluoromethane	-		
Ethylbenzene	-		
Hexachlorobutadiene	-		
Isopropylbenzene	-		
m+p-Xylene	-		
Methyl Tertiary Butyl Ether	-		
Methylene chloride	-		
n-Butylbenzene	-		
n-Propylbenzene	-		
Naphthalene	-		
o-Xylene	-		
4-Isopropyltoluene	-		
sec-Butylbenzene	-		
Styrene	-		
tert-Butylbenzene	-		
Tetrachloroethene	-		
Toluene	-		
trans-1,2-Dichloroethene	-		
trans-1,3-Dichloropropene	-		
Trichloroethene	-		
Trichlorofluoromethane	-		
Vinyl chloride	-		
Semivolatile Organic Compounds (mg/kg)			
1,2,4-Trichlorobenzene	-		
1,2-Dichlorobenzene	-		
1,3-Dichlorobenzene	-		
1,4-Dichlorobenzene	-		
2,4,5-Trichlorophenol	-		
2,4,6-Trichlorophenol	-		
2,4-Dichlorophenol	-		
2,4-Dimethylphenol	-		
2,4-Dinitrophenol	-		
2,4-Dinitrotoluene	-		
2,6-Dinitrotoluene	-		
2-Chloronaphthalene	-		
2-Chlorophenol	-		
2-Methylnaphthalene	-		
2-Methylphenol	-		
2-Nitroaniline	-		
2-Nitrophenol	-		
3,3-Dichlorobenzidine	-		
3-Nitroaniline	-		
4,6-Dinitro-2-methylphenol	-		
4-Bromophenyl-phenylether	-		
4-Chloro-3-methylphenol	-		
4-Chloroaniline	-		

TABLE B-AQ23
ANALYTICAL RESULTS FOR GRID AQ23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AQ23		
Sample Name	P3IF-SS-IS-SO-AQ623		
Date Collected	June 9, 2023		
Semivolatile Organic Compounds (mg/kg), continued			
4-Chlorophenyl-phenylether	-		
4-Nitroaniline	-		
4-Nitrophenol	-		
Acenaphthene	-		
Acenaphthylene	-		
Anthracene	-		
Benzo(a)anthracene	-		
Benzo(a)pyrene	-		
Benzo(b)fluoranthene	-		
Benzo(g,h,i)perylene	-		
Benzo(k)fluoranthene	-		
Benzoic acid	-		
Benzyl Alcohol	-		
Bis(2-chloro-1-methylethyl) ether	-		
Bis(2-chloroethoxy)methane	-		
Bis(2-chloroethyl)ether	-		
Bis(2-ethylhexyl)phthalate	-		
Butyl benzyl phthalate	-		
Carbazole	-		
Chrysene	-		
Di-n-butyl phthalate	-		
Di-n-octyl phthalate	-		
Dibenz(a,h)anthracene	-		
Dibenzofuran	-		
Diethyl phthalate	-		
Dimethyl phthalate	-		
Fluoranthene	-		
Fluorene	-		
Hexachlorobenzene	-		
Hexachlorobutadiene	-		
Hexachloroethane	-		
Indeno(1,2,3-cd)pyrene	-		
Isophorone	-		
n-Nitroso-di-n-propylamine	-		
n-Nitrosodimethylamine	-		
n-Nitrosodiphenylamine	-		
Naphthalene	-		
Nitrobenzene	-		
Pentachlorophenol	-		
Phenanthrene	-		
Phenol	-		
Pyrene	-		
Explosives (mg/kg)			
1,3,5-Trinitrobenzene	0.075	0.075	U
1,3-Dinitrobenzene	0.075	0.075	U
2,4,6-Trinitrotoluene	0.075	0.075	U
2,4-Dinitrotoluene	0.075	0.075	U
2,6-Dinitrotoluene	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	0.075	0.075	U
2-Nitrotoluene	0.075	0.075	U
3-Nitrotoluene	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	0.075	0.075	U
4-Nitrotoluene	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	U
Nitrobenzene	0.075	0.075	U
Nitroglycerin	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	0.25	0.25	U
Polychlorinated Biphenyls (mg/kg)			
Aroclor 1016	-		
Aroclor 1221	-		
Aroclor 1232	-		
Aroclor 1242	-		
Aroclor 1248	-		
Aroclor 1254	-		
Aroclor 1260	-		
Dioxins/Furans (mg/kg)			
Octachlorodibenzofuran (OCDF)	-		
Octachlorodibenzo-p-dioxin (OCDD)	-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	-		

TABLE B-AQ23
ANALYTICAL RESULTS FOR GRID AQ23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AQ23		
Sample Name	P3IF-SS-IS-SO-AQ623		
Date Collected	June 9, 2023		
Metals (mg/kg)			
Aluminum	14000	4	
Antimony	0.15	0.15	U
Arsenic	0.94	0.3	
Barium	190	0.2	
Beryllium	0.44	0.3	J
Cadmium	0.24	0.08	
Calcium (Ca)	2700	15	
Chromium	10	0.2	
Cobalt	4	0.08	
Copper	34	0.2	
Iron (Fe)	8100	8	
Lead	11	0.05	
Magnesium (Mg)	6100	5	
Manganese (Mn)	280	0.08	
Mercury	0.04	0.044	J
Nickel	7.3	0.2	
Potassium (K)	940	8	
Selenium	0.9	0.1	
Silver	0.046	0.05	J
Sodium (Na)	49	8	
Thallium	0.039	0.05	J
Vanadium	15	0.1	
Zinc	28	1.5	
Other Parameters (mg/kg)			
Cyanide (CN-)	-		
Nitrate	-		
Perchlorate	-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-AQ24
ANALYTICAL RESULTS FOR GRID AQ24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AQ24			AQ24			AQ24		
Sample Name	P3IF-BA-GRID-AQ024			P3IF-SS-IS-SO-AQ024			P3IF-SS-IS-SO-AQ524		
Date Collected	June 9, 2023			June 9, 2023			June 9, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)									
1,1,1,2-Tetrachloroethane	0.0020	0.002	U	-			-		
1,1,1-Trichloroethane	0.0020	0.002	U	-			-		
1,1,2,2-Tetrachloroethane	0.0020	0.002	U	-			-		
1,1,2-Trichloroethane	0.0020	0.002	U	-			-		
1,1-Dichloroethane	0.0020	0.002	U	-			-		
1,1-Dichloroethene	0.0020	0.002	U	-			-		
1,1-Dichloropropene	0.0020	0.002	U	-			-		
1,2,3-Trichlorobenzene	0.0020	0.002	U	-			-		
1,2,3-Trichloropropane	0.0050	0.005	U	-			-		
1,2,4-Trichlorobenzene	0.0020	0.002	U	-			-		
1,2,4-Trimethylbenzene	0.0020	0.002	U	-			-		
1,2-Dibromo-3-chloropropane	0.0050	0.005	U	-			-		
1,2-Dibromoethane	0.0020	0.002	U	-			-		
1,2-Dichlorobenzene	0.0020	0.002	U	-			-		
1,2-Dichloroethane	0.0020	0.002	U	-			-		
1,2-Dichloropropane	0.0020	0.002	U	-			-		
1,3,5-Trimethylbenzene	0.0020	0.002	U	-			-		
1,3-Dichlorobenzene	0.0020	0.002	U	-			-		
1,3-Dichloropropane	0.0020	0.002	U	-			-		
1,4-Dichlorobenzene	0.0020	0.002	U	-			-		
2,2-Dichloropropane	0.0020	0.002	U	-			-		
2-Butanone	0.0030	0.003	U	-			-		
2-Chlorotoluene	0.0020	0.002	U	-			-		
2-Hexanone	0.0020	0.002	U	-			-		
4-Chlorotoluene	0.0020	0.002	U	-			-		
4-Methyl-2-pentanone	0.0020	0.002	U	-			-		
Acetone	0.35	0.005		-			-		
Benzene	0.0020	0.002	U	-			-		
Bromobenzene	0.0020	0.002	U	-			-		
Bromochloromethane	0.0020	0.002	U	-			-		
Bromodichloromethane	0.0020	0.002	U	-			-		
Bromoform	0.0020	0.002	U	-			-		
Bromomethane	0.0020	0.002	U	-			-		
Carbon disulfide	0.0020	0.002	U	-			-		
Carbon tetrachloride	0.0020	0.002	U	-			-		
Chlorobenzene	0.0020	0.002	U	-			-		
Chloroethane	0.0020	0.002	U	-			-		
Chloroform	0.0020	0.002	U	-			-		
Chloromethane	0.0050	0.005	U	-			-		
cis-1,2-Dichloroethene	0.0020	0.002	U	-			-		
cis-1,3-Dichloropropene	0.0020	0.002	U	-			-		
Dibromochloromethane	0.0020	0.002	U	-			-		
Dibromomethane	0.0020	0.002	U	-			-		
Dichlorodifluoromethane	0.0020	0.002	U	-			-		
Ethylbenzene	0.0020	0.002	U	-			-		
Hexachlorobutadiene	0.0020	0.002	U	-			-		
Isopropylbenzene	0.0020	0.002	U	-			-		
m+p-Xylene	0.0050	0.005	U	-			-		
Methyl Tertiary Butyl Ether	0.0020	0.002	U	-			-		
Methylene chloride	0.010	0.01	U	-			-		
n-Butylbenzene	0.0020	0.002	U	-			-		
n-Propylbenzene	0.0020	0.002	U	-			-		
Naphthalene	0.0020	0.002	U	-			-		
o-Xylene	0.0025	0.0025	U	-			-		
4-Isopropyltoluene	0.0020	0.002	U	-			-		
sec-Butylbenzene	0.0020	0.002	U	-			-		
Styrene	0.0020	0.002	U	-			-		
tert-Butylbenzene	0.0020	0.002	U	-			-		
Tetrachloroethene	0.0020	0.002	U	-			-		
Toluene	0.0024	0.002	J	-			-		
trans-1,2-Dichloroethene	0.0020	0.002	U	-			-		
trans-1,3-Dichloropropene	0.0020	0.002	U	-			-		
Trichloroethene	0.0020	0.002	U	-			-		
Trichlorofluoromethane	0.0020	0.002	U	-			-		
Vinyl chloride	0.0020	0.002	U	-			-		
Semivolatile Organic Compounds (mg/kg)									
1,2,4-Trichlorobenzene	0.18	0.18	U	-			-		
1,2-Dichlorobenzene	0.18	0.18	U	-			-		
1,3-Dichlorobenzene	0.18	0.18	U	-			-		
1,4-Dichlorobenzene	0.18	0.18	U	-			-		
2,4,5-Trichlorophenol	0.18	0.18	U	-			-		
2,4,6-Trichlorophenol	0.18	0.18	U	-			-		
2,4-Dichlorophenol	0.18	0.18	U	-			-		
2,4-Dimethylphenol	0.18	0.18	U	-			-		
2,4-Dinitrophenol	0.18	0.18	U	-			-		
2,4-Dinitrotoluene	0.18	0.18	U	-			-		
2,6-Dinitrotoluene	0.18	0.18	U	-			-		
2-Chloronaphthalene	0.18	0.18	U	-			-		
2-Chlorophenol	0.18	0.18	U	-			-		
2-Methylnaphthalene	0.18	0.18	U	-			-		
2-Methylphenol	0.18	0.18	U	-			-		
2-Nitroaniline	0.18	0.18	U	-			-		
2-Nitrophenol	0.18	0.18	U	-			-		
3,3-Dichlorobenzidine	0.18	0.18	U	-			-		
3-Nitroaniline	0.18	0.18	U	-			-		
4,6-Dinitro-2-methylphenol	0.18	0.18	U	-			-		
4-Bromophenyl-phenylether	0.18	0.18	U	-			-		
4-Chloro-3-methylphenol	0.18	0.18	U	-			-		
4-Chloroaniline	0.18	0.18	U	-			-		

TABLE B-AQ24
ANALYTICAL RESULTS FOR GRID AQ24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AQ24			AQ24			AQ24		
Sample Name	P3IF-BA-GRID-AQ024			P3IF-SS-IS-SO-AQ024			P3IF-SS-IS-SO-AQ524		
Date Collected	June 9, 2023			June 9, 2023			June 9, 2023		
Semivolatile Organic Compounds (mg/kg), continued									
4-Chlorophenyl-phenylether	0.18	0.18	U	-			-		
4-Nitroaniline	0.18	0.18	U	-			-		
4-Nitrophenol	0.18	0.18	U	-			-		
Acenaphthene	0.18	0.18	U	-			-		
Acenaphthylene	0.18	0.18	U	-			-		
Anthracene	0.18	0.18	U	-			-		
Benzo(a)anthracene	0.18	0.18	U	-			-		
Benzo(a)pyrene	0.14	0.14	U	-			-		
Benzo(b)fluoranthene	0.18	0.18	U	-			-		
Benzo(g,h,i)perylene	0.18	0.18	U	-			-		
Benzo(k)fluoranthene	0.18	0.18	U	-			-		
Benzoic acid	0.18	0.18	U	-			-		
Benzyl Alcohol	0.18	0.18	U	-			-		
Bis(2-chloro-1-methylethyl) ether	0.18	0.18	U	-			-		
Bis(2-chloroethoxy)methane	0.18	0.18	U	-			-		
Bis(2-chloroethyl)ether	0.18	0.18	U	-			-		
Bis(2-ethylhexyl)phthalate	0.18	0.18	U	-			-		
Butyl benzyl phthalate	0.18	0.18	U	-			-		
Carbazole	0.18	0.18	U	-			-		
Chrysene	0.18	0.18	U	-			-		
Di-n-butyl phthalate	0.18	0.18	U	-			-		
Di-n-octyl phthalate	0.18	0.18	U	-			-		
Dibenz(a,h)anthracene	0.14	0.14	U	-			-		
Dibenzofuran	0.18	0.18	U	-			-		
Diethyl phthalate	0.18	0.18	U	-			-		
Dimethyl phthalate	0.18	0.18	U	-			-		
Fluoranthene	0.18	0.18	U	-			-		
Fluorene	0.18	0.18	U	-			-		
Hexachlorobenzene	0.18	0.18	U	-			-		
Hexachlorobutadiene	0.18	0.18	U	-			-		
Hexachloroethane	0.18	0.18	U	-			-		
Indeno(1,2,3-cd)pyrene	0.18	0.18	U	-			-		
Isophorone	0.18	0.18	U	-			-		
n-Nitroso-di-n-propylamine	0.18	0.18	U	-			-		
n-Nitrosodimethylamine	0.021	0.021	UJ	-			-		
n-Nitrosodiphenylamine	0.18	0.18	U	-			-		
Naphthalene	0.18	0.18	U	-			-		
Nitrobenzene	0.18	0.18	U	-			-		
Pentachlorophenol	0.18	0.18	U	-			-		
Phenanthrene	0.18	0.18	U	-			-		
Phenol	0.18	0.18	U	-			-		
Pyrene	0.18	0.18	U	-			-		
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	-			0.075	0.075	U	0.075	0.075	U
1,3-Dinitrobenzene	-			0.075	0.075	U	0.075	0.075	U
2,4,6-Trinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2,4-Dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2,6-Dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2-Nitrotoluene	-			0.075	0.075	U	0.075	0.075	U
3-Nitrotoluene	-			0.075	0.075	U	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
4-Nitrotoluene	-			0.075	0.075	U	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	-			0.075	0.075	U	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	-			0.075	0.075	U	0.075	0.075	U
Nitrobenzene	-			0.075	0.075	U	0.075	0.075	U
Nitroglycerin	-			0.15	0.15	U	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	-			0.075	0.075	U	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	-			0.25	0.25	U	0.25	0.25	U
Polychlorinated Biphenyls (mg/kg)									
Aroclor 1016	0.21	0.21	U	-			-		
Aroclor 1221	0.21	0.21	U	-			-		
Aroclor 1232	0.1	0.1	U	-			-		
Aroclor 1242	0.1	0.1	U	-			-		
Aroclor 1248	0.1	0.1	U	-			-		
Aroclor 1254	0.1	0.1	U	-			-		
Aroclor 1260	0.1	0.1	U	-			-		
Dioxins/Furans (mg/kg)									
Octachlorodibenzofuran (OCDF)	0.0000003	0.0000003	U	-			-		
Octachlorodibenzo-p-dioxin (OCDD)	0.0000077	0.0000077	J	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.0000006	0.0000006	J	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	0.0000125	0.0000125	U	-			-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.000000079	0.000000079	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.00000011	0.00000011	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000042	0.000000042	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.00000011	0.00000011	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000043	0.000000043	UJ	-			-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.00000015	0.00000015	UJ	-			-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000022	0.00000022	U	-			-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.0000001	0.0000001	U	-			-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.00000016	0.00000016	U	-			-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000097	0.000000097	UJ	-			-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000011	0.00000011	U	-			-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.00000031	0.00000031	U	-			-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.000000069	0.000000069	U	-			-		

TABLE B-AQ24
ANALYTICAL RESULTS FOR GRID AQ24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AQ24			AQ24			AQ24		
Sample Name	P3IF-BA-GRID-AQ024			P3IF-SS-IS-SO-AQ024			P3IF-SS-IS-SO-AQ524		
Date Collected	June 9, 2023			June 9, 2023			June 9, 2023		
Metals (mg/kg)									
Aluminum	-			11000	4		13000	4	
Antimony	-			0.15	0.15	U	0.15	0.15	U
Arsenic	-			1	0.3		1	0.3	
Barium	-			170	0.2		190	0.2	
Beryllium	-			0.37	0.3	J	0.42	0.3	J
Cadmium	-			0.33	0.08		0.22	0.08	
Calcium (Ca)	-			2900	15		3100	15	
Chromium	-			9.1	0.2		9.3	0.2	
Cobalt	-			3.4	0.08		3.8	0.08	
Copper	-			50	0.2		31	0.2	
Iron (Fe)	-			7200	8		7300	8	
Lead	-			13	0.05		11	0.05	
Magnesium (Mg)	-			4700	5		5800	5	
Manganese (Mn)	-			260	0.08		250	0.08	
Mercury	-			0.028	0.043	J	0.048	0.043	J
Nickel	-			6.1	0.2		6.3	0.2	
Potassium (K)	-			740	8		820	8	
Selenium	-			0.7	0.1		0.86	0.1	
Silver	-			0.086	0.05	J	0.055	0.05	J
Sodium (Na)	-			58	8		58	8	
Thallium	-			0.028	0.05	J	0.033	0.05	J
Vanadium	-			14	0.1		15	0.1	
Zinc	-			28	1.5		25	1.5	
Other Parameters (mg/kg)									
Cyanide (CN-)	0.33	0.33	U	-			-		
Nitrate	11	2.1		-			-		
Perchlorate	0.002	0.002	U	-			-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-AQ24
ANALYTICAL RESULTS FOR GRID AQ24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AQ24		
Sample Name	P3IF-SS-IS-SO-AQ624		
Date Collected	June 9, 2023		
	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)			
1,1,1,2-Tetrachloroethane	-		
1,1,1-Trichloroethane	-		
1,1,2,2-Tetrachloroethane	-		
1,1,2-Trichloroethane	-		
1,1-Dichloroethane	-		
1,1-Dichloroethene	-		
1,1-Dichloropropene	-		
1,2,3-Trichlorobenzene	-		
1,2,3-Trichloropropane	-		
1,2,4-Trichlorobenzene	-		
1,2,4-Trimethylbenzene	-		
1,2-Dibromo-3-chloropropane	-		
1,2-Dibromoethane	-		
1,2-Dichlorobenzene	-		
1,2-Dichloroethane	-		
1,2-Dichloropropane	-		
1,3,5-Trimethylbenzene	-		
1,3-Dichlorobenzene	-		
1,3-Dichloropropane	-		
1,4-Dichlorobenzene	-		
2,2-Dichloropropane	-		
2-Butanone	-		
2-Chlorotoluene	-		
2-Hexanone	-		
4-Chlorotoluene	-		
4-Methyl-2-pentanone	-		
Acetone	-		
Benzene	-		
Bromobenzene	-		
Bromochloromethane	-		
Bromodichloromethane	-		
Bromoform	-		
Bromomethane	-		
Carbon disulfide	-		
Carbon tetrachloride	-		
Chlorobenzene	-		
Chloroethane	-		
Chloroform	-		
Chloromethane	-		
cis-1,2-Dichloroethene	-		
cis-1,3-Dichloropropene	-		
Dibromochloromethane	-		
Dibromomethane	-		
Dichlorodifluoromethane	-		
Ethylbenzene	-		
Hexachlorobutadiene	-		
Isopropylbenzene	-		
m+p-Xylene	-		
Methyl Tertiary Butyl Ether	-		
Methylene chloride	-		
n-Butylbenzene	-		
n-Propylbenzene	-		
Naphthalene	-		
o-Xylene	-		
4-Isopropyltoluene	-		
sec-Butylbenzene	-		
Styrene	-		
tert-Butylbenzene	-		
Tetrachloroethene	-		
Toluene	-		
trans-1,2-Dichloroethene	-		
trans-1,3-Dichloropropene	-		
Trichloroethene	-		
Trichlorofluoromethane	-		
Vinyl chloride	-		
Semivolatile Organic Compounds (mg/kg)			
1,2,4-Trichlorobenzene	-		
1,2-Dichlorobenzene	-		
1,3-Dichlorobenzene	-		
1,4-Dichlorobenzene	-		
2,4,5-Trichlorophenol	-		
2,4,6-Trichlorophenol	-		
2,4-Dichlorophenol	-		
2,4-Dimethylphenol	-		
2,4-Dinitrophenol	-		
2,4-Dinitrotoluene	-		
2,6-Dinitrotoluene	-		
2-Chloronaphthalene	-		
2-Chlorophenol	-		
2-Methylnaphthalene	-		
2-Methylphenol	-		
2-Nitroaniline	-		
2-Nitrophenol	-		
3,3-Dichlorobenzidine	-		
3-Nitroaniline	-		
4,6-Dinitro-2-methylphenol	-		
4-Bromophenyl-phenylether	-		
4-Chloro-3-methylphenol	-		
4-Chloroaniline	-		

TABLE B-AQ24
ANALYTICAL RESULTS FOR GRID AQ24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AQ24		
Sample Name	P3IF-SS-IS-SO-AQ624		
Date Collected	June 9, 2023		
Semivolatile Organic Compounds (mg/kg), continued			
4-Chlorophenyl-phenylether	-		
4-Nitroaniline	-		
4-Nitrophenol	-		
Acenaphthene	-		
Acenaphthylene	-		
Anthracene	-		
Benzo(a)anthracene	-		
Benzo(a)pyrene	-		
Benzo(b)fluoranthene	-		
Benzo(g,h,i)perylene	-		
Benzo(k)fluoranthene	-		
Benzoic acid	-		
Benzyl Alcohol	-		
Bis(2-chloro-1-methylethyl) ether	-		
Bis(2-chloroethoxy)methane	-		
Bis(2-chloroethyl)ether	-		
Bis(2-ethylhexyl)phthalate	-		
Butyl benzyl phthalate	-		
Carbazole	-		
Chrysene	-		
Di-n-butyl phthalate	-		
Di-n-octyl phthalate	-		
Dibenz(a,h)anthracene	-		
Dibenzofuran	-		
Diethyl phthalate	-		
Dimethyl phthalate	-		
Fluoranthene	-		
Fluorene	-		
Hexachlorobenzene	-		
Hexachlorobutadiene	-		
Hexachloroethane	-		
Indeno(1,2,3-cd)pyrene	-		
Isophorone	-		
n-Nitroso-di-n-propylamine	-		
n-Nitrosodimethylamine	-		
n-Nitrosodiphenylamine	-		
Naphthalene	-		
Nitrobenzene	-		
Pentachlorophenol	-		
Phenanthrene	-		
Phenol	-		
Pyrene	-		
Explosives (mg/kg)			
1,3,5-Trinitrobenzene	0.075	0.075	U
1,3-Dinitrobenzene	0.075	0.075	U
2,4,6-Trinitrotoluene	0.075	0.075	U
2,4-Dinitrotoluene	0.075	0.075	U
2,6-Dinitrotoluene	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	0.075	0.075	U
2-Nitrotoluene	0.075	0.075	U
3-Nitrotoluene	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	0.075	0.075	U
4-Nitrotoluene	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	U
Nitrobenzene	0.075	0.075	U
Nitroglycerin	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	0.25	0.25	U
Polychlorinated Biphenyls (mg/kg)			
Aroclor 1016	-		
Aroclor 1221	-		
Aroclor 1232	-		
Aroclor 1242	-		
Aroclor 1248	-		
Aroclor 1254	-		
Aroclor 1260	-		
Dioxins/Furans (mg/kg)			
Octachlorodibenzofuran (OCDF)	-		
Octachlorodibenzo-p-dioxin (OCDD)	-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	-		

TABLE B-AQ24
ANALYTICAL RESULTS FOR GRID AQ24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	AQ24		
Sample Name	P3IF-SS-IS-SO-AQ624		
Date Collected	June 9, 2023		
Metals (mg/kg)			
Aluminum	14000	4	
Antimony	0.15	0.15	UJ
Arsenic	1.1	0.3	
Barium	190	0.2	
Beryllium	0.46	0.3	J
Cadmium	0.28	0.08	
Calcium (Ca)	3100	15	J
Chromium	11	0.2	
Cobalt	4.1	0.08	
Copper	40	0.2	J
Iron (Fe)	8100	8	
Lead	12	0.05	
Magnesium (Mg)	6300	5	
Manganese (Mn)	290	0.08	
Mercury	0.028	0.043	J
Nickel	7	0.2	
Potassium (K)	900	8	
Selenium	0.91	0.1	J
Silver	0.065	0.05	J
Sodium (Na)	54	8	
Thallium	0.034	0.05	J
Vanadium	16	0.1	J
Zinc	29	1.5	J
Other Parameters (mg/kg)			
Cyanide (CN-)	-		
Nitrate	-		
Perchlorate	-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-B8
ANALYTICAL RESULTS FOR GRID B8
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	B8			B8			B8		
Sample Name	P3IF-BA-GRID-B008			P3IF-SS-IS-SO-B008			P3IF-SS-IS-SO-B508		
Date Collected	June 12, 2023			June 12, 2023			June 12, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)									
1,1,1,2-Tetrachloroethane	0.0016	0.0016	U	-			-		
1,1,1-Trichloroethane	0.0016	0.0016	U	-			-		
1,1,2,2-Tetrachloroethane	0.0016	0.0016	U	-			-		
1,1,2-Trichloroethane	0.0016	0.0016	U	-			-		
1,1-Dichloroethane	0.0016	0.0016	U	-			-		
1,1-Dichloroethene	0.0016	0.0016	U	-			-		
1,1-Dichloropropene	0.0016	0.0016	U	-			-		
1,2,3-Trichlorobenzene	0.0016	0.0016	U	-			-		
1,2,3-Trichloropropane	0.0039	0.0039	U	-			-		
1,2,4-Trichlorobenzene	0.0016	0.0016	U	-			-		
1,2,4-Trimethylbenzene	0.0016	0.0016	U	-			-		
1,2-Dibromo-3-chloropropane	0.0039	0.0039	U	-			-		
1,2-Dibromoethane	0.0016	0.0016	U	-			-		
1,2-Dichlorobenzene	0.0016	0.0016	U	-			-		
1,2-Dichloroethane	0.0016	0.0016	U	-			-		
1,2-Dichloropropane	0.0016	0.0016	U	-			-		
1,3,5-Trimethylbenzene	0.0016	0.0016	U	-			-		
1,3-Dichlorobenzene	0.0016	0.0016	U	-			-		
1,3-Dichloropropane	0.0016	0.0016	U	-			-		
1,4-Dichlorobenzene	0.0016	0.0016	U	-			-		
2,2-Dichloropropane	0.0016	0.0016	U	-			-		
2-Butanone	0.0024	0.0024	U	-			-		
2-Chlorotoluene	0.0016	0.0016	U	-			-		
2-Hexanone	0.0016	0.0016	U	-			-		
4-Chlorotoluene	0.0016	0.0016	U	-			-		
4-Methyl-2-pentanone	0.0016	0.0016	U	-			-		
Acetone	0.05	0.0039		-			-		
Benzene	0.0018	0.0016	J	-			-		
Bromobenzene	0.0016	0.0016	U	-			-		
Bromochloromethane	0.0016	0.0016	U	-			-		
Bromodichloromethane	0.0016	0.0016	U	-			-		
Bromoform	0.0016	0.0016	U	-			-		
Bromomethane	0.0016	0.0016	U	-			-		
Carbon disulfide	0.0016	0.0016	U	-			-		
Carbon tetrachloride	0.0016	0.0016	U	-			-		
Chlorobenzene	0.0016	0.0016	U	-			-		
Chloroethane	0.0016	0.0016	U	-			-		
Chloroform	0.0016	0.0016	U	-			-		
Chloromethane	0.0039	0.0039	U	-			-		
cis-1,2-Dichloroethene	0.0016	0.0016	U	-			-		
cis-1,3-Dichloropropene	0.0016	0.0016	U	-			-		
Dibromochloromethane	0.0016	0.0016	U	-			-		
Dibromomethane	0.0016	0.0016	U	-			-		
Dichlorodifluoromethane	0.0016	0.0016	U	-			-		
Ethylbenzene	0.0016	0.0016	U	-			-		
Hexachlorobutadiene	0.0016	0.0016	U	-			-		
Isopropylbenzene	0.0016	0.0016	U	-			-		
m+p-Xylene	0.0039	0.0039	U	-			-		
Methyl Tertiary Butyl Ether	0.0016	0.0016	U	-			-		
Methylene chloride	0.0079	0.0079	U	-			-		
n-Butylbenzene	0.0016	0.0016	U	-			-		
n-Propylbenzene	0.0016	0.0016	U	-			-		
Naphthalene	0.0016	0.0016	U	-			-		
o-Xylene	0.002	0.002	U	-			-		
4-Isopropyltoluene	0.0016	0.0016	U	-			-		
sec-Butylbenzene	0.0016	0.0016	U	-			-		
Styrene	0.0016	0.0016	U	-			-		
tert-Butylbenzene	0.0016	0.0016	U	-			-		
Tetrachloroethene	0.0016	0.0016	U	-			-		
Toluene	0.0015	0.0016	J	-			-		
trans-1,2-Dichloroethene	0.0016	0.0016	U	-			-		
trans-1,3-Dichloropropene	0.0016	0.0016	U	-			-		
Trichloroethene	0.0016	0.0016	U	-			-		
Trichlorofluoromethane	0.0016	0.0016	U	-			-		
Vinyl chloride	0.0016	0.0016	U	-			-		
Semivolatile Organic Compounds (mg/kg)									
1,2,4-Trichlorobenzene	0.17	0.17	U	-			-		
1,2-Dichlorobenzene	0.17	0.17	U	-			-		
1,3-Dichlorobenzene	0.17	0.17	U	-			-		
1,4-Dichlorobenzene	0.17	0.17	U	-			-		
2,4,5-Trichlorophenol	0.17	0.17	U	-			-		
2,4,6-Trichlorophenol	0.17	0.17	U	-			-		
2,4-Dichlorophenol	0.17	0.17	U	-			-		
2,4-Dimethylphenol	0.17	0.17	U	-			-		
2,4-Dinitrophenol	0.17	0.17	U	-			-		
2,4-Dinitrotoluene	0.17	0.17	U	-			-		
2,6-Dinitrotoluene	0.17	0.17	U	-			-		
2-Chloronaphthalene	0.17	0.17	U	-			-		
2-Chlorophenol	0.17	0.17	U	-			-		
2-Methylnaphthalene	0.17	0.17	U	-			-		
2-Methylphenol	0.17	0.17	U	-			-		
2-Nitroaniline	0.17	0.17	U	-			-		
2-Nitrophenol	0.17	0.17	U	-			-		
3,3-Dichlorobenzidine	0.17	0.17	U	-			-		
3-Nitroaniline	0.17	0.17	U	-			-		
4,6-Dinitro-2-methylphenol	0.17	0.17	U	-			-		
4-Bromophenyl-phenylether	0.17	0.17	U	-			-		
4-Chloro-3-methylphenol	0.17	0.17	U	-			-		
4-Chloroaniline	0.17	0.17	U	-			-		

TABLE B-B8
ANALYTICAL RESULTS FOR GRID B8
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	B8			B8			B8		
Sample Name	P3IF-BA-GRID-B008			P3IF-SS-IS-SO-B008			P3IF-SS-IS-SO-B508		
Date Collected	June 12, 2023			June 12, 2023			June 12, 2023		
Semivolatile Organic Compounds (mg/kg), continued									
4-Chlorophenyl-phenylether	0.17	0.17	U	-			-		
4-Nitroaniline	0.17	0.17	U	-			-		
4-Nitrophenol	0.17	0.17	U	-			-		
Acenaphthene	0.17	0.17	U	-			-		
Acenaphthylene	0.17	0.17	U	-			-		
Anthracene	0.17	0.17	U	-			-		
Benzo(a)anthracene	0.17	0.17	U	-			-		
Benzo(a)pyrene	0.13	0.13	U	-			-		
Benzo(b)fluoranthene	0.17	0.17	U	-			-		
Benzo(g,h,i)perylene	0.17	0.17	U	-			-		
Benzo(k)fluoranthene	0.17	0.17	U	-			-		
Benzoic acid	0.17	0.17	U	-			-		
Benzyl Alcohol	0.17	0.17	U	-			-		
Bis(2-chloro-1-methylethyl) ether	0.17	0.17	U	-			-		
Bis(2-chloroethoxy)methane	0.17	0.17	U	-			-		
Bis(2-chloroethyl)ether	0.17	0.17	U	-			-		
Bis(2-ethylhexyl)phthalate	0.17	0.17	U	-			-		
Butyl benzyl phthalate	0.17	0.17	U	-			-		
Carbazole	0.17	0.17	U	-			-		
Chrysene	0.17	0.17	U	-			-		
Di-n-butyl phthalate	0.17	0.17	U	-			-		
Di-n-octyl phthalate	0.17	0.17	U	-			-		
Dibenz(a,h)anthracene	0.13	0.13	U	-			-		
Dibenzofuran	0.17	0.17	U	-			-		
Diethyl phthalate	0.17	0.17	U	-			-		
Dimethyl phthalate	0.17	0.17	U	-			-		
Fluoranthene	0.17	0.17	U	-			-		
Fluorene	0.17	0.17	U	-			-		
Hexachlorobenzene	0.17	0.17	U	-			-		
Hexachlorobutadiene	0.17	0.17	U	-			-		
Hexachloroethane	0.17	0.17	U	-			-		
Indeno(1,2,3-cd)pyrene	0.17	0.17	U	-			-		
Isophorone	0.17	0.17	U	-			-		
n-Nitroso-di-n-propylamine	0.17	0.17	U	-			-		
n-Nitrosodimethylamine	0.02	0.02	UJ	-			-		
n-Nitrosodiphenylamine	0.17	0.17	U	-			-		
Naphthalene	0.17	0.17	U	-			-		
Nitrobenzene	0.17	0.17	U	-			-		
Pentachlorophenol	0.17	0.17	U	-			-		
Phenanthrene	0.17	0.17	U	-			-		
Phenol	0.17	0.17	U	-			-		
Pyrene	0.17	0.17	U	-			-		
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	-			0.075	0.075	U	0.075	0.075	U
1,3-Dinitrobenzene	-			0.075	0.075	U	0.075	0.075	U
2,4,6-Trinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2,4-Dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2,6-Dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2-Nitrotoluene	-			0.075	0.075	U	0.075	0.075	U
3-Nitrotoluene	-			0.075	0.075	U	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
4-Nitrotoluene	-			0.075	0.075	U	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	-			0.075	0.075	U	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	-			0.075	0.075	U	0.075	0.075	U
Nitrobenzene	-			0.075	0.075	U	0.075	0.075	U
Nitroglycerin	-			0.15	0.15	U	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	-			0.075	0.075	U	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	-			0.25	0.25	U	0.25	0.25	U
Polychlorinated Biphenyls (mg/kg)									
Aroclor 1016	0.02	0.02	U	-			-		
Aroclor 1221	0.02	0.02	U	-			-		
Aroclor 1232	0.0098	0.0098	U	-			-		
Aroclor 1242	0.0098	0.0098	U	-			-		
Aroclor 1248	0.0098	0.0098	U	-			-		
Aroclor 1254	0.0098	0.0098	U	-			-		
Aroclor 1260	0.0098	0.0098	U	-			-		
Dioxins/Furans (mg/kg)									
Octachlorodibenzofuran (OCDF)	0.00000019	0.00000019	U	-			-		
Octachlorodibenzo-p-dioxin (OCDD)	0.0000012	0.0000012	U	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.000000036	0.000000036	U	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	0.00000048	0.00000048	J	-			-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.000000045	0.000000045	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000049	0.000000049	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000042	0.000000042	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000047	0.000000047	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000022	0.000000022	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.000000061	0.000000061	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000043	0.000000043	U	-			-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.000000053	0.000000053	U	-			-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.000000055	0.000000055	U	-			-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000051	0.000000051	U	-			-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.000000039	0.000000039	U	-			-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.00000033	0.00000033	J	-			-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.000000091	0.000000091	U	-			-		

TABLE B-B8
ANALYTICAL RESULTS FOR GRID B8
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	B8			B8			B8		
Sample Name	P3IF-BA-GRID-B008			P3IF-SS-IS-SO-B008			P3IF-SS-IS-SO-B508		
Date Collected	June 12, 2023			June 12, 2023			June 12, 2023		
Metals (mg/kg)									
Aluminum	-			10000	4		9800	4	
Antimony	-			0.14	0.15	J	0.18	0.15	J
Arsenic	-			1.3	0.3		1.4	0.3	
Barium	-			140	0.2		130	0.2	
Beryllium	-			0.42	0.3	J	0.41	0.3	J
Cadmium	-			0.2	0.08		0.18	0.08	
Calcium (Ca)	-			46000	15		44000	15	
Chromium	-			9.7	0.2		9.1	0.2	
Cobalt	-			3.9	0.08		3.9	0.08	
Copper	-			45	0.2		33	0.2	
Iron (Fe)	-			8600	8		8700	8	
Lead	-			8.6	0.05		8.7	0.05	
Magnesium (Mg)	-			6600	5		6800	5	
Manganese (Mn)	-			320	0.08		320	0.08	
Mercury	-			0.041	0.041	U	0.041	0.041	U
Nickel	-			10	0.2		10	0.2	
Potassium (K)	-			1800	8		1700	8	
Selenium	-			0.91	0.1		0.97	0.1	
Silver	-			0.042	0.05	J	0.036	0.05	J
Sodium (Na)	-			58	8		53	8	
Thallium	-			0.06	0.05	J	0.057	0.05	J
Vanadium	-			13	0.1		12	0.1	
Zinc	-			18	1.5		17	1.5	
Other Parameters (mg/kg)									
Cyanide (CN-)	0.32	0.32	U	-			-		
Nitrate	2	2	U	-			-		
Perchlorate	0.0041	0.0041	U	-			-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-B8
ANALYTICAL RESULTS FOR GRID B8
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	B8		
Sample Name	P3IF-SS-IS-SO-B608		
Date Collected	June 12, 2023		
	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)			
1,1,1,2-Tetrachloroethane	-		
1,1,1-Trichloroethane	-		
1,1,2,2-Tetrachloroethane	-		
1,1,2-Trichloroethane	-		
1,1-Dichloroethane	-		
1,1-Dichloroethene	-		
1,1-Dichloropropene	-		
1,2,3-Trichlorobenzene	-		
1,2,3-Trichloropropane	-		
1,2,4-Trichlorobenzene	-		
1,2,4-Trimethylbenzene	-		
1,2-Dibromo-3-chloropropane	-		
1,2-Dibromoethane	-		
1,2-Dichlorobenzene	-		
1,2-Dichloroethane	-		
1,2-Dichloropropane	-		
1,3,5-Trimethylbenzene	-		
1,3-Dichlorobenzene	-		
1,3-Dichloropropane	-		
1,4-Dichlorobenzene	-		
2,2-Dichloropropane	-		
2-Butanone	-		
2-Chlorotoluene	-		
2-Hexanone	-		
4-Chlorotoluene	-		
4-Methyl-2-pentanone	-		
Acetone	-		
Benzene	-		
Bromobenzene	-		
Bromochloromethane	-		
Bromodichloromethane	-		
Bromoform	-		
Bromomethane	-		
Carbon disulfide	-		
Carbon tetrachloride	-		
Chlorobenzene	-		
Chloroethane	-		
Chloroform	-		
Chloromethane	-		
cis-1,2-Dichloroethene	-		
cis-1,3-Dichloropropene	-		
Dibromochloromethane	-		
Dibromomethane	-		
Dichlorodifluoromethane	-		
Ethylbenzene	-		
Hexachlorobutadiene	-		
Isopropylbenzene	-		
m+p-Xylene	-		
Methyl Tertiary Butyl Ether	-		
Methylene chloride	-		
n-Butylbenzene	-		
n-Propylbenzene	-		
Naphthalene	-		
o-Xylene	-		
4-Isopropyltoluene	-		
sec-Butylbenzene	-		
Styrene	-		
tert-Butylbenzene	-		
Tetrachloroethene	-		
Toluene	-		
trans-1,2-Dichloroethene	-		
trans-1,3-Dichloropropene	-		
Trichloroethene	-		
Trichlorofluoromethane	-		
Vinyl chloride	-		
Semivolatile Organic Compounds (mg/kg)			
1,2,4-Trichlorobenzene	-		
1,2-Dichlorobenzene	-		
1,3-Dichlorobenzene	-		
1,4-Dichlorobenzene	-		
2,4,5-Trichlorophenol	-		
2,4,6-Trichlorophenol	-		
2,4-Dichlorophenol	-		
2,4-Dimethylphenol	-		
2,4-Dinitrophenol	-		
2,4-Dinitrotoluene	-		
2,6-Dinitrotoluene	-		
2-Chloronaphthalene	-		
2-Chlorophenol	-		
2-Methylnaphthalene	-		
2-Methylphenol	-		
2-Nitroaniline	-		
2-Nitrophenol	-		
3,3-Dichlorobenzidine	-		
3-Nitroaniline	-		
4,6-Dinitro-2-methylphenol	-		
4-Bromophenyl-phenylether	-		
4-Chloro-3-methylphenol	-		
4-Chloroaniline	-		

TABLE B-B8
ANALYTICAL RESULTS FOR GRID B8
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	B8		
Sample Name	P3IF-SS-IS-SO-B608		
Date Collected	June 12, 2023		
Semivolatile Organic Compounds (mg/kg), continued			
4-Chlorophenyl-phenylether	-		
4-Nitroaniline	-		
4-Nitrophenol	-		
Acenaphthene	-		
Acenaphthylene	-		
Anthracene	-		
Benzo(a)anthracene	-		
Benzo(a)pyrene	-		
Benzo(b)fluoranthene	-		
Benzo(g,h,i)perylene	-		
Benzo(k)fluoranthene	-		
Benzoic acid	-		
Benzyl Alcohol	-		
Bis(2-chloro-1-methylethyl) ether	-		
Bis(2-chloroethoxy)methane	-		
Bis(2-chloroethyl)ether	-		
Bis(2-ethylhexyl)phthalate	-		
Butyl benzyl phthalate	-		
Carbazole	-		
Chrysene	-		
Di-n-butyl phthalate	-		
Di-n-octyl phthalate	-		
Dibenz(a,h)anthracene	-		
Dibenzofuran	-		
Diethyl phthalate	-		
Dimethyl phthalate	-		
Fluoranthene	-		
Fluorene	-		
Hexachlorobenzene	-		
Hexachlorobutadiene	-		
Hexachloroethane	-		
Indeno(1,2,3-cd)pyrene	-		
Isophorone	-		
n-Nitroso-di-n-propylamine	-		
n-Nitrosodimethylamine	-		
n-Nitrosodiphenylamine	-		
Naphthalene	-		
Nitrobenzene	-		
Pentachlorophenol	-		
Phenanthrene	-		
Phenol	-		
Pyrene	-		
Explosives (mg/kg)			
1,3,5-Trinitrobenzene	0.075	0.075	U
1,3-Dinitrobenzene	0.075	0.075	U
2,4,6-Trinitrotoluene	0.075	0.075	U
2,4-Dinitrotoluene	0.075	0.075	U
2,6-Dinitrotoluene	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	0.075	0.075	U
2-Nitrotoluene	0.075	0.075	U
3-Nitrotoluene	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	0.075	0.075	U
4-Nitrotoluene	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	U
Nitrobenzene	0.075	0.075	U
Nitroglycerin	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	0.25	0.25	U
Polychlorinated Biphenyls (mg/kg)			
Aroclor 1016	-		
Aroclor 1221	-		
Aroclor 1232	-		
Aroclor 1242	-		
Aroclor 1248	-		
Aroclor 1254	-		
Aroclor 1260	-		
Dioxins/Furans (mg/kg)			
Octachlorodibenzofuran (OCDF)	-		
Octachlorodibenzo-p-dioxin (OCDD)	-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	-		

TABLE B-B8
ANALYTICAL RESULTS FOR GRID B8
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	B8		
Sample Name	P3IF-SS-IS-SO-B608		
Date Collected	June 12, 2023		
Metals (mg/kg)			
Aluminum	9100	4	
Antimony	0.12	0.15	J
Arsenic	1.3	0.3	
Barium	140	0.2	
Beryllium	0.37	0.3	J
Cadmium	0.18	0.08	
Calcium (Ca)	38000	15	
Chromium	8.7	0.2	
Cobalt	3.6	0.08	
Copper	31	0.2	
Iron (Fe)	8200	8	
Lead	7.9	0.05	
Magnesium (Mg)	6000	5	
Manganese (Mn)	290	0.08	
Mercury	0.04	0.04	U
Nickel	9.6	0.2	
Potassium (K)	1600	8	
Selenium	0.82	0.1	
Silver	0.043	0.05	J
Sodium (Na)	51	8	
Thallium	0.049	0.05	J
Vanadium	12	0.1	
Zinc	17	1.5	
Other Parameters (mg/kg)			
Cyanide (CN-)	-		
Nitrate	-		
Perchlorate	-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-B20
ANALYTICAL RESULTS FOR GRID B20
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	B20			B20			B20		
Sample Name	P3IF-BA-GRID-B020			P3IF-SS-IS-SO-B020			P3IF-SS-IS-SO-B520		
Date Collected	June 12, 2023			June 12, 2023			June 12, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)									
1,1,1,2-Tetrachloroethane	0.002	0.002	U	-			-		
1,1,1-Trichloroethane	0.002	0.002	U	-			-		
1,1,2,2-Tetrachloroethane	0.002	0.002	U	-			-		
1,1,2-Trichloroethane	0.002	0.002	U	-			-		
1,1-Dichloroethane	0.002	0.002	U	-			-		
1,1-Dichloroethene	0.002	0.002	U	-			-		
1,1-Dichloropropene	0.002	0.002	U	-			-		
1,2,3-Trichlorobenzene	0.002	0.002	U	-			-		
1,2,3-Trichloropropane	0.0049	0.0049	U	-			-		
1,2,4-Trichlorobenzene	0.002	0.002	U	-			-		
1,2,4-Trimethylbenzene	0.002	0.002	U	-			-		
1,2-Dibromo-3-chloropropane	0.0049	0.0049	U	-			-		
1,2-Dibromoethane	0.002	0.002	U	-			-		
1,2-Dichlorobenzene	0.002	0.002	U	-			-		
1,2-Dichloroethane	0.002	0.002	U	-			-		
1,2-Dichloropropane	0.002	0.002	U	-			-		
1,3,5-Trimethylbenzene	0.002	0.002	U	-			-		
1,3-Dichlorobenzene	0.002	0.002	U	-			-		
1,3-Dichloropropane	0.002	0.002	U	-			-		
1,4-Dichlorobenzene	0.002	0.002	U	-			-		
2,2-Dichloropropane	0.002	0.002	U	-			-		
2-Butanone	0.027	0.0029		-			-		
2-Chlorotoluene	0.002	0.002	U	-			-		
2-Hexanone	0.002	0.002	U	-			-		
4-Chlorotoluene	0.002	0.002	U	-			-		
4-Methyl-2-pentanone	0.002	0.002	U	-			-		
Acetone	0.19	0.0049		-			-		
Benzene	0.002	0.002	U	-			-		
Bromobenzene	0.002	0.002	U	-			-		
Bromochloromethane	0.002	0.002	U	-			-		
Bromodichloromethane	0.002	0.002	U	-			-		
Bromoform	0.002	0.002	U	-			-		
Bromomethane	0.002	0.002	U	-			-		
Carbon disulfide	0.002	0.002	U	-			-		
Carbon tetrachloride	0.002	0.002	U	-			-		
Chlorobenzene	0.002	0.002	U	-			-		
Chloroethane	0.002	0.002	U	-			-		
Chloroform	0.002	0.002	U	-			-		
Chloromethane	0.0049	0.0049	U	-			-		
cis-1,2-Dichloroethene	0.002	0.002	U	-			-		
cis-1,3-Dichloropropene	0.002	0.002	U	-			-		
Dibromochloromethane	0.002	0.002	U	-			-		
Dibromomethane	0.002	0.002	U	-			-		
Dichlorodifluoromethane	0.002	0.002	U	-			-		
Ethylbenzene	0.002	0.002	U	-			-		
Hexachlorobutadiene	0.002	0.002	U	-			-		
Isopropylbenzene	0.002	0.002	U	-			-		
m+p-Xylene	0.0049	0.0049	U	-			-		
Methyl Tertiary Butyl Ether	0.002	0.002	U	-			-		
Methylene chloride	0.0098	0.0098	U	-			-		
n-Butylbenzene	0.002	0.002	U	-			-		
n-Propylbenzene	0.002	0.002	U	-			-		
Naphthalene	0.002	0.002	U	-			-		
o-Xylene	0.0024	0.0024	U	-			-		
4-Isopropyltoluene	0.002	0.002	U	-			-		
sec-Butylbenzene	0.002	0.002	U	-			-		
Styrene	0.002	0.002	U	-			-		
tert-Butylbenzene	0.002	0.002	U	-			-		
Tetrachloroethene	0.002	0.002	U	-			-		
Toluene	0.002	0.002	U	-			-		
trans-1,2-Dichloroethene	0.002	0.002	U	-			-		
trans-1,3-Dichloropropene	0.002	0.002	U	-			-		
Trichloroethene	0.002	0.002	U	-			-		
Trichlorofluoromethane	0.002	0.002	U	-			-		
Vinyl chloride	0.002	0.002	U	-			-		
Semivolatile Organic Compounds (mg/kg)									
1,2,4-Trichlorobenzene	0.17	0.17	U	-			-		
1,2-Dichlorobenzene	0.17	0.17	U	-			-		
1,3-Dichlorobenzene	0.17	0.17	U	-			-		
1,4-Dichlorobenzene	0.17	0.17	U	-			-		
2,4,5-Trichlorophenol	0.17	0.17	U	-			-		
2,4,6-Trichlorophenol	0.17	0.17	U	-			-		
2,4-Dichlorophenol	0.17	0.17	U	-			-		
2,4-Dimethylphenol	0.17	0.17	U	-			-		
2,4-Dinitrophenol	0.17	0.17	U	-			-		
2,4-Dinitrotoluene	0.17	0.17	U	-			-		
2,6-Dinitrotoluene	0.17	0.17	U	-			-		
2-Chloronaphthalene	0.17	0.17	U	-			-		
2-Chlorophenol	0.17	0.17	U	-			-		
2-Methylnaphthalene	0.17	0.17	U	-			-		
2-Methylphenol	0.17	0.17	U	-			-		
2-Nitroaniline	0.17	0.17	U	-			-		
2-Nitrophenol	0.17	0.17	U	-			-		
3,3-Dichlorobenzidine	0.17	0.17	U	-			-		
3-Nitroaniline	0.17	0.17	U	-			-		
4,6-Dinitro-2-methylphenol	0.17	0.17	U	-			-		
4-Bromophenyl-phenylether	0.17	0.17	U	-			-		
4-Chloro-3-methylphenol	0.17	0.17	U	-			-		
4-Chloroaniline	0.17	0.17	U	-			-		

TABLE B-B20
ANALYTICAL RESULTS FOR GRID B20
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	B20			B20			B20		
Sample Name	P3IF-BA-GRID-B020			P3IF-SS-IS-SO-B020			P3IF-SS-IS-SO-B520		
Date Collected	June 12, 2023			June 12, 2023			June 12, 2023		
Semivolatile Organic Compounds (mg/kg), continued									
4-Chlorophenyl-phenylether	0.17	0.17	U	-			-		
4-Nitroaniline	0.17	0.17	U	-			-		
4-Nitrophenol	0.17	0.17	U	-			-		
Acenaphthene	0.17	0.17	U	-			-		
Acenaphthylene	0.17	0.17	U	-			-		
Anthracene	0.17	0.17	U	-			-		
Benzo(a)anthracene	0.17	0.17	U	-			-		
Benzo(a)pyrene	0.14	0.14	U	-			-		
Benzo(b)fluoranthene	0.17	0.17	U	-			-		
Benzo(g,h,i)perylene	0.17	0.17	U	-			-		
Benzo(k)fluoranthene	0.17	0.17	U	-			-		
Benzoic acid	0.17	0.17	U	-			-		
Benzyl Alcohol	0.17	0.17	U	-			-		
Bis(2-chloro-1-methylethyl) ether	0.17	0.17	U	-			-		
Bis(2-chloroethoxy)methane	0.17	0.17	U	-			-		
Bis(2-chloroethyl)ether	0.17	0.17	U	-			-		
Bis(2-ethylhexyl)phthalate	0.17	0.17	U	-			-		
Butyl benzyl phthalate	0.17	0.17	U	-			-		
Carbazole	0.17	0.17	U	-			-		
Chrysene	0.17	0.17	U	-			-		
Di-n-butyl phthalate	0.17	0.17	U	-			-		
Di-n-octyl phthalate	0.17	0.17	U	-			-		
Dibenz(a,h)anthracene	0.14	0.14	U	-			-		
Dibenzofuran	0.17	0.17	U	-			-		
Diethyl phthalate	0.17	0.17	U	-			-		
Dimethyl phthalate	0.17	0.17	U	-			-		
Fluoranthene	0.17	0.17	U	-			-		
Fluorene	0.17	0.17	U	-			-		
Hexachlorobenzene	0.17	0.17	U	-			-		
Hexachlorobutadiene	0.17	0.17	U	-			-		
Hexachloroethane	0.17	0.17	U	-			-		
Indeno(1,2,3-cd)pyrene	0.17	0.17	U	-			-		
Isophorone	0.17	0.17	U	-			-		
n-Nitroso-di-n-propylamine	0.17	0.17	U	-			-		
n-Nitrosodimethylamine	0.021	0.021	UJ	-			-		
n-Nitrosodiphenylamine	0.17	0.17	U	-			-		
Naphthalene	0.17	0.17	U	-			-		
Nitrobenzene	0.17	0.17	U	-			-		
Pentachlorophenol	0.17	0.17	U	-			-		
Phenanthrene	0.17	0.17	U	-			-		
Phenol	0.17	0.17	U	-			-		
Pyrene	0.17	0.17	U	-			-		
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	-			0.075	0.075	U	0.075	0.075	U
1,3-Dinitrobenzene	-			0.075	0.075	U	0.075	0.075	U
2,4,6-Trinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2,4-Dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2,6-Dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2-Nitrotoluene	-			0.075	0.075	U	0.075	0.075	U
3-Nitrotoluene	-			0.075	0.075	U	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
4-Nitrotoluene	-			0.075	0.075	U	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	-			0.075	0.075	U	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	-			0.075	0.075	U	0.075	0.075	U
Nitrobenzene	-			0.075	0.075	U	0.075	0.075	U
Nitroglycerin	-			0.15	0.15	U	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	-			0.075	0.075	U	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	-			0.25	0.25	U	0.25	0.25	U
Polychlorinated Biphenyls (mg/kg)									
Aroclor 1016	0.02	0.02	U	-			-		
Aroclor 1221	0.02	0.02	U	-			-		
Aroclor 1232	0.0099	0.0099	U	-			-		
Aroclor 1242	0.0099	0.0099	U	-			-		
Aroclor 1248	0.0099	0.0099	U	-			-		
Aroclor 1254	0.0099	0.0099	U	-			-		
Aroclor 1260	0.0099	0.0099	U	-			-		
Dioxins/Furans (mg/kg)									
Octachlorodibenzofuran (OCDF)	0.00000022	0.00000022	U	-			-		
Octachlorodibenzo-p-dioxin (OCDD)	0.0000041	0.0000041	J	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.00000012	0.00000012	U	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	0.00000067	0.00000067	U	-			-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.00000015	0.00000015	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000046	0.000000046	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000045	0.000000045	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000045	0.000000045	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000041	0.000000041	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.000000062	0.000000062	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000042	0.000000042	U	-			-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.000000056	0.000000056	U	-			-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.000000067	0.000000067	U	-			-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000043	0.000000042	J	-			-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.000000067	0.000000067	U	-			-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.00000034	0.00000034	J	-			-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.000000042	0.000000042	U	-			-		

TABLE B-B20
ANALYTICAL RESULTS FOR GRID B20
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	B20			B20			B20		
Sample Name	P3IF-BA-GRID-B020			P3IF-SS-IS-SO-B020			P3IF-SS-IS-SO-B520		
Date Collected	June 12, 2023			June 12, 2023			June 12, 2023		
Metals (mg/kg)									
Aluminum	-			15000	4		14000	4	
Antimony	-			0.15	0.15	U	0.086	0.15	J
Arsenic	-			1.2	0.3		1.4	0.3	
Barium	-			310	0.2		310	0.2	
Beryllium	-			0.68	0.3	J	0.71	0.3	J
Cadmium	-			0.24	0.08		0.31	0.08	
Calcium (Ca)	-			15000	15		18000	15	
Chromium	-			9.2	0.2		8.4	0.2	
Cobalt	-			3.8	0.08		3.7	0.08	
Copper	-			36	0.2		28	0.2	
Iron (Fe)	-			8400	8		8500	8	
Lead	-			8.6	0.05		8.6	0.05	
Magnesium (Mg)	-			5100	5		4900	5	
Manganese (Mn)	-			420	0.08		450	0.08	
Mercury	-			0.015	0.042	J	0.017	0.042	J
Nickel	-			7.6	0.2		7.3	0.2	
Potassium (K)	-			1300	8		1300	8	
Selenium	-			1	0.1		1.1	0.1	
Silver	-			0.027	0.05	J	0.022	0.05	J
Sodium (Na)	-			110	8		150	8	
Thallium	-			0.057	0.05	J	0.16	0.05	
Vanadium	-			12	0.1		12	0.1	
Zinc	-			26	1.5		19	1.5	
Other Parameters (mg/kg)									
Cyanide (CN-)	0.32	0.32	U	-			-		
Nitrate	5.3	2.2	J	-			-		
Perchlorate	0.0042	0.0042	U	-			-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-B20
ANALYTICAL RESULTS FOR GRID B20
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	B20		
Sample Name	P3IF-SS-IS-SO-B620		
Date Collected	June 12, 2023		
	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)			
1,1,1,2-Tetrachloroethane	-		
1,1,1-Trichloroethane	-		
1,1,2,2-Tetrachloroethane	-		
1,1,2-Trichloroethane	-		
1,1-Dichloroethane	-		
1,1-Dichloroethene	-		
1,1-Dichloropropene	-		
1,2,3-Trichlorobenzene	-		
1,2,3-Trichloropropane	-		
1,2,4-Trichlorobenzene	-		
1,2,4-Trimethylbenzene	-		
1,2-Dibromo-3-chloropropane	-		
1,2-Dibromoethane	-		
1,2-Dichlorobenzene	-		
1,2-Dichloroethane	-		
1,2-Dichloropropane	-		
1,3,5-Trimethylbenzene	-		
1,3-Dichlorobenzene	-		
1,3-Dichloropropane	-		
1,4-Dichlorobenzene	-		
2,2-Dichloropropane	-		
2-Butanone	-		
2-Chlorotoluene	-		
2-Hexanone	-		
4-Chlorotoluene	-		
4-Methyl-2-pentanone	-		
Acetone	-		
Benzene	-		
Bromobenzene	-		
Bromochloromethane	-		
Bromodichloromethane	-		
Bromoform	-		
Bromomethane	-		
Carbon disulfide	-		
Carbon tetrachloride	-		
Chlorobenzene	-		
Chloroethane	-		
Chloroform	-		
Chloromethane	-		
cis-1,2-Dichloroethene	-		
cis-1,3-Dichloropropene	-		
Dibromochloromethane	-		
Dibromomethane	-		
Dichlorodifluoromethane	-		
Ethylbenzene	-		
Hexachlorobutadiene	-		
Isopropylbenzene	-		
m+p-Xylene	-		
Methyl Tertiary Butyl Ether	-		
Methylene chloride	-		
n-Butylbenzene	-		
n-Propylbenzene	-		
Naphthalene	-		
o-Xylene	-		
4-Isopropyltoluene	-		
sec-Butylbenzene	-		
Styrene	-		
tert-Butylbenzene	-		
Tetrachloroethene	-		
Toluene	-		
trans-1,2-Dichloroethene	-		
trans-1,3-Dichloropropene	-		
Trichloroethene	-		
Trichlorofluoromethane	-		
Vinyl chloride	-		
Semivolatile Organic Compounds (mg/kg)			
1,2,4-Trichlorobenzene	-		
1,2-Dichlorobenzene	-		
1,3-Dichlorobenzene	-		
1,4-Dichlorobenzene	-		
2,4,5-Trichlorophenol	-		
2,4,6-Trichlorophenol	-		
2,4-Dichlorophenol	-		
2,4-Dimethylphenol	-		
2,4-Dinitrophenol	-		
2,4-Dinitrotoluene	-		
2,6-Dinitrotoluene	-		
2-Chloronaphthalene	-		
2-Chlorophenol	-		
2-Methylnaphthalene	-		
2-Methylphenol	-		
2-Nitroaniline	-		
2-Nitrophenol	-		
3,3-Dichlorobenzidine	-		
3-Nitroaniline	-		
4,6-Dinitro-2-methylphenol	-		
4-Bromophenyl-phenylether	-		
4-Chloro-3-methylphenol	-		
4-Chloroaniline	-		

TABLE B-B20
ANALYTICAL RESULTS FOR GRID B20
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	B20		
Sample Name	P3IF-SS-IS-SO-B620		
Date Collected	June 12, 2023		
Semivolatile Organic Compounds (mg/kg), continued			
4-Chlorophenyl-phenylether	-		
4-Nitroaniline	-		
4-Nitrophenol	-		
Acenaphthene	-		
Acenaphthylene	-		
Anthracene	-		
Benzo(a)anthracene	-		
Benzo(a)pyrene	-		
Benzo(b)fluoranthene	-		
Benzo(g,h,i)perylene	-		
Benzo(k)fluoranthene	-		
Benzoic acid	-		
Benzyl Alcohol	-		
Bis(2-chloro-1-methylethyl) ether	-		
Bis(2-chloroethoxy)methane	-		
Bis(2-chloroethyl)ether	-		
Bis(2-ethylhexyl)phthalate	-		
Butyl benzyl phthalate	-		
Carbazole	-		
Chrysene	-		
Di-n-butyl phthalate	-		
Di-n-octyl phthalate	-		
Dibenz(a,h)anthracene	-		
Dibenzofuran	-		
Diethyl phthalate	-		
Dimethyl phthalate	-		
Fluoranthene	-		
Fluorene	-		
Hexachlorobenzene	-		
Hexachlorobutadiene	-		
Hexachloroethane	-		
Indeno(1,2,3-cd)pyrene	-		
Isophorone	-		
n-Nitroso-di-n-propylamine	-		
n-Nitrosodimethylamine	-		
n-Nitrosodiphenylamine	-		
Naphthalene	-		
Nitrobenzene	-		
Pentachlorophenol	-		
Phenanthrene	-		
Phenol	-		
Pyrene	-		
Explosives (mg/kg)			
1,3,5-Trinitrobenzene	0.075	0.075	U
1,3-Dinitrobenzene	0.075	0.075	U
2,4,6-Trinitrotoluene	0.075	0.075	U
2,4-Dinitrotoluene	0.075	0.075	U
2,6-Dinitrotoluene	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	0.075	0.075	U
2-Nitrotoluene	0.075	0.075	U
3-Nitrotoluene	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	0.075	0.075	U
4-Nitrotoluene	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	U
Nitrobenzene	0.075	0.075	U
Nitroglycerin	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	0.25	0.25	U
Polychlorinated Biphenyls (mg/kg)			
Aroclor 1016	-		
Aroclor 1221	-		
Aroclor 1232	-		
Aroclor 1242	-		
Aroclor 1248	-		
Aroclor 1254	-		
Aroclor 1260	-		
Dioxins/Furans (mg/kg)			
Octachlorodibenzofuran (OCDF)	-		
Octachlorodibenzo-p-dioxin (OCDD)	-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	-		

TABLE B-B20
ANALYTICAL RESULTS FOR GRID B20
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	B20		
Sample Name	P3IF-SS-IS-SO-B620		
Date Collected	June 12, 2023		
Metals (mg/kg)			
Aluminum	17000	4	
Antimony	0.15	0.15	U
Arsenic	1.3	0.3	
Barium	300	0.2	
Beryllium	0.72	0.3	J
Cadmium	0.24	0.08	
Calcium (Ca)	18000	15	
Chromium	10	0.2	
Cobalt	4.1	0.08	
Copper	38	0.2	
Iron (Fe)	9200	8	
Lead	8.5	0.05	
Magnesium (Mg)	5600	5	
Manganese (Mn)	430	0.08	
Mercury	0.016	0.041	J
Nickel	8.4	0.2	
Potassium (K)	1600	8	
Selenium	1.2	0.1	
Silver	0.021	0.05	J
Sodium (Na)	150	8	
Thallium	0.052	0.05	J
Vanadium	14	0.1	
Zinc	33	1.5	
Other Parameters (mg/kg)			
Cyanide (CN-)	-		
Nitrate	-		
Perchlorate	-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-B21
ANALYTICAL RESULTS FOR GRID B21
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	B21			B21			B21		
Sample Name	P3IF-BA-GRID-B021			P3IF-SS-IS-SO-B021			P3IF-SS-IS-SO-B521		
Date Collected	June 12, 2023			June 12, 2023			June 12, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)									
1,1,1,2-Tetrachloroethane	0.0019	0.0019	U	-			-		
1,1,1-Trichloroethane	0.0019	0.0019	U	-			-		
1,1,2,2-Tetrachloroethane	0.0019	0.0019	U	-			-		
1,1,2-Trichloroethane	0.0019	0.0019	U	-			-		
1,1-Dichloroethane	0.0019	0.0019	U	-			-		
1,1-Dichloroethene	0.0019	0.0019	U	-			-		
1,1-Dichloropropene	0.0019	0.0019	U	-			-		
1,2,3-Trichlorobenzene	0.0019	0.0019	U	-			-		
1,2,3-Trichloropropane	0.0047	0.0047	U	-			-		
1,2,4-Trichlorobenzene	0.0019	0.0019	U	-			-		
1,2,4-Trimethylbenzene	0.0019	0.0019	U	-			-		
1,2-Dibromo-3-chloropropane	0.0047	0.0047	U	-			-		
1,2-Dibromoethane	0.0019	0.0019	U	-			-		
1,2-Dichlorobenzene	0.0019	0.0019	U	-			-		
1,2-Dichloroethane	0.0019	0.0019	U	-			-		
1,2-Dichloropropane	0.0019	0.0019	U	-			-		
1,3,5-Trimethylbenzene	0.0019	0.0019	U	-			-		
1,3-Dichlorobenzene	0.0019	0.0019	U	-			-		
1,3-Dichloropropane	0.0019	0.0019	U	-			-		
1,4-Dichlorobenzene	0.0019	0.0019	U	-			-		
2,2-Dichloropropane	0.0019	0.0019	U	-			-		
2-Butanone	0.031	0.0028		-			-		
2-Chlorotoluene	0.0019	0.0019	U	-			-		
2-Hexanone	0.0019	0.0019	U	-			-		
4-Chlorotoluene	0.0019	0.0019	U	-			-		
4-Methyl-2-pentanone	0.0019	0.0019	U	-			-		
Acetone	0.3	0.0047		-			-		
Benzene	0.0019	0.0019	U	-			-		
Bromobenzene	0.0019	0.0019	U	-			-		
Bromochloromethane	0.0019	0.0019	U	-			-		
Bromodichloromethane	0.0019	0.0019	U	-			-		
Bromoform	0.0019	0.0019	U	-			-		
Bromomethane	0.0019	0.0019	U	-			-		
Carbon disulfide	0.0019	0.0019	U	-			-		
Carbon tetrachloride	0.0019	0.0019	U	-			-		
Chlorobenzene	0.0019	0.0019	U	-			-		
Chloroethane	0.0019	0.0019	U	-			-		
Chloroform	0.0019	0.0019	U	-			-		
Chloromethane	0.0047	0.0047	U	-			-		
cis-1,2-Dichloroethene	0.0019	0.0019	U	-			-		
cis-1,3-Dichloropropene	0.0019	0.0019	U	-			-		
Dibromochloromethane	0.0019	0.0019	U	-			-		
Dibromomethane	0.0019	0.0019	U	-			-		
Dichlorodifluoromethane	0.0019	0.0019	U	-			-		
Ethylbenzene	0.0019	0.0019	U	-			-		
Hexachlorobutadiene	0.0019	0.0019	U	-			-		
Isopropylbenzene	0.0019	0.0019	U	-			-		
m+p-Xylene	0.0047	0.0047	U	-			-		
Methyl Tertiary Butyl Ether	0.0019	0.0019	U	-			-		
Methylene chloride	0.0095	0.0095	U	-			-		
n-Butylbenzene	0.0019	0.0019	U	-			-		
n-Propylbenzene	0.0019	0.0019	U	-			-		
Naphthalene	0.0019	0.0019	U	-			-		
o-Xylene	0.0024	0.0024	U	-			-		
4-Isopropyltoluene	0.0019	0.0019	U	-			-		
sec-Butylbenzene	0.0019	0.0019	U	-			-		
Styrene	0.0019	0.0019	U	-			-		
tert-Butylbenzene	0.0019	0.0019	U	-			-		
Tetrachloroethene	0.0019	0.0019	U	-			-		
Toluene	0.0019	0.0019	U	-			-		
trans-1,2-Dichloroethene	0.0019	0.0019	U	-			-		
trans-1,3-Dichloropropene	0.0019	0.0019	U	-			-		
Trichloroethene	0.0019	0.0019	U	-			-		
Trichlorofluoromethane	0.0019	0.0019	U	-			-		
Vinyl chloride	0.0019	0.0019	U	-			-		
Semivolatile Organic Compounds (mg/kg)									
1,2,4-Trichlorobenzene	0.17	0.17	U	-			-		
1,2-Dichlorobenzene	0.17	0.17	U	-			-		
1,3-Dichlorobenzene	0.17	0.17	U	-			-		
1,4-Dichlorobenzene	0.17	0.17	U	-			-		
2,4,5-Trichlorophenol	0.17	0.17	U	-			-		
2,4,6-Trichlorophenol	0.17	0.17	U	-			-		
2,4-Dichlorophenol	0.17	0.17	U	-			-		
2,4-Dimethylphenol	0.17	0.17	U	-			-		
2,4-Dinitrophenol	0.17	0.17	U	-			-		
2,4-Dinitrotoluene	0.17	0.17	U	-			-		
2,6-Dinitrotoluene	0.17	0.17	U	-			-		
2-Chloronaphthalene	0.17	0.17	U	-			-		
2-Chlorophenol	0.17	0.17	U	-			-		
2-Methylnaphthalene	0.17	0.17	U	-			-		
2-Methylphenol	0.17	0.17	U	-			-		
2-Nitroaniline	0.17	0.17	U	-			-		
2-Nitrophenol	0.17	0.17	U	-			-		
3,3-Dichlorobenzidine	0.17	0.17	U	-			-		
3-Nitroaniline	0.17	0.17	U	-			-		
4,6-Dinitro-2-methylphenol	0.17	0.17	U	-			-		
4-Bromophenyl-phenylether	0.17	0.17	U	-			-		
4-Chloro-3-methylphenol	0.17	0.17	U	-			-		
4-Chloroaniline	0.17	0.17	U	-			-		

TABLE B-B21
ANALYTICAL RESULTS FOR GRID B21
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	B21			B21			B21		
Sample Name	P3IF-BA-GRID-B021			P3IF-SS-IS-SO-B021			P3IF-SS-IS-SO-B521		
Date Collected	June 12, 2023			June 12, 2023			June 12, 2023		
Semivolatile Organic Compounds (mg/kg), continued									
4-Chlorophenyl-phenylether	0.17	0.17	U	-			-		
4-Nitroaniline	0.17	0.17	U	-			-		
4-Nitrophenol	0.17	0.17	U	-			-		
Acenaphthene	0.17	0.17	U	-			-		
Acenaphthylene	0.17	0.17	U	-			-		
Anthracene	0.17	0.17	U	-			-		
Benzo(a)anthracene	0.17	0.17	U	-			-		
Benzo(a)pyrene	0.13	0.13	U	-			-		
Benzo(b)fluoranthene	0.17	0.17	U	-			-		
Benzo(g,h,i)perylene	0.17	0.17	U	-			-		
Benzo(k)fluoranthene	0.17	0.17	U	-			-		
Benzoic acid	0.17	0.17	U	-			-		
Benzyl Alcohol	0.17	0.17	U	-			-		
Bis(2-chloro-1-methylethyl) ether	0.17	0.17	U	-			-		
Bis(2-chloroethoxy)methane	0.17	0.17	U	-			-		
Bis(2-chloroethyl)ether	0.17	0.17	U	-			-		
Bis(2-ethylhexyl)phthalate	0.17	0.17	U	-			-		
Butyl benzyl phthalate	0.17	0.17	U	-			-		
Carbazole	0.17	0.17	U	-			-		
Chrysene	0.17	0.17	U	-			-		
Di-n-butyl phthalate	0.17	0.17	U	-			-		
Di-n-octyl phthalate	0.17	0.17	U	-			-		
Dibenz(a,h)anthracene	0.13	0.13	U	-			-		
Dibenzofuran	0.17	0.17	U	-			-		
Diethyl phthalate	0.17	0.17	U	-			-		
Dimethyl phthalate	0.17	0.17	U	-			-		
Fluoranthene	0.17	0.17	U	-			-		
Fluorene	0.17	0.17	U	-			-		
Hexachlorobenzene	0.17	0.17	U	-			-		
Hexachlorobutadiene	0.17	0.17	U	-			-		
Hexachloroethane	0.17	0.17	U	-			-		
Indeno(1,2,3-cd)pyrene	0.17	0.17	U	-			-		
Isophorone	0.17	0.17	U	-			-		
n-Nitroso-di-n-propylamine	0.17	0.17	U	-			-		
n-Nitrosodimethylamine	0.02	0.02	UJ	-			-		
n-Nitrosodiphenylamine	0.17	0.17	U	-			-		
Naphthalene	0.17	0.17	U	-			-		
Nitrobenzene	0.17	0.17	U	-			-		
Pentachlorophenol	0.17	0.17	U	-			-		
Phenanthrene	0.17	0.17	U	-			-		
Phenol	0.17	0.17	U	-			-		
Pyrene	0.17	0.17	U	-			-		
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	-			0.075	0.075	U	0.075	0.075	U
1,3-Dinitrobenzene	-			0.075	0.075	U	0.075	0.075	U
2,4,6-Trinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2,4-Dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2,6-Dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2-Nitrotoluene	-			0.075	0.075	U	0.075	0.075	U
3-Nitrotoluene	-			0.075	0.075	U	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
4-Nitrotoluene	-			0.075	0.075	U	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	-			0.075	0.075	U	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	-			0.075	0.075	U	0.075	0.075	U
Nitrobenzene	-			0.075	0.075	U	0.075	0.075	U
Nitroglycerin	-			0.15	0.15	U	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	-			0.075	0.075	U	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	-			0.25	0.25	U	0.25	0.25	U
Polychlorinated Biphenyls (mg/kg)									
Aroclor 1016	0.02	0.02	U	-			-		
Aroclor 1221	0.02	0.02	U	-			-		
Aroclor 1232	0.01	0.01	U	-			-		
Aroclor 1242	0.01	0.01	U	-			-		
Aroclor 1248	0.01	0.01	U	-			-		
Aroclor 1254	0.01	0.01	U	-			-		
Aroclor 1260	0.01	0.01	U	-			-		
Dioxins/Furans (mg/kg)									
Octachlorodibenzofuran (OCDF)	0.00000014	0.00000014	U	-			-		
Octachlorodibenzo-p-dioxin (OCDD)	0.0000019	0.0000019	U	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.000000077	0.000000077	U	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	0.00000039	0.00000039	U	-			-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.000000098	0.000000098	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000047	0.000000047	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000063	0.000000063	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000046	0.000000046	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000079	0.000000079	J	-			-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.000000035	0.000000035	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000064	0.000000064	U	-			-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.000000052	0.000000052	U	-			-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.000000064	0.000000064	U	-			-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000049	0.000000049	U	-			-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.000000053	0.000000053	U	-			-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.0000004	0.0000004	J	-			-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.000000043	0.000000043	U	-			-		

TABLE B-B21
ANALYTICAL RESULTS FOR GRID B21
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	B21			B21			B21		
Sample Name	P3IF-BA-GRID-B021			P3IF-SS-IS-SO-B021			P3IF-SS-IS-SO-B521		
Date Collected	June 12, 2023			June 12, 2023			June 12, 2023		
Metals (mg/kg)									
Aluminum	-			19000	4		22000	4	
Antimony	-			0.15	0.15	U	0.15	0.15	U
Arsenic	-			1.6	0.3		1.5	0.3	
Barium	-			400	0.2		400	0.2	
Beryllium	-			0.74	0.3	J	0.79	0.3	J
Cadmium	-			0.19	0.08	J	0.48	0.08	J
Calcium (Ca)	-			11000	15		14000	15	
Chromium	-			9.8	0.2		11	0.2	
Cobalt	-			4.5	0.08		4.7	0.08	
Copper	-			27	0.2		39	0.2	
Iron (Fe)	-			9100	8		9900	8	
Lead	-			8.5	0.05		8.9	0.05	
Magnesium (Mg)	-			6000	5		6700	5	
Manganese (Mn)	-			570	0.08		540	0.08	
Mercury	-			0.023	0.04	J	0.024	0.042	J
Nickel	-			7.8	0.2		8.4	0.2	
Potassium (K)	-			1400	8		1600	8	
Selenium	-			1.3	0.1		1.5	0.1	
Silver	-			0.025	0.05	J	0.024	0.05	J
Sodium (Na)	-			30	8		36	8	
Thallium	-			0.052	0.05	J	0.061	0.05	J
Vanadium	-			16	0.1		17	0.1	
Zinc	-			22	1.5		23	1.5	
Other Parameters (mg/kg)									
Cyanide (CN-)	0.32	0.32	U	-			-		
Nitrate	2.3	2	J	-			-		
Perchlorate	0.0042	0.0042	U	-			-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-B21
ANALYTICAL RESULTS FOR GRID B21
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	B21		
Sample Name	P3IF-SS-IS-SO-B621		
Date Collected	June 12, 2023		
	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)			
1,1,1,2-Tetrachloroethane	-		
1,1,1-Trichloroethane	-		
1,1,2,2-Tetrachloroethane	-		
1,1,2-Trichloroethane	-		
1,1-Dichloroethane	-		
1,1-Dichloroethene	-		
1,1-Dichloropropene	-		
1,2,3-Trichlorobenzene	-		
1,2,3-Trichloropropane	-		
1,2,4-Trichlorobenzene	-		
1,2,4-Trimethylbenzene	-		
1,2-Dibromo-3-chloropropane	-		
1,2-Dibromoethane	-		
1,2-Dichlorobenzene	-		
1,2-Dichloroethane	-		
1,2-Dichloropropane	-		
1,3,5-Trimethylbenzene	-		
1,3-Dichlorobenzene	-		
1,3-Dichloropropane	-		
1,4-Dichlorobenzene	-		
2,2-Dichloropropane	-		
2-Butanone	-		
2-Chlorotoluene	-		
2-Hexanone	-		
4-Chlorotoluene	-		
4-Methyl-2-pentanone	-		
Acetone	-		
Benzene	-		
Bromobenzene	-		
Bromochloromethane	-		
Bromodichloromethane	-		
Bromoform	-		
Bromomethane	-		
Carbon disulfide	-		
Carbon tetrachloride	-		
Chlorobenzene	-		
Chloroethane	-		
Chloroform	-		
Chloromethane	-		
cis-1,2-Dichloroethene	-		
cis-1,3-Dichloropropene	-		
Dibromochloromethane	-		
Dibromomethane	-		
Dichlorodifluoromethane	-		
Ethylbenzene	-		
Hexachlorobutadiene	-		
Isopropylbenzene	-		
m+p-Xylene	-		
Methyl Tertiary Butyl Ether	-		
Methylene chloride	-		
n-Butylbenzene	-		
n-Propylbenzene	-		
Naphthalene	-		
o-Xylene	-		
4-Isopropyltoluene	-		
sec-Butylbenzene	-		
Styrene	-		
tert-Butylbenzene	-		
Tetrachloroethene	-		
Toluene	-		
trans-1,2-Dichloroethene	-		
trans-1,3-Dichloropropene	-		
Trichloroethene	-		
Trichlorofluoromethane	-		
Vinyl chloride	-		
Semivolatile Organic Compounds (mg/kg)			
1,2,4-Trichlorobenzene	-		
1,2-Dichlorobenzene	-		
1,3-Dichlorobenzene	-		
1,4-Dichlorobenzene	-		
2,4,5-Trichlorophenol	-		
2,4,6-Trichlorophenol	-		
2,4-Dichlorophenol	-		
2,4-Dimethylphenol	-		
2,4-Dinitrophenol	-		
2,4-Dinitrotoluene	-		
2,6-Dinitrotoluene	-		
2-Chloronaphthalene	-		
2-Chlorophenol	-		
2-Methylnaphthalene	-		
2-Methylphenol	-		
2-Nitroaniline	-		
2-Nitrophenol	-		
3,3-Dichlorobenzidine	-		
3-Nitroaniline	-		
4,6-Dinitro-2-methylphenol	-		
4-Bromophenyl-phenylether	-		
4-Chloro-3-methylphenol	-		
4-Chloroaniline	-		

TABLE B-B21
ANALYTICAL RESULTS FOR GRID B21
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	B21		
Sample Name	P3IF-SS-IS-SO-B621		
Date Collected	June 12, 2023		
Semivolatile Organic Compounds (mg/kg), continued			
4-Chlorophenyl-phenylether	-		
4-Nitroaniline	-		
4-Nitrophenol	-		
Acenaphthene	-		
Acenaphthylene	-		
Anthracene	-		
Benzo(a)anthracene	-		
Benzo(a)pyrene	-		
Benzo(b)fluoranthene	-		
Benzo(g,h,i)perylene	-		
Benzo(k)fluoranthene	-		
Benzoic acid	-		
Benzyl Alcohol	-		
Bis(2-chloro-1-methylethyl) ether	-		
Bis(2-chloroethoxy)methane	-		
Bis(2-chloroethyl)ether	-		
Bis(2-ethylhexyl)phthalate	-		
Butyl benzyl phthalate	-		
Carbazole	-		
Chrysene	-		
Di-n-butyl phthalate	-		
Di-n-octyl phthalate	-		
Dibenz(a,h)anthracene	-		
Dibenzofuran	-		
Diethyl phthalate	-		
Dimethyl phthalate	-		
Fluoranthene	-		
Fluorene	-		
Hexachlorobenzene	-		
Hexachlorobutadiene	-		
Hexachloroethane	-		
Indeno(1,2,3-cd)pyrene	-		
Isophorone	-		
n-Nitroso-di-n-propylamine	-		
n-Nitrosodimethylamine	-		
n-Nitrosodiphenylamine	-		
Naphthalene	-		
Nitrobenzene	-		
Pentachlorophenol	-		
Phenanthrene	-		
Phenol	-		
Pyrene	-		
Explosives (mg/kg)			
1,3,5-Trinitrobenzene	0.075	0.075	U
1,3-Dinitrobenzene	0.075	0.075	U
2,4,6-Trinitrotoluene	0.075	0.075	U
2,4-Dinitrotoluene	0.075	0.075	U
2,6-Dinitrotoluene	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	0.075	0.075	U
2-Nitrotoluene	0.075	0.075	U
3-Nitrotoluene	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	0.075	0.075	U
4-Nitrotoluene	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	U
Nitrobenzene	0.075	0.075	U
Nitroglycerin	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	0.25	0.25	U
Polychlorinated Biphenyls (mg/kg)			
Aroclor 1016	-		
Aroclor 1221	-		
Aroclor 1232	-		
Aroclor 1242	-		
Aroclor 1248	-		
Aroclor 1254	-		
Aroclor 1260	-		
Dioxins/Furans (mg/kg)			
Octachlorodibenzofuran (OCDF)	-		
Octachlorodibenzo-p-dioxin (OCDD)	-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	-		

TABLE B-B21
ANALYTICAL RESULTS FOR GRID B21
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	B21		
Sample Name	P3IF-SS-IS-SO-B621		
Date Collected	June 12, 2023		
Metals (mg/kg)			
Aluminum	20000	4	
Antimony	0.15	0.15	J
Arsenic	1.6	0.3	
Barium	360	0.2	
Beryllium	0.77	0.3	J
Cadmium	0.22	0.08	
Calcium (Ca)	12000	15	
Chromium	10	0.2	
Cobalt	4.6	0.08	
Copper	30	0.2	
Iron (Fe)	9800	8	
Lead	8.8	0.05	
Magnesium (Mg)	6300	5	
Manganese (Mn)	510	0.08	
Mercury	0.022	0.041	J
Nickel	8.2	0.2	
Potassium (K)	1600	8	
Selenium	1.2	0.1	
Silver	0.03	0.05	J
Sodium (Na)	31	8	
Thallium	0.065	0.05	J
Vanadium	16	0.1	
Zinc	23	1.5	
Other Parameters (mg/kg)			
Cyanide (CN-)	-		
Nitrate	-		
Perchlorate	-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-B22
ANALYTICAL RESULTS FOR GRID B22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	B22			B22			B22		
Sample Name	P3IF-BA-GRID-B022			P3IF-SS-IS-SO-B022			P3IF-SS-IS-SO-B522		
Date Collected	June 12, 2023			June 12, 2023			June 12, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)									
1,1,1,2-Tetrachloroethane	0.0042	0.0042	U	-			-		
1,1,1-Trichloroethane	0.0042	0.0042	U	-			-		
1,1,2,2-Tetrachloroethane	0.0042	0.0042	U	-			-		
1,1,2-Trichloroethane	0.0042	0.0042	U	-			-		
1,1-Dichloroethane	0.0042	0.0042	U	-			-		
1,1-Dichloroethene	0.0042	0.0042	U	-			-		
1,1-Dichloropropene	0.0042	0.0042	U	-			-		
1,2,3-Trichlorobenzene	0.0042	0.0042	U	-			-		
1,2,3-Trichloropropane	0.01	0.01	U	-			-		
1,2,4-Trichlorobenzene	0.0042	0.0042	U	-			-		
1,2,4-Trimethylbenzene	0.0042	0.0042	U	-			-		
1,2-Dibromo-3-chloropropane	0.01	0.01	U	-			-		
1,2-Dibromoethane	0.0042	0.0042	U	-			-		
1,2-Dichlorobenzene	0.0042	0.0042	U	-			-		
1,2-Dichloroethane	0.0042	0.0042	U	-			-		
1,2-Dichloropropane	0.0042	0.0042	U	-			-		
1,3,5-Trimethylbenzene	0.0042	0.0042	U	-			-		
1,3-Dichlorobenzene	0.0042	0.0042	U	-			-		
1,3-Dichloropropane	0.0042	0.0042	U	-			-		
1,4-Dichlorobenzene	0.0042	0.0042	U	-			-		
2,2-Dichloropropane	0.0042	0.0042	U	-			-		
2-Butanone	0.14	0.0062	J	-			-		
2-Chlorotoluene	0.0042	0.0042	U	-			-		
2-Hexanone	0.0042	0.0042	U	-			-		
4-Chlorotoluene	0.0042	0.0042	U	-			-		
4-Methyl-2-pentanone	0.0042	0.0042	U	-			-		
Acetone	3.1	0.01	J	-			-		
Benzene	0.0042	0.0042	U	-			-		
Bromobenzene	0.0042	0.0042	U	-			-		
Bromochloromethane	0.0042	0.0042	U	-			-		
Bromodichloromethane	0.0042	0.0042	U	-			-		
Bromoform	0.0042	0.0042	U	-			-		
Bromomethane	0.0042	0.0042	U	-			-		
Carbon disulfide	0.0042	0.0042	U	-			-		
Carbon tetrachloride	0.0042	0.0042	U	-			-		
Chlorobenzene	0.0042	0.0042	U	-			-		
Chloroethane	0.0042	0.0042	U	-			-		
Chloroform	0.0042	0.0042	U	-			-		
Chloromethane	0.01	0.01	U	-			-		
cis-1,2-Dichloroethene	0.0042	0.0042	U	-			-		
cis-1,3-Dichloropropene	0.0042	0.0042	U	-			-		
Dibromochloromethane	0.0042	0.0042	U	-			-		
Dibromomethane	0.0042	0.0042	U	-			-		
Dichlorodifluoromethane	0.0042	0.0042	U	-			-		
Ethylbenzene	0.0042	0.0042	U	-			-		
Hexachlorobutadiene	0.0042	0.0042	U	-			-		
Isopropylbenzene	0.0042	0.0042	U	-			-		
m+p-Xylene	0.01	0.01	U	-			-		
Methyl Tertiary Butyl Ether	0.0042	0.0042	U	-			-		
Methylene chloride	0.021	0.021	U	-			-		
n-Butylbenzene	0.0042	0.0042	U	-			-		
n-Propylbenzene	0.0042	0.0042	U	-			-		
Naphthalene	0.0042	0.0042	U	-			-		
o-Xylene	0.0052	0.0052	U	-			-		
4-Isopropyltoluene	0.0042	0.0042	U	-			-		
sec-Butylbenzene	0.0042	0.0042	U	-			-		
Styrene	0.0042	0.0042	U	-			-		
tert-Butylbenzene	0.0042	0.0042	U	-			-		
Tetrachloroethene	0.0042	0.0042	U	-			-		
Toluene	0.016	0.0042	J	-			-		
trans-1,2-Dichloroethene	0.0042	0.0042	U	-			-		
trans-1,3-Dichloropropene	0.0042	0.0042	U	-			-		
Trichloroethene	0.0042	0.0042	U	-			-		
Trichlorofluoromethane	0.0042	0.0042	U	-			-		
Vinyl chloride	0.0042	0.0042	U	-			-		
Semivolatile Organic Compounds (mg/kg)									
1,2,4-Trichlorobenzene	0.17	0.17	U	-			-		
1,2-Dichlorobenzene	0.17	0.17	U	-			-		
1,3-Dichlorobenzene	0.17	0.17	U	-			-		
1,4-Dichlorobenzene	0.17	0.17	U	-			-		
2,4,5-Trichlorophenol	0.17	0.17	U	-			-		
2,4,6-Trichlorophenol	0.17	0.17	U	-			-		
2,4-Dichlorophenol	0.17	0.17	U	-			-		
2,4-Dimethylphenol	0.17	0.17	U	-			-		
2,4-Dinitrophenol	0.17	0.17	U	-			-		
2,4-Dinitrotoluene	0.17	0.17	U	-			-		
2,6-Dinitrotoluene	0.17	0.17	U	-			-		
2-Chloronaphthalene	0.17	0.17	U	-			-		
2-Chlorophenol	0.17	0.17	U	-			-		
2-Methylnaphthalene	0.17	0.17	U	-			-		
2-Methylphenol	0.17	0.17	U	-			-		
2-Nitroaniline	0.17	0.17	U	-			-		
2-Nitrophenol	0.17	0.17	U	-			-		
3,3-Dichlorobenzidine	0.17	0.17	U	-			-		
3-Nitroaniline	0.17	0.17	U	-			-		
4,6-Dinitro-2-methylphenol	0.17	0.17	U	-			-		
4-Bromophenyl-phenylether	0.17	0.17	U	-			-		
4-Chloro-3-methylphenol	0.17	0.17	U	-			-		
4-Chloroaniline	0.17	0.17	U	-			-		

TABLE B-B22
ANALYTICAL RESULTS FOR GRID B22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	B22			B22			B22		
Sample Name	P3IF-BA-GRID-B022			P3IF-SS-IS-SO-B022			P3IF-SS-IS-SO-B522		
Date Collected	June 12, 2023			June 12, 2023			June 12, 2023		
Semivolatile Organic Compounds (mg/kg), continued									
4-Chlorophenyl-phenylether	0.17	0.17	U	-			-		
4-Nitroaniline	0.17	0.17	U	-			-		
4-Nitrophenol	0.17	0.17	U	-			-		
Acenaphthene	0.17	0.17	U	-			-		
Acenaphthylene	0.17	0.17	U	-			-		
Anthracene	0.17	0.17	U	-			-		
Benzo(a)anthracene	0.17	0.17	U	-			-		
Benzo(a)pyrene	0.13	0.13	U	-			-		
Benzo(b)fluoranthene	0.17	0.17	U	-			-		
Benzo(g,h,i)perylene	0.17	0.17	U	-			-		
Benzo(k)fluoranthene	0.17	0.17	U	-			-		
Benzoic acid	0.17	0.17	U	-			-		
Benzyl Alcohol	0.17	0.17	U	-			-		
Bis(2-chloro-1-methylethyl) ether	0.17	0.17	U	-			-		
Bis(2-chloroethoxy)methane	0.17	0.17	U	-			-		
Bis(2-chloroethyl)ether	0.17	0.17	U	-			-		
Bis(2-ethylhexyl)phthalate	0.17	0.17	U	-			-		
Butyl benzyl phthalate	0.17	0.17	U	-			-		
Carbazole	0.17	0.17	U	-			-		
Chrysene	0.17	0.17	U	-			-		
Di-n-butyl phthalate	0.072	0.17	J	-			-		
Di-n-octyl phthalate	0.17	0.17	U	-			-		
Dibenz(a,h)anthracene	0.13	0.13	U	-			-		
Dibenzofuran	0.17	0.17	U	-			-		
Diethyl phthalate	0.17	0.17	U	-			-		
Dimethyl phthalate	0.17	0.17	U	-			-		
Fluoranthene	0.17	0.17	U	-			-		
Fluorene	0.17	0.17	U	-			-		
Hexachlorobenzene	0.17	0.17	U	-			-		
Hexachlorobutadiene	0.17	0.17	U	-			-		
Hexachloroethane	0.17	0.17	U	-			-		
Indeno(1,2,3-cd)pyrene	0.17	0.17	U	-			-		
Isophorone	0.17	0.17	U	-			-		
n-Nitrosodimethylamine	0.021	0.021	UJ	-			-		
n-Nitroso-di-n-propylamine	0.17	0.17	U	-			-		
n-Nitrosodiphenylamine	0.17	0.17	U	-			-		
Naphthalene	0.17	0.17	U	-			-		
Nitrobenzene	0.17	0.17	U	-			-		
Pentachlorophenol	0.17	0.17	U	-			-		
Phenanthrene	0.17	0.17	U	-			-		
Phenol	0.17	0.17	U	-			-		
Pyrene	0.17	0.17	U	-			-		
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	-			0.075	0.075	U	0.075	0.075	UJ
1,3-Dinitrobenzene	-			0.075	0.075	U	0.075	0.075	UJ
2,4,6-Trinitrotoluene	-			0.075	0.075	U	0.075	0.075	UJ
2,4-Dinitrotoluene	-			0.075	0.075	U	0.075	0.075	UJ
2,6-Dinitrotoluene	-			0.075	0.075	U	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	-			0.075	0.075	U	0.075	0.075	UJ
2-Nitrotoluene	-			0.075	0.075	U	0.075	0.075	UJ
3-Nitrotoluene	-			0.075	0.075	U	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	-			0.075	0.075	U	0.075	0.075	UJ
4-Nitrotoluene	-			0.075	0.075	U	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	-			0.075	0.075	U	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	-			0.075	0.075	U	0.075	0.075	UJ
Nitrobenzene	-			0.075	0.075	U	0.075	0.075	UJ
Nitroglycerin	-			0.15	0.15	U	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	-			0.075	0.075	U	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	-			0.25	0.25	U	0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)									
Aroclor 1016	0.02	0.02	U	-			-		
Aroclor 1221	0.02	0.02	U	-			-		
Aroclor 1232	0.0099	0.0099	U	-			-		
Aroclor 1242	0.0099	0.0099	U	-			-		
Aroclor 1248	0.0099	0.0099	U	-			-		
Aroclor 1254	0.0099	0.0099	U	-			-		
Aroclor 1260	0.0099	0.0099	U	-			-		
Dioxins/Furans (mg/kg)									
Octachlorodibenzofuran (OCDF)	0.00000038	0.00000038	J	-			-		
Octachlorodibenzo-p-dioxin (OCDD)	0.000005	0.000005	J	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.00000027	0.00000027	U	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	0.00000013	0.00000013	U	-			-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.00000012	0.00000012	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000089	0.000000089	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000071	0.000000071	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000086	0.000000086	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000071	0.000000071	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.00000011	0.00000011	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000072	0.000000072	U	-			-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.000000092	0.000000092	U	-			-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.000000088	0.000000088	U	-			-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000082	0.000000082	U	-			-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.000000094	0.000000094	U	-			-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.00000028	0.00000028	U	-			-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.000000087	0.000000087	U	-			-		

TABLE B-B22
ANALYTICAL RESULTS FOR GRID B22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	B22			B22			B22		
Sample Name	P3IF-BA-GRID-B022			P3IF-SS-IS-SO-B022			P3IF-SS-IS-SO-B522		
Date Collected	June 12, 2023			June 12, 2023			June 12, 2023		
Metals (mg/kg)									
Aluminum	-			20000	4		19000	4	
Antimony	-			0.25	0.15		0.15	0.15	U
Arsenic	-			1.6	0.3		1.5	0.3	
Barium	-			260	0.2		250	0.2	
Beryllium	-			0.84	0.3	J	0.84	0.3	J
Cadmium	-			0.36	0.08		0.3	0.08	
Calcium (Ca)	-			15000	15		15000	15	
Chromium	-			11	0.2		10	0.2	
Cobalt	-			4.6	0.08		4.2	0.08	
Copper	-			49	0.2		33	0.2	
Iron (Fe)	-			11000	8		10000	8	
Lead	-			12	0.05		11	0.05	
Magnesium (Mg)	-			6200	5		5900	5	
Manganese (Mn)	-			530	0.08		500	0.08	
Mercury	-			0.022	0.042	J	0.019	0.042	J
Nickel	-			9.3	0.2		8.5	0.2	
Potassium (K)	-			2100	8		2000	8	
Selenium	-			1.3	0.1		1.3	0.1	
Silver	-			0.026	0.05	J	0.05	0.05	U
Sodium (Na)	-			46	8		42	8	
Thallium	-			0.091	0.05	J	0.074	0.05	J
Vanadium	-			12	0.1		12	0.1	
Zinc	-			24	1.5		22	1.5	
Other Parameters (mg/kg)									
Cyanide (CN-)	0.32	0.32	U	-			-		
Nitrate	5.7	2	J	-			-		
Perchlorate	0.0042	0.0042	U	-			-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-B22
ANALYTICAL RESULTS FOR GRID B22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	B22		
Sample Name	P3IF-SS-IS-SO-B622		
Date Collected	June 12, 2023		
	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)			
1,1,1,2-Tetrachloroethane	-		
1,1,1-Trichloroethane	-		
1,1,2,2-Tetrachloroethane	-		
1,1,2-Trichloroethane	-		
1,1-Dichloroethane	-		
1,1-Dichloroethene	-		
1,1-Dichloropropene	-		
1,2,3-Trichlorobenzene	-		
1,2,3-Trichloropropane	-		
1,2,4-Trichlorobenzene	-		
1,2,4-Trimethylbenzene	-		
1,2-Dibromo-3-chloropropane	-		
1,2-Dibromoethane	-		
1,2-Dichlorobenzene	-		
1,2-Dichloroethane	-		
1,2-Dichloropropane	-		
1,3,5-Trimethylbenzene	-		
1,3-Dichlorobenzene	-		
1,3-Dichloropropane	-		
1,4-Dichlorobenzene	-		
2,2-Dichloropropane	-		
2-Butanone	-		
2-Chlorotoluene	-		
2-Hexanone	-		
4-Chlorotoluene	-		
4-Methyl-2-pentanone	-		
Acetone	-		
Benzene	-		
Bromobenzene	-		
Bromochloromethane	-		
Bromodichloromethane	-		
Bromoform	-		
Bromomethane	-		
Carbon disulfide	-		
Carbon tetrachloride	-		
Chlorobenzene	-		
Chloroethane	-		
Chloroform	-		
Chloromethane	-		
cis-1,2-Dichloroethene	-		
cis-1,3-Dichloropropene	-		
Dibromochloromethane	-		
Dibromomethane	-		
Dichlorodifluoromethane	-		
Ethylbenzene	-		
Hexachlorobutadiene	-		
Isopropylbenzene	-		
m+p-Xylene	-		
Methyl Tertiary Butyl Ether	-		
Methylene chloride	-		
n-Butylbenzene	-		
n-Propylbenzene	-		
Naphthalene	-		
o-Xylene	-		
4-Isopropyltoluene	-		
sec-Butylbenzene	-		
Styrene	-		
tert-Butylbenzene	-		
Tetrachloroethene	-		
Toluene	-		
trans-1,2-Dichloroethene	-		
trans-1,3-Dichloropropene	-		
Trichloroethene	-		
Trichlorofluoromethane	-		
Vinyl chloride	-		
Semivolatile Organic Compounds (mg/kg)			
1,2,4-Trichlorobenzene	-		
1,2-Dichlorobenzene	-		
1,3-Dichlorobenzene	-		
1,4-Dichlorobenzene	-		
2,4,5-Trichlorophenol	-		
2,4,6-Trichlorophenol	-		
2,4-Dichlorophenol	-		
2,4-Dimethylphenol	-		
2,4-Dinitrophenol	-		
2,4-Dinitrotoluene	-		
2,6-Dinitrotoluene	-		
2-Chloronaphthalene	-		
2-Chlorophenol	-		
2-Methylnaphthalene	-		
2-Methylphenol	-		
2-Nitroaniline	-		
2-Nitrophenol	-		
3,3-Dichlorobenzidine	-		
3-Nitroaniline	-		
4,6-Dinitro-2-methylphenol	-		
4-Bromophenyl-phenylether	-		
4-Chloro-3-methylphenol	-		
4-Chloroaniline	-		

TABLE B-B22
ANALYTICAL RESULTS FOR GRID B22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	B22		
Sample Name	P3IF-SS-IS-SO-B622		
Date Collected	June 12, 2023		
Semivolatile Organic Compounds (mg/kg), continued			
4-Chlorophenyl-phenylether	-		
4-Nitroaniline	-		
4-Nitrophenol	-		
Acenaphthene	-		
Acenaphthylene	-		
Anthracene	-		
Benzo(a)anthracene	-		
Benzo(a)pyrene	-		
Benzo(b)fluoranthene	-		
Benzo(g,h,i)perylene	-		
Benzo(k)fluoranthene	-		
Benzoic acid	-		
Benzyl Alcohol	-		
Bis(2-chloro-1-methylethyl) ether	-		
Bis(2-chloroethoxy)methane	-		
Bis(2-chloroethyl)ether	-		
Bis(2-ethylhexyl)phthalate	-		
Butyl benzyl phthalate	-		
Carbazole	-		
Chrysene	-		
Di-n-butyl phthalate	-		
Di-n-octyl phthalate	-		
Dibenz(a,h)anthracene	-		
Dibenzofuran	-		
Diethyl phthalate	-		
Dimethyl phthalate	-		
Fluoranthene	-		
Fluorene	-		
Hexachlorobenzene	-		
Hexachlorobutadiene	-		
Hexachloroethane	-		
Indeno(1,2,3-cd)pyrene	-		
Isophorone	-		
n-Nitrosodimethylamine	-		
n-Nitroso-di-n-propylamine	-		
n-Nitrosodiphenylamine	-		
Naphthalene	-		
Nitrobenzene	-		
Pentachlorophenol	-		
Phenanthrene	-		
Phenol	-		
Pyrene	-		
Explosives (mg/kg)			
1,3,5-Trinitrobenzene	0.075	0.075	U
1,3-Dinitrobenzene	0.075	0.075	U
2,4,6-Trinitrotoluene	0.075	0.075	U
2,4-Dinitrotoluene	0.075	0.075	U
2,6-Dinitrotoluene	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	0.075	0.075	U
2-Nitrotoluene	0.075	0.075	U
3-Nitrotoluene	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	0.075	0.075	U
4-Nitrotoluene	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	U
Nitrobenzene	0.075	0.075	U
Nitroglycerin	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	0.25	0.25	U
Polychlorinated Biphenyls (mg/kg)			
Aroclor 1016	-		
Aroclor 1221	-		
Aroclor 1232	-		
Aroclor 1242	-		
Aroclor 1248	-		
Aroclor 1254	-		
Aroclor 1260	-		
Dioxins/Furans (mg/kg)			
Octachlorodibenzofuran (OCDF)	-		
Octachlorodibenzo-p-dioxin (OCDD)	-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	-		

TABLE B-B22
ANALYTICAL RESULTS FOR GRID B22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	B22		
Sample Name	P3IF-SS-IS-SO-B622		
Date Collected	June 12, 2023		
Metals (mg/kg)			
Aluminum	17000	4	
Antimony	0.12	0.15	J
Arsenic	1.4	0.3	
Barium	240	0.2	
Beryllium	0.78	0.3	J
Cadmium	0.41	0.08	
Calcium (Ca)	12000	15	
Chromium	9.6	0.2	
Cobalt	3.9	0.08	
Copper	55	0.2	
Iron (Fe)	9300	8	
Lead	11	0.05	
Magnesium (Mg)	5100	5	
Manganese (Mn)	480	0.08	
Mercury	0.023	0.042	J
Nickel	8.1	0.2	
Potassium (K)	1700	8	
Selenium	1.2	0.1	
Silver	0.05	0.05	U
Sodium (Na)	36	8	
Thallium	0.065	0.05	J
Vanadium	11	0.1	
Zinc	22	1.5	
Other Parameters (mg/kg)			
Cyanide (CN-)	-		
Nitrate	-		
Perchlorate	-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-C8
ANALYTICAL RESULTS FOR GRID C8
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	C8			C8			C8		
Sample Name	P3IF-BA-GRID-C008			P3IF-SS-IS-SO-C008			P3IF-SS-IS-SO-C508		
Date Collected	June 12, 2023			June 12, 2023			June 12, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)									
1,1,1,2-Tetrachloroethane	0.0016	0.0016	U	-			-		
1,1,1-Trichloroethane	0.0016	0.0016	U	-			-		
1,1,2,2-Tetrachloroethane	0.0016	0.0016	U	-			-		
1,1,2-Trichloroethane	0.0016	0.0016	U	-			-		
1,1-Dichloroethane	0.0016	0.0016	U	-			-		
1,1-Dichloroethene	0.0016	0.0016	U	-			-		
1,1-Dichloropropene	0.0016	0.0016	U	-			-		
1,2,3-Trichlorobenzene	0.0016	0.0016	U	-			-		
1,2,3-Trichloropropane	0.004	0.004	U	-			-		
1,2,4-Trichlorobenzene	0.0016	0.0016	U	-			-		
1,2,4-Trimethylbenzene	0.0016	0.0016	U	-			-		
1,2-Dibromo-3-chloropropane	0.004	0.004	U	-			-		
1,2-Dibromoethane	0.0016	0.0016	U	-			-		
1,2-Dichlorobenzene	0.0016	0.0016	U	-			-		
1,2-Dichloroethane	0.0016	0.0016	U	-			-		
1,2-Dichloropropane	0.0016	0.0016	U	-			-		
1,3,5-Trimethylbenzene	0.0016	0.0016	U	-			-		
1,3-Dichlorobenzene	0.0016	0.0016	U	-			-		
1,3-Dichloropropane	0.0016	0.0016	U	-			-		
1,4-Dichlorobenzene	0.0016	0.0016	U	-			-		
2,2-Dichloropropane	0.0016	0.0016	U	-			-		
2-Butanone	0.0024	0.0024	U	-			-		
2-Chlorotoluene	0.0016	0.0016	U	-			-		
2-Hexanone	0.0016	0.0016	U	-			-		
4-Chlorotoluene	0.0016	0.0016	U	-			-		
4-Methyl-2-pentanone	0.0016	0.0016	U	-			-		
Acetone	0.037	0.004		-			-		
Benzene	0.0025	0.0016	J	-			-		
Bromobenzene	0.0016	0.0016	U	-			-		
Bromochloromethane	0.0016	0.0016	U	-			-		
Bromodichloromethane	0.0016	0.0016	U	-			-		
Bromoform	0.0016	0.0016	U	-			-		
Bromomethane	0.0016	0.0016	U	-			-		
Carbon disulfide	0.0016	0.0016	U	-			-		
Carbon tetrachloride	0.0016	0.0016	U	-			-		
Chlorobenzene	0.0016	0.0016	U	-			-		
Chloroethane	0.0016	0.0016	U	-			-		
Chloroform	0.0016	0.0016	U	-			-		
Chloromethane	0.004	0.004	U	-			-		
cis-1,2-Dichloroethene	0.0016	0.0016	U	-			-		
cis-1,3-Dichloropropene	0.0016	0.0016	U	-			-		
Dibromochloromethane	0.0016	0.0016	U	-			-		
Dibromomethane	0.0016	0.0016	U	-			-		
Dichlorodifluoromethane	0.0016	0.0016	U	-			-		
Ethylbenzene	0.0016	0.0016	U	-			-		
Hexachlorobutadiene	0.0016	0.0016	U	-			-		
Isopropylbenzene	0.0016	0.0016	U	-			-		
m+p-Xylene	0.004	0.004	U	-			-		
Methyl Tertiary Butyl Ether	0.0016	0.0016	U	-			-		
Methylene chloride	0.0081	0.0081	U	-			-		
n-Butylbenzene	0.0016	0.0016	U	-			-		
n-Propylbenzene	0.0016	0.0016	U	-			-		
Naphthalene	0.0016	0.0016	U	-			-		
o-Xylene	0.002	0.002	U	-			-		
4-Isopropyltoluene	0.0016	0.0016	U	-			-		
sec-Butylbenzene	0.0016	0.0016	U	-			-		
Styrene	0.0016	0.0016	U	-			-		
tert-Butylbenzene	0.0016	0.0016	U	-			-		
Tetrachloroethene	0.0016	0.0016	U	-			-		
Toluene	0.0022	0.0016	J	-			-		
trans-1,2-Dichloroethene	0.0016	0.0016	U	-			-		
trans-1,3-Dichloropropene	0.0016	0.0016	U	-			-		
Trichloroethene	0.0016	0.0016	U	-			-		
Trichlorofluoromethane	0.0016	0.0016	U	-			-		
Vinyl chloride	0.0016	0.0016	U	-			-		
Semivolatile Organic Compounds (mg/kg)									
1,2,4-Trichlorobenzene	0.17	0.17	U	-			-		
1,2-Dichlorobenzene	0.17	0.17	U	-			-		
1,3-Dichlorobenzene	0.17	0.17	U	-			-		
1,4-Dichlorobenzene	0.17	0.17	U	-			-		
2,4,5-Trichlorophenol	0.17	0.17	U	-			-		
2,4,6-Trichlorophenol	0.17	0.17	U	-			-		
2,4-Dichlorophenol	0.17	0.17	U	-			-		
2,4-Dimethylphenol	0.17	0.17	U	-			-		
2,4-Dinitrophenol	0.17	0.17	U	-			-		
2,4-Dinitrotoluene	0.17	0.17	U	-			-		
2,6-Dinitrotoluene	0.17	0.17	U	-			-		
2-Chloronaphthalene	0.17	0.17	U	-			-		
2-Chlorophenol	0.17	0.17	U	-			-		
2-Methylnaphthalene	0.17	0.17	U	-			-		
2-Methylphenol	0.17	0.17	U	-			-		
2-Nitroaniline	0.17	0.17	U	-			-		
2-Nitrophenol	0.17	0.17	U	-			-		
3,3-Dichlorobenzidine	0.17	0.17	U	-			-		
3-Nitroaniline	0.17	0.17	U	-			-		
4,6-Dinitro-2-methylphenol	0.17	0.17	U	-			-		
4-Bromophenyl-phenylether	0.17	0.17	U	-			-		
4-Chloro-3-methylphenol	0.17	0.17	U	-			-		
4-Chloroaniline	0.17	0.17	U	-			-		

TABLE B-C8
ANALYTICAL RESULTS FOR GRID C8
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	C8			C8			C8		
Sample Name	P3IF-BA-GRID-C008			P3IF-SS-IS-SO-C008			P3IF-SS-IS-SO-C508		
Date Collected	June 12, 2023			June 12, 2023			June 12, 2023		
Semivolatile Organic Compounds (mg/kg), continued									
4-Chlorophenyl-phenylether	0.17	0.17	U	-			-		
4-Nitroaniline	0.17	0.17	U	-			-		
4-Nitrophenol	0.17	0.17	U	-			-		
Acenaphthene	0.17	0.17	U	-			-		
Acenaphthylene	0.17	0.17	U	-			-		
Anthracene	0.17	0.17	U	-			-		
Benzo(a)anthracene	0.17	0.17	U	-			-		
Benzo(a)pyrene	0.13	0.13	U	-			-		
Benzo(b)fluoranthene	0.17	0.17	U	-			-		
Benzo(g,h,i)perylene	0.17	0.17	U	-			-		
Benzo(k)fluoranthene	0.17	0.17	U	-			-		
Benzoic acid	0.17	0.17	U	-			-		
Benzyl Alcohol	0.17	0.17	U	-			-		
Bis(2-chloro-1-methylethyl) ether	0.17	0.17	U	-			-		
Bis(2-chloroethoxy)methane	0.17	0.17	U	-			-		
Bis(2-chloroethyl)ether	0.17	0.17	U	-			-		
Bis(2-ethylhexyl)phthalate	0.17	0.17	U	-			-		
Butyl benzyl phthalate	0.17	0.17	U	-			-		
Carbazole	0.17	0.17	U	-			-		
Chrysene	0.17	0.17	U	-			-		
Di-n-butyl phthalate	0.17	0.17	U	-			-		
Di-n-octyl phthalate	0.17	0.17	U	-			-		
Dibenz(a,h)anthracene	0.13	0.13	U	-			-		
Dibenzofuran	0.17	0.17	U	-			-		
Diethyl phthalate	0.17	0.17	U	-			-		
Dimethyl phthalate	0.17	0.17	U	-			-		
Fluoranthene	0.17	0.17	U	-			-		
Fluorene	0.17	0.17	U	-			-		
Hexachlorobenzene	0.17	0.17	U	-			-		
Hexachlorobutadiene	0.17	0.17	U	-			-		
Hexachloroethane	0.17	0.17	U	-			-		
Indeno(1,2,3-cd)pyrene	0.17	0.17	U	-			-		
Isophorone	0.17	0.17	U	-			-		
n-Nitroso-di-n-propylamine	0.17	0.17	U	-			-		
n-Nitrosodimethylamine	0.02	0.02	UJ	-			-		
n-Nitrosodiphenylamine	0.17	0.17	U	-			-		
Naphthalene	0.17	0.17	U	-			-		
Nitrobenzene	0.17	0.17	U	-			-		
Pentachlorophenol	0.17	0.17	U	-			-		
Phenanthrene	0.17	0.17	U	-			-		
Phenol	0.17	0.17	U	-			-		
Pyrene	0.17	0.17	U	-			-		
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	-			0.075	0.075	U	0.075	0.075	U
1,3-Dinitrobenzene	-			0.075	0.075	U	0.075	0.075	U
2,4,6-Trinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2,4-Dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2,6-Dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2-Nitrotoluene	-			0.075	0.075	U	0.075	0.075	U
3-Nitrotoluene	-			0.075	0.075	U	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
4-Nitrotoluene	-			0.075	0.075	U	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	-			0.096	0.075	J	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	-			0.075	0.075	U	0.075	0.075	U
Nitrobenzene	-			0.075	0.075	U	0.075	0.075	U
Nitroglycerin	-			0.15	0.15	U	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	-			0.1	0.075		0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	-			0.25	0.25	U	0.25	0.25	U
Polychlorinated Biphenyls (mg/kg)									
Aroclor 1016	0.02	0.02	U	-			-		
Aroclor 1221	0.02	0.02	U	-			-		
Aroclor 1232	0.01	0.01	U	-			-		
Aroclor 1242	0.01	0.01	U	-			-		
Aroclor 1248	0.01	0.01	U	-			-		
Aroclor 1254	0.01	0.01	U	-			-		
Aroclor 1260	0.01	0.01	U	-			-		
Dioxins/Furans (mg/kg)									
Octachlorodibenzofuran (OCDF)	0.00000023	0.00000023	U	-			-		
Octachlorodibenzo-p-dioxin (OCDD)	0.0000027	0.0000027	J	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.00000004	0.00000004	U	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	0.00000059	0.00000059	U	-			-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.0000002	0.0000002	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000054	0.000000054	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000005	0.00000005	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000096	0.000000096	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000005	0.00000005	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.00000013	0.00000013	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000057	0.000000057	U	-			-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000013	0.00000013	J	-			-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.00000025	0.00000025	J	-			-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000074	0.000000074	U	-			-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.0000125	0.0000125	U	-			-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.0000001	0.0000001	U	-			-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.000000056	0.000000056	U	-			-		

TABLE B-C8
ANALYTICAL RESULTS FOR GRID C8
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	C8			C8			C8		
Sample Name	P3IF-BA-GRID-C008			P3IF-SS-IS-SO-C008			P3IF-SS-IS-SO-C508		
Date Collected	June 12, 2023			June 12, 2023			June 12, 2023		
Metals (mg/kg)									
Aluminum	-			8400	4		10000	4	
Antimony	-			0.19	0.15	J	0.29	0.15	
Arsenic	-			1.4	0.3		1.5	0.3	
Barium	-			130	0.2		140	0.2	
Beryllium	-			0.36	0.3	J	0.43	0.3	J
Cadmium	-			0.36	0.08		0.38	0.08	
Calcium (Ca)	-			37000	15		39000	15	
Chromium	-			9.7	0.2		11	0.2	
Cobalt	-			3.5	0.08		3.9	0.08	
Copper	-			72	0.2		75	0.2	
Iron (Fe)	-			8100	8		9000	8	
Lead	-			9.2	0.05		11	0.05	
Magnesium (Mg)	-			5700	5		6500	5	
Manganese (Mn)	-			300	0.08		310	0.08	
Mercury	-			0.04	0.04	U	0.018	0.041	J
Nickel	-			10	0.2		11	0.2	
Potassium (K)	-			1500	8		1900	8	
Selenium	-			0.77	0.1		0.79	0.1	
Silver	-			0.05	0.05	U	0.05	0.05	U
Sodium (Na)	-			50	8		60	8	
Thallium	-			0.048	0.05	J	0.062	0.05	J
Vanadium	-			11	0.1		14	0.1	
Zinc	-			19	1.5		21	1.5	
Other Parameters (mg/kg)									
Cyanide (CN-)	0.32	0.32	U	-			-		
Nitrate	3.9	2.2	J	-			-		
Perchlorate	0.0041	0.0041	U	-			-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-C8
ANALYTICAL RESULTS FOR GRID C8
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	C8		
Sample Name	P3IF-SS-IS-SO-C608		
Date Collected	June 12, 2023		
	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)			
1,1,1,2-Tetrachloroethane	-		
1,1,1-Trichloroethane	-		
1,1,2,2-Tetrachloroethane	-		
1,1,2-Trichloroethane	-		
1,1-Dichloroethane	-		
1,1-Dichloroethene	-		
1,1-Dichloropropene	-		
1,2,3-Trichlorobenzene	-		
1,2,3-Trichloropropane	-		
1,2,4-Trichlorobenzene	-		
1,2,4-Trimethylbenzene	-		
1,2-Dibromo-3-chloropropane	-		
1,2-Dibromoethane	-		
1,2-Dichlorobenzene	-		
1,2-Dichloroethane	-		
1,2-Dichloropropane	-		
1,3,5-Trimethylbenzene	-		
1,3-Dichlorobenzene	-		
1,3-Dichloropropane	-		
1,4-Dichlorobenzene	-		
2,2-Dichloropropane	-		
2-Butanone	-		
2-Chlorotoluene	-		
2-Hexanone	-		
4-Chlorotoluene	-		
4-Methyl-2-pentanone	-		
Acetone	-		
Benzene	-		
Bromobenzene	-		
Bromochloromethane	-		
Bromodichloromethane	-		
Bromoform	-		
Bromomethane	-		
Carbon disulfide	-		
Carbon tetrachloride	-		
Chlorobenzene	-		
Chloroethane	-		
Chloroform	-		
Chloromethane	-		
cis-1,2-Dichloroethene	-		
cis-1,3-Dichloropropene	-		
Dibromochloromethane	-		
Dibromomethane	-		
Dichlorodifluoromethane	-		
Ethylbenzene	-		
Hexachlorobutadiene	-		
Isopropylbenzene	-		
m+p-Xylene	-		
Methyl Tertiary Butyl Ether	-		
Methylene chloride	-		
n-Butylbenzene	-		
n-Propylbenzene	-		
Naphthalene	-		
o-Xylene	-		
4-Isopropyltoluene	-		
sec-Butylbenzene	-		
Styrene	-		
tert-Butylbenzene	-		
Tetrachloroethene	-		
Toluene	-		
trans-1,2-Dichloroethene	-		
trans-1,3-Dichloropropene	-		
Trichloroethene	-		
Trichlorofluoromethane	-		
Vinyl chloride	-		
Semivolatile Organic Compounds (mg/kg)			
1,2,4-Trichlorobenzene	-		
1,2-Dichlorobenzene	-		
1,3-Dichlorobenzene	-		
1,4-Dichlorobenzene	-		
2,4,5-Trichlorophenol	-		
2,4,6-Trichlorophenol	-		
2,4-Dichlorophenol	-		
2,4-Dimethylphenol	-		
2,4-Dinitrophenol	-		
2,4-Dinitrotoluene	-		
2,6-Dinitrotoluene	-		
2-Chloronaphthalene	-		
2-Chlorophenol	-		
2-Methylnaphthalene	-		
2-Methylphenol	-		
2-Nitroaniline	-		
2-Nitrophenol	-		
3,3-Dichlorobenzidine	-		
3-Nitroaniline	-		
4,6-Dinitro-2-methylphenol	-		
4-Bromophenyl-phenylether	-		
4-Chloro-3-methylphenol	-		
4-Chloroaniline	-		

TABLE B-C8
ANALYTICAL RESULTS FOR GRID C8
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	C8		
Sample Name	P3IF-SS-IS-SO-C608		
Date Collected	June 12, 2023		
Semivolatile Organic Compounds (mg/kg), continued			
4-Chlorophenyl-phenylether	-		
4-Nitroaniline	-		
4-Nitrophenol	-		
Acenaphthene	-		
Acenaphthylene	-		
Anthracene	-		
Benzo(a)anthracene	-		
Benzo(a)pyrene	-		
Benzo(b)fluoranthene	-		
Benzo(g,h,i)perylene	-		
Benzo(k)fluoranthene	-		
Benzoic acid	-		
Benzyl Alcohol	-		
Bis(2-chloro-1-methylethyl) ether	-		
Bis(2-chloroethoxy)methane	-		
Bis(2-chloroethyl)ether	-		
Bis(2-ethylhexyl)phthalate	-		
Butyl benzyl phthalate	-		
Carbazole	-		
Chrysene	-		
Di-n-butyl phthalate	-		
Di-n-octyl phthalate	-		
Dibenz(a,h)anthracene	-		
Dibenzofuran	-		
Diethyl phthalate	-		
Dimethyl phthalate	-		
Fluoranthene	-		
Fluorene	-		
Hexachlorobenzene	-		
Hexachlorobutadiene	-		
Hexachloroethane	-		
Indeno(1,2,3-cd)pyrene	-		
Isophorone	-		
n-Nitroso-di-n-propylamine	-		
n-Nitrosodimethylamine	-		
n-Nitrosodiphenylamine	-		
Naphthalene	-		
Nitrobenzene	-		
Pentachlorophenol	-		
Phenanthrene	-		
Phenol	-		
Pyrene	-		
Explosives (mg/kg)			
1,3,5-Trinitrobenzene	0.075	0.075	U
1,3-Dinitrobenzene	0.075	0.075	U
2,4,6-Trinitrotoluene	0.075	0.075	U
2,4-Dinitrotoluene	0.075	0.075	U
2,6-Dinitrotoluene	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	0.075	0.075	U
2-Nitrotoluene	0.075	0.075	U
3-Nitrotoluene	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	0.075	0.075	U
4-Nitrotoluene	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.19	0.075	
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	U
Nitrobenzene	0.075	0.075	U
Nitroglycerin	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	0.25	0.25	U
Polychlorinated Biphenyls (mg/kg)			
Aroclor 1016	-		
Aroclor 1221	-		
Aroclor 1232	-		
Aroclor 1242	-		
Aroclor 1248	-		
Aroclor 1254	-		
Aroclor 1260	-		
Dioxins/Furans (mg/kg)			
Octachlorodibenzofuran (OCDF)	-		
Octachlorodibenzo-p-dioxin (OCDD)	-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	-		

TABLE B-C8
ANALYTICAL RESULTS FOR GRID C8
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	C8		
Sample Name	P3IF-SS-IS-SO-C608		
Date Collected	June 12, 2023		
Metals (mg/kg)			
Aluminum	9100	4	
Antimony	0.18	0.15	J
Arsenic	1.4	0.3	
Barium	130	0.2	
Beryllium	0.37	0.3	J
Cadmium	0.54	0.08	
Calcium (Ca)	36000	15	
Chromium	11	0.2	
Cobalt	3.6	0.08	J
Copper	83	0.2	
Iron (Fe)	8200	8	
Lead	9.3	0.05	
Magnesium (Mg)	5900	5	
Manganese (Mn)	300	0.08	
Mercury	0.04	0.04	U
Nickel	10	0.2	
Potassium (K)	1700	8	
Selenium	0.74	0.1	J
Silver	0.05	0.05	UJ
Sodium (Na)	60	8	
Thallium	0.052	0.05	J
Vanadium	16	0.1	J
Zinc	20	1.5	J
Other Parameters (mg/kg)			
Cyanide (CN-)	-		
Nitrate	-		
Perchlorate	-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-C22
ANALYTICAL RESULTS FOR GRID C22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	C22			C22			C22		
Sample Name	P3IF-BA-GRID-C022			P3IF-BA-GRID-C522			P3IF-SS-IS-SO-C022		
Date Collected	June 13, 2023			June 13, 2023			June 13, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)									
1,1,1,2-Tetrachloroethane	0.0021	0.0021	U	0.0019	0.0019	U	-		
1,1,1-Trichloroethane	0.0021	0.0021	U	0.0019	0.0019	U	-		
1,1,2,2-Tetrachloroethane	0.0021	0.0021	U	0.0019	0.0019	U	-		
1,1,2-Trichloroethane	0.0021	0.0021	U	0.0019	0.0019	U	-		
1,1-Dichloroethane	0.0021	0.0021	U	0.0019	0.0019	U	-		
1,1-Dichloroethene	0.0021	0.0021	U	0.0019	0.0019	U	-		
1,1-Dichloropropene	0.0021	0.0021	U	0.0019	0.0019	U	-		
1,2,3-Trichlorobenzene	0.0021	0.0021	U	0.0019	0.0019	U	-		
1,2,3-Trichloropropane	0.0052	0.0052	U	0.0047	0.0047	U	-		
1,2,4-Trichlorobenzene	0.0021	0.0021	U	0.0019	0.0019	U	-		
1,2,4-Trimethylbenzene	0.0021	0.0021	U	0.0019	0.0019	U	-		
1,2-Dibromo-3-chloropropane	0.0052	0.0052	U	0.0047	0.0047	U	-		
1,2-Dibromoethane	0.0021	0.0021	U	0.0019	0.0019	U	-		
1,2-Dichlorobenzene	0.0021	0.0021	U	0.0019	0.0019	U	-		
1,2-Dichloroethane	0.0021	0.0021	U	0.0019	0.0019	U	-		
1,2-Dichloropropane	0.0021	0.0021	U	0.0019	0.0019	U	-		
1,3,5-Trimethylbenzene	0.0021	0.0021	U	0.0019	0.0019	U	-		
1,3-Dichlorobenzene	0.0021	0.0021	U	0.0019	0.0019	U	-		
1,3-Dichloropropane	0.0021	0.0021	U	0.0019	0.0019	U	-		
1,4-Dichlorobenzene	0.0021	0.0021	U	0.0019	0.0019	U	-		
2,2-Dichloropropane	0.0021	0.0021	U	0.0019	0.0019	U	-		
2-Butanone	0.0031	0.0031	U	0.0028	0.0028	U	-		
2-Chlorotoluene	0.0021	0.0021	U	0.0019	0.0019	U	-		
2-Hexanone	0.0021	0.0021	U	0.0019	0.0019	U	-		
4-Chlorotoluene	0.0021	0.0021	U	0.0019	0.0019	U	-		
4-Methyl-2-pentanone	0.0021	0.0021	U	0.0019	0.0019	U	-		
Acetone	0.0052	0.0052	UJ	0.6	0.0047	J	-		
Benzene	0.0021	0.0021	U	0.0019	0.0019	U	-		
Bromobenzene	0.0021	0.0021	U	0.0019	0.0019	U	-		
Bromochloromethane	0.0021	0.0021	U	0.0019	0.0019	U	-		
Bromodichloromethane	0.0021	0.0021	U	0.0019	0.0019	U	-		
Bromoform	0.0021	0.0021	U	0.0019	0.0019	U	-		
Bromomethane	0.0021	0.0021	U	0.0019	0.0019	U	-		
Carbon disulfide	0.0021	0.0021	U	0.0019	0.0019	U	-		
Carbon tetrachloride	0.0021	0.0021	U	0.0019	0.0019	U	-		
Chlorobenzene	0.0021	0.0021	U	0.0019	0.0019	U	-		
Chloroethane	0.0021	0.0021	U	0.0019	0.0019	U	-		
Chloroform	0.0021	0.0021	U	0.0019	0.0019	U	-		
Chloromethane	0.0052	0.0052	U	0.0047	0.0047	U	-		
cis-1,2-Dichloroethene	0.0021	0.0021	U	0.0019	0.0019	U	-		
cis-1,3-Dichloropropene	0.0021	0.0021	U	0.0019	0.0019	U	-		
Dibromochloromethane	0.0021	0.0021	U	0.0019	0.0019	U	-		
Dibromomethane	0.0021	0.0021	U	0.0019	0.0019	U	-		
Dichlorodifluoromethane	0.0021	0.0021	U	0.0019	0.0019	U	-		
Ethylbenzene	0.0021	0.0021	U	0.0019	0.0019	U	-		
Hexachlorobutadiene	0.0021	0.0021	U	0.0019	0.0019	U	-		
Isopropylbenzene	0.0021	0.0021	U	0.0019	0.0019	U	-		
m+p-Xylene	0.0052	0.0052	U	0.0047	0.0047	U	-		
Methyl Tertiary Butyl Ether	0.0021	0.0021	U	0.0019	0.0019	U	-		
Methylene chloride	0.01	0.01	U	0.0094	0.0094	U	-		
n-Butylbenzene	0.0021	0.0021	U	0.0019	0.0019	U	-		
n-Propylbenzene	0.0021	0.0021	U	0.0019	0.0019	U	-		
Naphthalene	0.0021	0.0021	U	0.0019	0.0019	U	-		
o-Xylene	0.0026	0.0026	U	0.0024	0.0024	U	-		
4-Isopropyltoluene	0.0021	0.0021	U	0.0019	0.0019	U	-		
sec-Butylbenzene	0.0021	0.0021	U	0.0019	0.0019	U	-		
Styrene	0.0021	0.0021	U	0.0019	0.0019	U	-		
tert-Butylbenzene	0.0021	0.0021	U	0.0019	0.0019	U	-		
Tetrachloroethene	0.0021	0.0021	U	0.0019	0.0019	U	-		
Toluene	0.0021	0.0021	U	0.0031	0.0019	J	-		
trans-1,2-Dichloroethene	0.0021	0.0021	U	0.0019	0.0019	U	-		
trans-1,3-Dichloropropene	0.0021	0.0021	U	0.0019	0.0019	U	-		
Trichloroethene	0.0021	0.0021	U	0.0019	0.0019	U	-		
Trichlorofluoromethane	0.0021	0.0021	U	0.0019	0.0019	U	-		
Vinyl chloride	0.0021	0.0021	U	0.0019	0.0019	U	-		
Semivolatile Organic Compounds (mg/kg)									
1,2,4-Trichlorobenzene	0.18	0.18	U	0.18	0.18	U	-		
1,2-Dichlorobenzene	0.18	0.18	U	0.18	0.18	U	-		
1,3-Dichlorobenzene	0.18	0.18	U	0.18	0.18	U	-		
1,4-Dichlorobenzene	0.18	0.18	U	0.18	0.18	U	-		
2,4,5-Trichlorophenol	0.18	0.18	U	0.18	0.18	U	-		
2,4,6-Trichlorophenol	0.18	0.18	U	0.18	0.18	U	-		
2,4-Dichlorophenol	0.18	0.18	U	0.18	0.18	U	-		
2,4-Dimethylphenol	0.18	0.18	U	0.18	0.18	U	-		
2,4-Dinitrophenol	0.18	0.18	U	0.18	0.18	U	-		
2,4-Dinitrotoluene	0.18	0.18	U	0.18	0.18	U	-		
2,6-Dinitrotoluene	0.18	0.18	U	0.18	0.18	U	-		
2-Chloronaphthalene	0.18	0.18	U	0.18	0.18	U	-		
2-Chlorophenol	0.18	0.18	U	0.18	0.18	U	-		
2-Methylnaphthalene	0.18	0.18	U	0.18	0.18	U	-		
2-Methylphenol	0.18	0.18	U	0.18	0.18	U	-		
2-Nitroaniline	0.18	0.18	U	0.18	0.18	U	-		
2-Nitrophenol	0.18	0.18	U	0.18	0.18	U	-		
3,3-Dichlorobenzidine	0.18	0.18	U	0.18	0.18	U	-		
3-Nitroaniline	0.18	0.18	U	0.18	0.18	U	-		
4,6-Dinitro-2-methylphenol	0.18	0.18	U	0.18	0.18	U	-		
4-Bromophenyl-phenylether	0.18	0.18	U	0.18	0.18	U	-		
4-Chloro-3-methylphenol	0.18	0.18	U	0.18	0.18	U	-		
4-Chloroaniline	0.18	0.18	U	0.18	0.18	U	-		

TABLE B-C22
ANALYTICAL RESULTS FOR GRID C22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	C22			C22			C22		
Sample Name	P3IF-BA-GRID-C022			P3IF-BA-GRID-C522			P3IF-SS-IS-SO-C022		
Date Collected	June 13, 2023			June 13, 2023			June 13, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Semivolatile Organic Compounds (mg/kg), continued									
4-Chlorophenyl-phenylether	0.18	0.18	U	0.18	0.18	U	-		
4-Nitroaniline	0.18	0.18	U	0.18	0.18	U	-		
4-Nitrophenol	0.18	0.18	U	0.18	0.18	U	-		
Acenaphthene	0.18	0.18	U	0.18	0.18	U	-		
Acenaphthylene	0.18	0.18	U	0.18	0.18	U	-		
Anthracene	0.18	0.18	U	0.18	0.18	U	-		
Benzo(a)anthracene	0.18	0.18	U	0.18	0.18	U	-		
Benzo(a)pyrene	0.14	0.14	U	0.14	0.14	U	-		
Benzo(b)fluoranthene	0.18	0.18	U	0.18	0.18	U	-		
Benzo(g,h,i)perylene	0.18	0.18	U	0.18	0.18	U	-		
Benzo(k)fluoranthene	0.18	0.18	U	0.18	0.18	U	-		
Benzoic acid	0.18	0.18	U	0.18	0.18	U	-		
Benzyl Alcohol	0.18	0.18	U	0.18	0.18	U	-		
Bis(2-chloro-1-methylethyl) ether	0.18	0.18	U	0.18	0.18	U	-		
Bis(2-chloroethoxy)methane	0.18	0.18	U	0.18	0.18	U	-		
Bis(2-chloroethyl)ether	0.18	0.18	U	0.18	0.18	U	-		
Bis(2-ethylhexyl)phthalate	0.18	0.18	U	0.18	0.18	U	-		
Butyl benzyl phthalate	0.18	0.18	U	0.18	0.18	U	-		
Carbazole	0.18	0.18	U	0.18	0.18	U	-		
Chrysene	0.18	0.18	U	0.18	0.18	U	-		
Di-n-butyl phthalate	0.18	0.18	U	0.18	0.18	U	-		
Di-n-octyl phthalate	0.18	0.18	U	0.18	0.18	U	-		
Dibenz(a,h)anthracene	0.14	0.14	U	0.14	0.14	U	-		
Dibenzofuran	0.18	0.18	U	0.18	0.18	U	-		
Diethyl phthalate	0.18	0.18	U	0.18	0.18	U	-		
Dimethyl phthalate	0.18	0.18	U	0.18	0.18	U	-		
Fluoranthene	0.18	0.18	U	0.18	0.18	U	-		
Fluorene	0.18	0.18	U	0.18	0.18	U	-		
Hexachlorobenzene	0.18	0.18	U	0.18	0.18	U	-		
Hexachlorobutadiene	0.18	0.18	U	0.18	0.18	U	-		
Hexachloroethane	0.18	0.18	U	0.18	0.18	U	-		
Indeno(1,2,3-cd)pyrene	0.18	0.18	U	0.18	0.18	U	-		
Isophorone	0.18	0.18	U	0.18	0.18	U	-		
n-Nitroso-di-n-propylamine	0.18	0.18	U	0.18	0.18	U	-		
n-Nitrosodimethylamine	0.021	0.021	UJ	0.021	0.021	UJ	-		
n-Nitrosodiphenylamine	0.18	0.18	U	0.18	0.18	U	-		
Naphthalene	0.18	0.18	U	0.18	0.18	U	-		
Nitrobenzene	0.18	0.18	U	0.18	0.18	U	-		
Pentachlorophenol	0.18	0.18	U	0.18	0.18	U	-		
Phenanthrene	0.18	0.18	U	0.18	0.18	U	-		
Phenol	0.18	0.18	U	0.18	0.18	U	-		
Pyrene	0.18	0.18	U	0.18	0.18	U	-		
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	-			-			0.075	0.075	U
1,3-Dinitrobenzene	-			-			0.075	0.075	U
2,4,6-Trinitrotoluene	-			-			0.075	0.075	U
2,4-Dinitrotoluene	-			-			0.075	0.075	U
2,6-Dinitrotoluene	-			-			0.075	0.075	U
2-Amino-4,6-dinitrotoluene	-			-			0.075	0.075	U
2-Nitrotoluene	-			-			0.075	0.075	U
3-Nitrotoluene	-			-			0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	-			-			0.075	0.075	U
4-Nitrotoluene	-			-			0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	-			-			0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	-			-			0.075	0.075	U
Nitrobenzene	-			-			0.075	0.075	U
Nitroglycerin	-			-			0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	-			-			0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	-			-			0.25	0.25	U
Polychlorinated Biphenyls (mg/kg)									
Aroclor 1016	0.02	0.02	U	0.02	0.02	U	-		
Aroclor 1221	0.02	0.02	U	0.02	0.02	U	-		
Aroclor 1232	0.01	0.01	U	0.01	0.01	U	-		
Aroclor 1242	0.01	0.01	U	0.01	0.01	U	-		
Aroclor 1248	0.01	0.01	U	0.01	0.01	U	-		
Aroclor 1254	0.01	0.01	U	0.01	0.01	U	-		
Aroclor 1260	0.01	0.01	U	0.01	0.01	U	-		
Dioxins/Furans (mg/kg)									
Octachlorodibenzofuran (OCDF)	0.00000018	0.00000018	U	0.00000011	0.00000011	U	-		
Octachlorodibenzo-p-dioxin (OCDD)	0.0000049	0.0000049	J	0.0000031	0.0000031	J	-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.00000026	0.00000026	J	0.00000017	0.00000017	U	-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	0.00000095	0.00000095	J	0.00000032	0.00000032	U	-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.00000011	0.00000011	U	0.00000013	0.00000013	U	-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000061	0.000000061	U	3.9E-08	3.9E-08	U	-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000069	0.000000069	U	5.1E-08	5.1E-08	U	-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000032	0.000000032	U	6.2E-08	6.2E-08	U	-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000007	0.00000007	U	5.1E-08	5.1E-08	U	-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.000000075	0.000000075	U	5.7E-08	5.7E-08	U	-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000047	0.000000047	U	4.5E-08	4.5E-08	U	-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.000000081	0.000000081	U	9.5E-08	9.5E-08	U	-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.000000089	0.000000089	U	9.7E-08	9.7E-08	U	-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000054	0.000000054	U	7.9E-08	7.9E-08	U	-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000012	0.00000012	U	6.8E-08	6.8E-08	U	-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.00000032	0.00000032	U	0.00000032	0.00000032	U	-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.000000087	0.000000087	U	4.7E-08	4.7E-08	U	-		

TABLE B-C22
ANALYTICAL RESULTS FOR GRID C22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	C22			C22			C22		
Sample Name	P3IF-BA-GRID-C022			P3IF-BA-GRID-C522			P3IF-SS-IS-SO-C022		
Date Collected	June 13, 2023			June 13, 2023			June 13, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Metals (mg/kg)									
Aluminum	-			-			15000	4	
Antimony	-			-			0.15	0.15	U
Arsenic	-			-			1.1	0.3	
Barium	-			-			210	0.2	
Beryllium	-			-			0.73	0.3	J
Cadmium	-			-			0.34	0.08	
Calcium (Ca)	-			-			10000	15	
Chromium	-			-			9.5	0.2	
Cobalt	-			-			3.5	0.08	
Copper	-			-			76	0.2	
Iron (Fe)	-			-			7600	8	
Lead	-			-			11	0.05	
Magnesium (Mg)	-			-			4700	5	
Manganese (Mn)	-			-			440	0.08	
Mercury	-			-			0.02	0.041	J
Nickel	-			-			7.9	0.2	
Potassium (K)	-			-			1500	8	
Selenium	-			-			0.89	0.1	
Silver	-			-			0.049	0.05	J
Sodium (Na)	-			-			39	8	
Thallium	-			-			0.052	0.05	J
Vanadium	-			-			9.9	0.1	
Zinc	-			-			21	1.5	
Other Parameters (mg/kg)									
Cyanide (CN-)	0.33	0.33	U	0.33	0.33	U	-		
Nitrate	4.8	2.1	J	2	2.2	J	-		
Perchlorate	0.0043	0.0043	U	0.0043	0.0043	U	-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-C22
ANALYTICAL RESULTS FOR GRID C22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	C22			C22		
Sample Name	P3IF-SS-IS-SO-C522			P3IF-SS-IS-SO-C622		
Date Collected	June 13, 2023			June 13, 2023		
	Result	LOD	Qual	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)						
1,1,1,2-Tetrachloroethane	-			-		
1,1,1-Trichloroethane	-			-		
1,1,2,2-Tetrachloroethane	-			-		
1,1,2-Trichloroethane	-			-		
1,1-Dichloroethane	-			-		
1,1-Dichloroethene	-			-		
1,1-Dichloropropene	-			-		
1,2,3-Trichlorobenzene	-			-		
1,2,3-Trichloropropane	-			-		
1,2,4-Trichlorobenzene	-			-		
1,2,4-Trimethylbenzene	-			-		
1,2-Dibromo-3-chloropropane	-			-		
1,2-Dibromoethane	-			-		
1,2-Dichlorobenzene	-			-		
1,2-Dichloroethane	-			-		
1,2-Dichloropropane	-			-		
1,3,5-Trimethylbenzene	-			-		
1,3-Dichlorobenzene	-			-		
1,3-Dichloropropane	-			-		
1,4-Dichlorobenzene	-			-		
2,2-Dichloropropane	-			-		
2-Butanone	-			-		
2-Chlorotoluene	-			-		
2-Hexanone	-			-		
4-Chlorotoluene	-			-		
4-Methyl-2-pentanone	-			-		
Acetone	-			-		
Benzene	-			-		
Bromobenzene	-			-		
Bromochloromethane	-			-		
Bromodichloromethane	-			-		
Bromoform	-			-		
Bromomethane	-			-		
Carbon disulfide	-			-		
Carbon tetrachloride	-			-		
Chlorobenzene	-			-		
Chloroethane	-			-		
Chloroform	-			-		
Chloromethane	-			-		
cis-1,2-Dichloroethene	-			-		
cis-1,3-Dichloropropene	-			-		
Dibromochloromethane	-			-		
Dibromomethane	-			-		
Dichlorodifluoromethane	-			-		
Ethylbenzene	-			-		
Hexachlorobutadiene	-			-		
Isopropylbenzene	-			-		
m+p-Xylene	-			-		
Methyl Tertiary Butyl Ether	-			-		
Methylene chloride	-			-		
n-Butylbenzene	-			-		
n-Propylbenzene	-			-		
Naphthalene	-			-		
o-Xylene	-			-		
4-Isopropyltoluene	-			-		
sec-Butylbenzene	-			-		
Styrene	-			-		
tert-Butylbenzene	-			-		
Tetrachloroethene	-			-		
Toluene	-			-		
trans-1,2-Dichloroethene	-			-		
trans-1,3-Dichloropropene	-			-		
Trichloroethene	-			-		
Trichlorofluoromethane	-			-		
Vinyl chloride	-			-		
Semivolatile Organic Compounds (mg/kg)						
1,2,4-Trichlorobenzene	-			-		
1,2-Dichlorobenzene	-			-		
1,3-Dichlorobenzene	-			-		
1,4-Dichlorobenzene	-			-		
2,4,5-Trichlorophenol	-			-		
2,4,6-Trichlorophenol	-			-		
2,4-Dichlorophenol	-			-		
2,4-Dimethylphenol	-			-		
2,4-Dinitrophenol	-			-		
2,4-Dinitrotoluene	-			-		
2,6-Dinitrotoluene	-			-		
2-Chloronaphthalene	-			-		
2-Chlorophenol	-			-		
2-Methylnaphthalene	-			-		
2-Methylphenol	-			-		
2-Nitroaniline	-			-		
2-Nitrophenol	-			-		
3,3-Dichlorobenzidine	-			-		
3-Nitroaniline	-			-		
4,6-Dinitro-2-methylphenol	-			-		
4-Bromophenyl-phenylether	-			-		
4-Chloro-3-methylphenol	-			-		
4-Chloroaniline	-			-		

TABLE B-C22
ANALYTICAL RESULTS FOR GRID C22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	C22			C22		
Sample Name	P3IF-SS-IS-SO-C522			P3IF-SS-IS-SO-C622		
Date Collected	June 13, 2023			June 13, 2023		
	Result	LOD	Qual	Result	LOD	Qual
Semivolatile Organic Compounds (mg/kg), continued						
4-Chlorophenyl-phenylether	-			-		
4-Nitroaniline	-			-		
4-Nitrophenol	-			-		
Acenaphthene	-			-		
Acenaphthylene	-			-		
Anthracene	-			-		
Benzo(a)anthracene	-			-		
Benzo(a)pyrene	-			-		
Benzo(b)fluoranthene	-			-		
Benzo(g,h,i)perylene	-			-		
Benzo(k)fluoranthene	-			-		
Benzoic acid	-			-		
Benzyl Alcohol	-			-		
Bis(2-chloro-1-methylethyl) ether	-			-		
Bis(2-chloroethoxy)methane	-			-		
Bis(2-chloroethyl)ether	-			-		
Bis(2-ethylhexyl)phthalate	-			-		
Butyl benzyl phthalate	-			-		
Carbazole	-			-		
Chrysene	-			-		
Di-n-butyl phthalate	-			-		
Di-n-octyl phthalate	-			-		
Dibenz(a,h)anthracene	-			-		
Dibenzofuran	-			-		
Diethyl phthalate	-			-		
Dimethyl phthalate	-			-		
Fluoranthene	-			-		
Fluorene	-			-		
Hexachlorobenzene	-			-		
Hexachlorobutadiene	-			-		
Hexachloroethane	-			-		
Indeno(1,2,3-cd)pyrene	-			-		
Isophorone	-			-		
n-Nitroso-di-n-propylamine	-			-		
n-Nitrosodimethylamine	-			-		
n-Nitrosodiphenylamine	-			-		
Naphthalene	-			-		
Nitrobenzene	-			-		
Pentachlorophenol	-			-		
Phenanthrene	-			-		
Phenol	-			-		
Pyrene	-			-		
Explosives (mg/kg)						
1,3,5-Trinitrobenzene	0.075	0.075	U	0.075	0.075	U
1,3-Dinitrobenzene	0.075	0.075	U	0.075	0.075	U
2,4,6-Trinitrotoluene	0.075	0.075	U	0.075	0.075	U
2,4-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U
2,6-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	0.075	0.075	U	0.075	0.075	U
2-Nitrotoluene	0.075	0.075	U	0.075	0.075	U
3-Nitrotoluene	0.075	0.075	U	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	0.075	0.075	U	0.075	0.075	U
4-Nitrotoluene	0.075	0.075	U	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	U	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	U	0.075	0.075	U
Nitrobenzene	0.075	0.075	U	0.075	0.075	U
Nitroglycerin	0.15	0.15	U	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	U	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	0.25	0.25	U	0.25	0.25	U
Polychlorinated Biphenyls (mg/kg)						
Aroclor 1016	-			-		
Aroclor 1221	-			-		
Aroclor 1232	-			-		
Aroclor 1242	-			-		
Aroclor 1248	-			-		
Aroclor 1254	-			-		
Aroclor 1260	-			-		
Dioxins/Furans (mg/kg)						
Octachlorodibenzofuran (OCDF)	-			-		
Octachlorodibenzo-p-dioxin (OCDD)	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	-			-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	-			-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	-			-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-			-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	-			-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-			-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	-			-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	-			-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	-			-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	-			-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	-			-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	-			-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	-			-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	-			-		

TABLE B-C22
ANALYTICAL RESULTS FOR GRID C22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	C22			C22		
Sample Name	P3IF-SS-IS-SO-C522			P3IF-SS-IS-SO-C622		
Date Collected	June 13, 2023			June 13, 2023		
	Result	LOD	Qual	Result	LOD	Qual
Metals (mg/kg)						
Aluminum	17000	4		17000	4	
Antimony	0.15	0.15	U	0.15	0.15	U
Arsenic	1.2	0.3		1.4	0.3	
Barium	210	0.2		230	0.2	
Beryllium	0.7	0.3	J	0.76	0.3	J
Cadmium	0.24	0.08		0.4	0.08	
Calcium (Ca)	8000	15		11000	15	
Chromium	9.5	0.2		11	0.2	
Cobalt	3.6	0.08		3.9	0.08	
Copper	42	0.2	J	66	0.2	
Iron (Fe)	7900	8		8500	8	
Lead	8.1	0.05		9.6	0.05	
Magnesium (Mg)	5100	5		5300	5	
Manganese (Mn)	400	0.08		480	0.08	
Mercury	0.022	0.042	J	0.023	0.042	J
Nickel	7.6	0.2		9	0.2	
Potassium (K)	1500	8		1700	8	
Selenium	0.96	0.1		1.2	0.1	
Silver	0.046	0.05	J	0.061	0.05	J
Sodium (Na)	36	8		42	8	
Thallium	0.055	0.05	J	0.058	0.05	J
Vanadium	11	0.1		12	0.1	
Zinc	20	1.5		24	1.5	
Other Parameters (mg/kg)						
Cyanide (CN-)	-			-		
Nitrate	-			-		
Perchlorate	-			-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-D8
ANALYTICAL RESULTS FOR GRID D8
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	D8			D8			D8		
Sample Name	P3IF-BA-GRID-D008			P3IF-SS-IS-SO-D008			P3IF-SS-IS-SO-D508		
Date Collected	June 12, 2023			June 12, 2023			June 12, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)									
1,1,1,2-Tetrachloroethane	0.0018	0.0018	U	-			-		
1,1,1-Trichloroethane	0.0018	0.0018	U	-			-		
1,1,2,2-Tetrachloroethane	0.0018	0.0018	U	-			-		
1,1,2-Trichloroethane	0.0018	0.0018	U	-			-		
1,1-Dichloroethane	0.0018	0.0018	U	-			-		
1,1-Dichloroethene	0.0018	0.0018	U	-			-		
1,1-Dichloropropene	0.0018	0.0018	U	-			-		
1,2,3-Trichlorobenzene	0.0018	0.0018	U	-			-		
1,2,3-Trichloropropane	0.0044	0.0044	U	-			-		
1,2,4-Trichlorobenzene	0.0018	0.0018	U	-			-		
1,2,4-Trimethylbenzene	0.0018	0.0018	U	-			-		
1,2-Dibromo-3-chloropropane	0.0044	0.0044	U	-			-		
1,2-Dibromoethane	0.0018	0.0018	U	-			-		
1,2-Dichlorobenzene	0.0018	0.0018	U	-			-		
1,2-Dichloroethane	0.0018	0.0018	U	-			-		
1,2-Dichloropropane	0.0018	0.0018	U	-			-		
1,3,5-Trimethylbenzene	0.0018	0.0018	U	-			-		
1,3-Dichlorobenzene	0.0018	0.0018	U	-			-		
1,3-Dichloropropane	0.0018	0.0018	U	-			-		
1,4-Dichlorobenzene	0.0018	0.0018	U	-			-		
2,2-Dichloropropane	0.0018	0.0018	U	-			-		
2-Butanone	0.0027	0.0027	U	-			-		
2-Chlorotoluene	0.0018	0.0018	U	-			-		
2-Hexanone	0.0018	0.0018	U	-			-		
4-Chlorotoluene	0.0018	0.0018	U	-			-		
4-Methyl-2-pentanone	0.0018	0.0018	U	-			-		
Acetone	0.23	0.0044		-			-		
Benzene	0.0018	0.0018	U	-			-		
Bromobenzene	0.0018	0.0018	U	-			-		
Bromochloromethane	0.0018	0.0018	U	-			-		
Bromodichloromethane	0.0018	0.0018	U	-			-		
Bromoform	0.0018	0.0018	U	-			-		
Bromomethane	0.0018	0.0018	U	-			-		
Carbon disulfide	0.0018	0.0018	U	-			-		
Carbon tetrachloride	0.0018	0.0018	U	-			-		
Chlorobenzene	0.0018	0.0018	U	-			-		
Chloroethane	0.0018	0.0018	U	-			-		
Chloroform	0.0018	0.0018	U	-			-		
Chloromethane	0.0044	0.0044	U	-			-		
cis-1,2-Dichloroethene	0.0018	0.0018	U	-			-		
cis-1,3-Dichloropropene	0.0018	0.0018	U	-			-		
Dibromochloromethane	0.0018	0.0018	U	-			-		
Dibromomethane	0.0018	0.0018	U	-			-		
Dichlorodifluoromethane	0.0018	0.0018	U	-			-		
Ethylbenzene	0.0018	0.0018	U	-			-		
Hexachlorobutadiene	0.0018	0.0018	U	-			-		
Isopropylbenzene	0.0018	0.0018	U	-			-		
m+p-Xylene	0.0044	0.0044	U	-			-		
Methyl Tertiary Butyl Ether	0.0018	0.0018	U	-			-		
Methylene chloride	0.0089	0.0089	U	-			-		
n-Butylbenzene	0.0018	0.0018	U	-			-		
n-Propylbenzene	0.0018	0.0018	U	-			-		
Naphthalene	0.0018	0.0018	U	-			-		
o-Xylene	0.0022	0.0022	U	-			-		
4-Isopropyltoluene	0.0018	0.0018	U	-			-		
sec-Butylbenzene	0.0018	0.0018	U	-			-		
Styrene	0.0018	0.0018	U	-			-		
tert-Butylbenzene	0.0018	0.0018	U	-			-		
Tetrachloroethene	0.0018	0.0018	U	-			-		
Toluene	0.0018	0.0018	U	-			-		
trans-1,2-Dichloroethene	0.0018	0.0018	U	-			-		
trans-1,3-Dichloropropene	0.0018	0.0018	U	-			-		
Trichloroethene	0.0018	0.0018	U	-			-		
Trichlorofluoromethane	0.0018	0.0018	U	-			-		
Vinyl chloride	0.0018	0.0018	U	-			-		
Semivolatile Organic Compounds (mg/kg)									
1,2,4-Trichlorobenzene	0.17	0.17	U	-			-		
1,2-Dichlorobenzene	0.17	0.17	U	-			-		
1,3-Dichlorobenzene	0.17	0.17	U	-			-		
1,4-Dichlorobenzene	0.17	0.17	U	-			-		
2,4,5-Trichlorophenol	0.17	0.17	U	-			-		
2,4,6-Trichlorophenol	0.17	0.17	U	-			-		
2,4-Dichlorophenol	0.17	0.17	U	-			-		
2,4-Dimethylphenol	0.17	0.17	U	-			-		
2,4-Dinitrophenol	0.17	0.17	U	-			-		
2,4-Dinitrotoluene	0.17	0.17	U	-			-		
2,6-Dinitrotoluene	0.17	0.17	U	-			-		
2-Chloronaphthalene	0.17	0.17	U	-			-		
2-Chlorophenol	0.17	0.17	U	-			-		
2-Methylnaphthalene	0.17	0.17	U	-			-		
2-Methylphenol	0.17	0.17	U	-			-		
2-Nitroaniline	0.17	0.17	U	-			-		
2-Nitrophenol	0.17	0.17	U	-			-		
3,3-Dichlorobenzidine	0.17	0.17	U	-			-		
3-Nitroaniline	0.17	0.17	U	-			-		
4,6-Dinitro-2-methylphenol	0.17	0.17	U	-			-		
4-Bromophenyl-phenylether	0.17	0.17	U	-			-		
4-Chloro-3-methylphenol	0.17	0.17	U	-			-		
4-Chloroaniline	0.17	0.17	U	-			-		

TABLE B-D8
ANALYTICAL RESULTS FOR GRID D8
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	D8			D8			D8		
Sample Name	P3IF-BA-GRID-D008			P3IF-SS-IS-SO-D008			P3IF-SS-IS-SO-D508		
Date Collected	June 12, 2023			June 12, 2023			June 12, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Semivolatile Organic Compounds (mg/kg), continued									
4-Chlorophenyl-phenylether	0.17	0.17	U	-			-		
4-Nitroaniline	0.17	0.17	U	-			-		
4-Nitrophenol	0.17	0.17	U	-			-		
Acenaphthene	0.17	0.17	U	-			-		
Acenaphthylene	0.17	0.17	U	-			-		
Anthracene	0.17	0.17	U	-			-		
Benzo(a)anthracene	0.17	0.17	U	-			-		
Benzo(a)pyrene	0.13	0.13	U	-			-		
Benzo(b)fluoranthene	0.17	0.17	U	-			-		
Benzo(g,h,i)perylene	0.17	0.17	U	-			-		
Benzo(k)fluoranthene	0.17	0.17	U	-			-		
Benzoic acid	0.17	0.17	U	-			-		
Benzyl Alcohol	0.17	0.17	U	-			-		
Bis(2-chloro-1-methylethyl) ether	0.17	0.17	U	-			-		
Bis(2-chloroethoxy)methane	0.17	0.17	U	-			-		
Bis(2-chloroethyl)ether	0.17	0.17	U	-			-		
Bis(2-ethylhexyl)phthalate	0.17	0.17	U	-			-		
Butyl benzyl phthalate	0.17	0.17	U	-			-		
Carbazole	0.17	0.17	U	-			-		
Chrysene	0.17	0.17	U	-			-		
Di-n-butyl phthalate	0.17	0.17	U	-			-		
Di-n-octyl phthalate	0.17	0.17	U	-			-		
Dibenz(a,h)anthracene	0.13	0.13	U	-			-		
Dibenzofuran	0.17	0.17	U	-			-		
Diethyl phthalate	0.17	0.17	U	-			-		
Dimethyl phthalate	0.17	0.17	U	-			-		
Fluoranthene	0.17	0.17	U	-			-		
Fluorene	0.17	0.17	U	-			-		
Hexachlorobenzene	0.17	0.17	U	-			-		
Hexachlorobutadiene	0.17	0.17	U	-			-		
Hexachloroethane	0.17	0.17	U	-			-		
Indeno(1,2,3-cd)pyrene	0.17	0.17	U	-			-		
Isophorone	0.17	0.17	U	-			-		
n-Nitroso-di-n-propylamine	0.17	0.17	U	-			-		
n-Nitrosodimethylamine	0.02	0.02	UJ	-			-		
n-Nitrosodiphenylamine	0.17	0.17	U	-			-		
Naphthalene	0.17	0.17	U	-			-		
Nitrobenzene	0.17	0.17	U	-			-		
Pentachlorophenol	0.17	0.17	U	-			-		
Phenanthrene	0.17	0.17	U	-			-		
Phenol	0.17	0.17	U	-			-		
Pyrene	0.17	0.17	U	-			-		
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	-			0.075	0.075	U	0.075	0.075	U
1,3-Dinitrobenzene	-			0.075	0.075	U	0.075	0.075	U
2,4,6-Trinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2,4-Dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2,6-Dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2-Nitrotoluene	-			0.075	0.075	U	0.075	0.075	U
3-Nitrotoluene	-			0.075	0.075	U	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
4-Nitrotoluene	-			0.075	0.075	U	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	-			0.22	0.075		0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	-			0.075	0.075	U	0.075	0.075	U
Nitrobenzene	-			0.075	0.075	U	0.075	0.075	U
Nitroglycerin	-			0.15	0.15	U	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	-			0.075	0.075	U	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	-			0.25	0.25	U	0.25	0.25	U
Polychlorinated Biphenyls (mg/kg)									
Aroclor 1016	0.019	0.019	U	-			-		
Aroclor 1221	0.019	0.019	U	-			-		
Aroclor 1232	0.0096	0.0096	U	-			-		
Aroclor 1242	0.0096	0.0096	U	-			-		
Aroclor 1248	0.0096	0.0096	U	-			-		
Aroclor 1254	0.0096	0.0096	U	-			-		
Aroclor 1260	0.0096	0.0096	U	-			-		
Dioxins/Furans (mg/kg)									
Octachlorodibenzofuran (OCDF)	0.00000029	0.00000029	U	-			-		
Octachlorodibenzo-p-dioxin (OCDD)	0.0000041	0.0000041	J	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.000000091	0.000000091	U	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	0.00000067	0.00000067	U	-			-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.00000011	0.00000011	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000029	0.000000029	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000035	0.000000035	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000034	0.000000034	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000035	0.000000035	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.000000047	0.000000047	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000029	0.000000029	U	-			-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000004	0.00000004	U	-			-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.000000054	0.000000054	U	-			-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000048	0.000000048	U	-			-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.000000093	0.000000093	U	-			-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.00000033	0.00000033	J	-			-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.00000004	0.00000004	U	-			-		

TABLE B-D8
ANALYTICAL RESULTS FOR GRID D8
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	D8			D8			D8		
Sample Name	P3IF-BA-GRID-D008			P3IF-SS-IS-SO-D008			P3IF-SS-IS-SO-D508		
Date Collected	June 12, 2023			June 12, 2023			June 12, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Metals (mg/kg)									
Aluminum	-			6000	4		5800	4	
Antimony	-			0.2	0.15		0.13	0.15	J
Arsenic	-			1.9	0.3		1.9	0.3	
Barium	-			100	0.2		94	0.2	
Beryllium	-			0.3	0.3	J	0.27	0.3	J
Cadmium	-			0.38	0.08		0.34	0.08	
Calcium (Ca)	-			8600	15		10000	15	
Chromium	-			7	0.2		6.4	0.2	
Cobalt	-			2.4	0.08		2.4	0.08	
Copper	-			76	0.2		68	0.2	
Iron (Fe)	-			6500	8		6300	8	
Lead	-			9.4	0.05		7.9	0.05	
Magnesium (Mg)	-			2200	5		2300	5	
Manganese (Mn)	-			190	0.08		190	0.08	
Mercury	-			0.019	0.04	J	0.014	0.042	J
Nickel	-			5.5	0.2		5.5	0.2	
Potassium (K)	-			1300	8		1300	8	
Selenium	-			0.66	0.1		0.6	0.1	
Silver	-			0.033	0.05	J	0.044	0.05	J
Sodium (Na)	-			23	8		23	8	
Thallium	-			0.047	0.05	J	0.058	0.05	J
Vanadium	-			11	0.1		10	0.1	
Zinc	-			19	1.5		17	1.5	
Other Parameters (mg/kg)									
Cyanide (CN-)	0.29	0.29	U	-			-		
Nitrate	4.6	2.1	J	-			-		
Perchlorate	0.0041	0.0041	U	-			-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-D8
ANALYTICAL RESULTS FOR GRID D8
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	D8		
Sample Name	P3IF-SS-IS-SO-D608		
Date Collected	June 12, 2023		
	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)			
1,1,1,2-Tetrachloroethane	-		
1,1,1-Trichloroethane	-		
1,1,2,2-Tetrachloroethane	-		
1,1,2-Trichloroethane	-		
1,1-Dichloroethane	-		
1,1-Dichloroethene	-		
1,1-Dichloropropene	-		
1,2,3-Trichlorobenzene	-		
1,2,3-Trichloropropane	-		
1,2,4-Trichlorobenzene	-		
1,2,4-Trimethylbenzene	-		
1,2-Dibromo-3-chloropropane	-		
1,2-Dibromoethane	-		
1,2-Dichlorobenzene	-		
1,2-Dichloroethane	-		
1,2-Dichloropropane	-		
1,3,5-Trimethylbenzene	-		
1,3-Dichlorobenzene	-		
1,3-Dichloropropane	-		
1,4-Dichlorobenzene	-		
2,2-Dichloropropane	-		
2-Butanone	-		
2-Chlorotoluene	-		
2-Hexanone	-		
4-Chlorotoluene	-		
4-Methyl-2-pentanone	-		
Acetone	-		
Benzene	-		
Bromobenzene	-		
Bromochloromethane	-		
Bromodichloromethane	-		
Bromoform	-		
Bromomethane	-		
Carbon disulfide	-		
Carbon tetrachloride	-		
Chlorobenzene	-		
Chloroethane	-		
Chloroform	-		
Chloromethane	-		
cis-1,2-Dichloroethene	-		
cis-1,3-Dichloropropene	-		
Dibromochloromethane	-		
Dibromomethane	-		
Dichlorodifluoromethane	-		
Ethylbenzene	-		
Hexachlorobutadiene	-		
Isopropylbenzene	-		
m+p-Xylene	-		
Methyl Tertiary Butyl Ether	-		
Methylene chloride	-		
n-Butylbenzene	-		
n-Propylbenzene	-		
Naphthalene	-		
o-Xylene	-		
4-Isopropyltoluene	-		
sec-Butylbenzene	-		
Styrene	-		
tert-Butylbenzene	-		
Tetrachloroethene	-		
Toluene	-		
trans-1,2-Dichloroethene	-		
trans-1,3-Dichloropropene	-		
Trichloroethene	-		
Trichlorofluoromethane	-		
Vinyl chloride	-		
Semivolatile Organic Compounds (mg/kg)			
1,2,4-Trichlorobenzene	-		
1,2-Dichlorobenzene	-		
1,3-Dichlorobenzene	-		
1,4-Dichlorobenzene	-		
2,4,5-Trichlorophenol	-		
2,4,6-Trichlorophenol	-		
2,4-Dichlorophenol	-		
2,4-Dimethylphenol	-		
2,4-Dinitrophenol	-		
2,4-Dinitrotoluene	-		
2,6-Dinitrotoluene	-		
2-Chloronaphthalene	-		
2-Chlorophenol	-		
2-Methylnaphthalene	-		
2-Methylphenol	-		
2-Nitroaniline	-		
2-Nitrophenol	-		
3,3-Dichlorobenzidine	-		
3-Nitroaniline	-		
4,6-Dinitro-2-methylphenol	-		
4-Bromophenyl-phenylether	-		
4-Chloro-3-methylphenol	-		
4-Chloroaniline	-		

TABLE B-D8
ANALYTICAL RESULTS FOR GRID D8
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	D8		
Sample Name	P3IF-SS-IS-SO-D608		
Date Collected	June 12, 2023		
	Result	LOD	Qual
Semivolatile Organic Compounds (mg/kg), continued			
4-Chlorophenyl-phenylether	-		
4-Nitroaniline	-		
4-Nitrophenol	-		
Acenaphthene	-		
Acenaphthylene	-		
Anthracene	-		
Benzo(a)anthracene	-		
Benzo(a)pyrene	-		
Benzo(b)fluoranthene	-		
Benzo(g,h,i)perylene	-		
Benzo(k)fluoranthene	-		
Benzoic acid	-		
Benzyl Alcohol	-		
Bis(2-chloro-1-methylethyl) ether	-		
Bis(2-chloroethoxy)methane	-		
Bis(2-chloroethyl)ether	-		
Bis(2-ethylhexyl)phthalate	-		
Butyl benzyl phthalate	-		
Carbazole	-		
Chrysene	-		
Di-n-butyl phthalate	-		
Di-n-octyl phthalate	-		
Dibenz(a,h)anthracene	-		
Dibenzofuran	-		
Diethyl phthalate	-		
Dimethyl phthalate	-		
Fluoranthene	-		
Fluorene	-		
Hexachlorobenzene	-		
Hexachlorobutadiene	-		
Hexachloroethane	-		
Indeno(1,2,3-cd)pyrene	-		
Isophorone	-		
n-Nitroso-di-n-propylamine	-		
n-Nitrosodimethylamine	-		
n-Nitrosodiphenylamine	-		
Naphthalene	-		
Nitrobenzene	-		
Pentachlorophenol	-		
Phenanthrene	-		
Phenol	-		
Pyrene	-		
Explosives (mg/kg)			
1,3,5-Trinitrobenzene	0.075	0.075	U
1,3-Dinitrobenzene	0.075	0.075	U
2,4,6-Trinitrotoluene	0.075	0.075	U
2,4-Dinitrotoluene	0.075	0.075	U
2,6-Dinitrotoluene	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	0.075	0.075	U
2-Nitrotoluene	0.075	0.075	U
3-Nitrotoluene	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	0.075	0.075	U
4-Nitrotoluene	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	U
Nitrobenzene	0.075	0.075	U
Nitroglycerin	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	0.25	0.25	U
Polychlorinated Biphenyls (mg/kg)			
Aroclor 1016	-		
Aroclor 1221	-		
Aroclor 1232	-		
Aroclor 1242	-		
Aroclor 1248	-		
Aroclor 1254	-		
Aroclor 1260	-		
Dioxins/Furans (mg/kg)			
Octachlorodibenzofuran (OCDF)	-		
Octachlorodibenzo-p-dioxin (OCDD)	-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	-		

TABLE B-D8
ANALYTICAL RESULTS FOR GRID D8
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	D8		
Sample Name	P3IF-SS-IS-SO-D608		
Date Collected	June 12, 2023		
	Result	LOD	Qual
Metals (mg/kg)			
Aluminum	6200	4	
Antimony	0.13	0.15	J
Arsenic	1.8	0.3	
Barium	100	0.2	
Beryllium	0.29	0.3	J
Cadmium	0.33	0.08	
Calcium (Ca)	9800	15	
Chromium	7.3	0.2	
Cobalt	2.5	0.08	
Copper	76	0.2	
Iron (Fe)	6500	8	
Lead	7.9	0.05	
Magnesium (Mg)	2300	5	
Manganese (Mn)	200	0.08	
Mercury	0.012	0.041	J
Nickel	5.7	0.2	
Potassium (K)	1400	8	
Selenium	0.62	0.1	
Silver	0.056	0.05	J
Sodium (Na)	25	8	
Thallium	0.038	0.05	J
Vanadium	10	0.1	
Zinc	18	1.5	
Other Parameters (mg/kg)			
Cyanide (CN-)	-		
Nitrate	-		
Perchlorate	-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-D22
ANALYTICAL RESULTS FOR GRID D22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	D22			D22			D22		
Sample Name	P3IF-BA-GRID-D022			P3IF-SS-IS-SO-D022			P3IF-SS-IS-SO-D522		
Date Collected	June 13, 2023			June 13, 2023			June 13, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)									
1,1,1,2-Tetrachloroethane	0.0023	0.0023	U	-			-		
1,1,1-Trichloroethane	0.0023	0.0023	U	-			-		
1,1,2,2-Tetrachloroethane	0.0023	0.0023	U	-			-		
1,1,2-Trichloroethane	0.0023	0.0023	U	-			-		
1,1-Dichloroethane	0.0023	0.0023	U	-			-		
1,1-Dichloroethene	0.0023	0.0023	U	-			-		
1,1-Dichloropropene	0.0023	0.0023	U	-			-		
1,2,3-Trichlorobenzene	0.0023	0.0023	U	-			-		
1,2,3-Trichloropropane	0.0059	0.0059	U	-			-		
1,2,4-Trichlorobenzene	0.0023	0.0023	U	-			-		
1,2,4-Trimethylbenzene	0.0023	0.0023	U	-			-		
1,2-Dibromo-3-chloropropane	0.0059	0.0059	U	-			-		
1,2-Dibromoethane	0.0023	0.0023	U	-			-		
1,2-Dichlorobenzene	0.0023	0.0023	U	-			-		
1,2-Dichloroethane	0.0023	0.0023	U	-			-		
1,2-Dichloropropane	0.0023	0.0023	U	-			-		
1,3,5-Trimethylbenzene	0.0023	0.0023	U	-			-		
1,3-Dichlorobenzene	0.0023	0.0023	U	-			-		
1,3-Dichloropropane	0.0023	0.0023	U	-			-		
1,4-Dichlorobenzene	0.0023	0.0023	U	-			-		
2,2-Dichloropropane	0.0023	0.0023	U	-			-		
2-Butanone	0.0035	0.0035	U	-			-		
2-Chlorotoluene	0.0023	0.0023	U	-			-		
2-Hexanone	0.0023	0.0023	U	-			-		
4-Chlorotoluene	0.0023	0.0023	U	-			-		
4-Methyl-2-pentanone	0.0023	0.0023	U	-			-		
Acetone	0.0059	0.0059	U	-			-		
Benzene	0.0023	0.0023	U	-			-		
Bromobenzene	0.0023	0.0023	U	-			-		
Bromochloromethane	0.0023	0.0023	U	-			-		
Bromodichloromethane	0.0023	0.0023	U	-			-		
Bromoform	0.0023	0.0023	U	-			-		
Bromomethane	0.0023	0.0023	U	-			-		
Carbon disulfide	0.0023	0.0023	U	-			-		
Carbon tetrachloride	0.0023	0.0023	U	-			-		
Chlorobenzene	0.0023	0.0023	U	-			-		
Chloroethane	0.0023	0.0023	U	-			-		
Chloroform	0.0023	0.0023	U	-			-		
Chloromethane	0.0059	0.0059	U	-			-		
cis-1,2-Dichloroethene	0.0023	0.0023	U	-			-		
cis-1,3-Dichloropropene	0.0023	0.0023	U	-			-		
Dibromochloromethane	0.0023	0.0023	U	-			-		
Dibromomethane	0.0023	0.0023	U	-			-		
Dichlorodifluoromethane	0.0023	0.0023	U	-			-		
Ethylbenzene	0.0023	0.0023	U	-			-		
Hexachlorobutadiene	0.0023	0.0023	U	-			-		
Isopropylbenzene	0.0023	0.0023	U	-			-		
m+p-Xylene	0.0059	0.0059	U	-			-		
Methyl Tertiary Butyl Ether	0.0023	0.0023	U	-			-		
Methylene chloride	0.012	0.012	U	-			-		
n-Butylbenzene	0.0023	0.0023	U	-			-		
n-Propylbenzene	0.0023	0.0023	U	-			-		
Naphthalene	0.0023	0.0023	U	-			-		
o-Xylene	0.0029	0.0029	U	-			-		
4-Isopropyltoluene	0.0023	0.0023	U	-			-		
sec-Butylbenzene	0.0023	0.0023	U	-			-		
Styrene	0.0023	0.0023	U	-			-		
tert-Butylbenzene	0.0023	0.0023	U	-			-		
Tetrachloroethene	0.0023	0.0023	U	-			-		
Toluene	0.0023	0.0023	U	-			-		
trans-1,2-Dichloroethene	0.0023	0.0023	U	-			-		
trans-1,3-Dichloropropene	0.0023	0.0023	U	-			-		
Trichloroethene	0.0023	0.0023	U	-			-		
Trichlorofluoromethane	0.0023	0.0023	U	-			-		
Vinyl chloride	0.0023	0.0023	U	-			-		
Semivolatile Organic Compounds (mg/kg)									
1,2,4-Trichlorobenzene	0.19	0.19	U	-			-		
1,2-Dichlorobenzene	0.19	0.19	U	-			-		
1,3-Dichlorobenzene	0.19	0.19	U	-			-		
1,4-Dichlorobenzene	0.19	0.19	U	-			-		
2,4,5-Trichlorophenol	0.19	0.19	U	-			-		
2,4,6-Trichlorophenol	0.19	0.19	U	-			-		
2,4-Dichlorophenol	0.19	0.19	U	-			-		
2,4-Dimethylphenol	0.19	0.19	U	-			-		
2,4-Dinitrophenol	0.19	0.19	U	-			-		
2,4-Dinitrotoluene	0.19	0.19	U	-			-		
2,6-Dinitrotoluene	0.19	0.19	U	-			-		
2-Chloronaphthalene	0.19	0.19	U	-			-		
2-Chlorophenol	0.19	0.19	U	-			-		
2-Methylnaphthalene	0.19	0.19	U	-			-		
2-Methylphenol	0.19	0.19	U	-			-		
2-Nitroaniline	0.19	0.19	U	-			-		
2-Nitrophenol	0.19	0.19	U	-			-		
3,3-Dichlorobenzidine	0.19	0.19	U	-			-		
3-Nitroaniline	0.19	0.19	U	-			-		
4,6-Dinitro-2-methylphenol	0.19	0.19	U	-			-		
4-Bromophenyl-phenylether	0.19	0.19	U	-			-		
4-Chloro-3-methylphenol	0.19	0.19	U	-			-		
4-Chloroaniline	0.19	0.19	U	-			-		

TABLE B-D22
ANALYTICAL RESULTS FOR GRID D22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	D22			D22			D22		
Sample Name	P3IF-BA-GRID-D022			P3IF-SS-IS-SO-D022			P3IF-SS-IS-SO-D522		
Date Collected	June 13, 2023			June 13, 2023			June 13, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Semivolatile Organic Compounds (mg/kg), continued									
4-Chlorophenyl-phenylether	0.19	0.19	U	-			-		
4-Nitroaniline	0.19	0.19	U	-			-		
4-Nitrophenol	0.19	0.19	U	-			-		
Acenaphthene	0.19	0.19	U	-			-		
Acenaphthylene	0.19	0.19	U	-			-		
Anthracene	0.19	0.19	U	-			-		
Benzo(a)anthracene	0.19	0.19	U	-			-		
Benzo(a)pyrene	0.15	0.15	U	-			-		
Benzo(b)fluoranthene	0.19	0.19	U	-			-		
Benzo(g,h,i)perylene	0.19	0.19	U	-			-		
Benzo(k)fluoranthene	0.19	0.19	U	-			-		
Benzoic acid	0.19	0.19	U	-			-		
Benzyl Alcohol	0.19	0.19	U	-			-		
Bis(2-chloro-1-methylethyl) ether	0.19	0.19	U	-			-		
Bis(2-chloroethoxy)methane	0.19	0.19	U	-			-		
Bis(2-chloroethyl)ether	0.19	0.19	U	-			-		
Bis(2-ethylhexyl)phthalate	0.19	0.19	U	-			-		
Butyl benzyl phthalate	0.19	0.19	U	-			-		
Carbazole	0.19	0.19	U	-			-		
Chrysene	0.19	0.19	U	-			-		
Di-n-butyl phthalate	0.19	0.19	U	-			-		
Di-n-octyl phthalate	0.19	0.19	U	-			-		
Dibenz(a,h)anthracene	0.15	0.15	U	-			-		
Dibenzofuran	0.19	0.19	U	-			-		
Diethyl phthalate	0.19	0.19	U	-			-		
Dimethyl phthalate	0.19	0.19	U	-			-		
Fluoranthene	0.19	0.19	U	-			-		
Fluorene	0.19	0.19	U	-			-		
Hexachlorobenzene	0.19	0.19	U	-			-		
Hexachlorobutadiene	0.19	0.19	U	-			-		
Hexachloroethane	0.19	0.19	U	-			-		
Indeno(1,2,3-cd)pyrene	0.19	0.19	U	-			-		
Isophorone	0.19	0.19	U	-			-		
n-Nitroso-di-n-propylamine	0.19	0.19	U	-			-		
n-Nitrosodimethylamine	0.023	0.023	UJ	-			-		
n-Nitrosodiphenylamine	0.19	0.19	U	-			-		
Naphthalene	0.19	0.19	U	-			-		
Nitrobenzene	0.19	0.19	U	-			-		
Pentachlorophenol	0.19	0.19	U	-			-		
Phenanthrene	0.19	0.19	U	-			-		
Phenol	0.19	0.19	U	-			-		
Pyrene	0.19	0.19	U	-			-		
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	-			0.075	0.075	U	0.075	0.075	U
1,3-Dinitrobenzene	-			0.075	0.075	U	0.075	0.075	U
2,4,6-Trinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2,4-Dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2,6-Dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2-Nitrotoluene	-			0.075	0.075	U	0.075	0.075	U
3-Nitrotoluene	-			0.075	0.075	U	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
4-Nitrotoluene	-			0.075	0.075	U	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	-			0.075	0.075	U	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	-			0.075	0.075	U	0.075	0.075	U
Nitrobenzene	-			0.075	0.075	U	0.075	0.075	U
Nitroglycerin	-			0.15	0.15	U	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	-			0.075	0.075	U	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	-			0.25	0.25	U	0.25	0.25	U
Polychlorinated Biphenyls (mg/kg)									
Aroclor 1016	0.022	0.022	U	-			-		
Aroclor 1221	0.022	0.022	U	-			-		
Aroclor 1232	0.011	0.011	U	-			-		
Aroclor 1242	0.011	0.011	U	-			-		
Aroclor 1248	0.011	0.011	U	-			-		
Aroclor 1254	0.011	0.011	U	-			-		
Aroclor 1260	0.011	0.011	U	-			-		
Dioxins/Furans (mg/kg)									
Octachlorodibenzofuran (OCDF)	0.00000081	0.00000081	U	-			-		
Octachlorodibenzo-p-dioxin (OCDD)	0.000018	0.000018	J	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.00000049	0.00000049	U	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	0.000002	0.000002	J	-			-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.00000012	0.00000012	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.00000012	0.00000012	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.0000001	0.0000001	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000097	0.000000097	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000091	0.000000091	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.00000014	0.00000014	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000014	0.00000014	U	-			-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000015	0.00000015	U	-			-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.000000083	0.000000083	U	-			-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000094	0.000000094	J	-			-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000016	0.00000016	U	-			-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.00000017	0.00000017	U	-			-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.000000096	0.000000096	U	-			-		

TABLE B-D22
ANALYTICAL RESULTS FOR GRID D22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	D22			D22			D22		
Sample Name	P3IF-BA-GRID-D022			P3IF-SS-IS-SO-D022			P3IF-SS-IS-SO-D522		
Date Collected	June 13, 2023			June 13, 2023			June 13, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Metals (mg/kg)									
Aluminum	-			15000	4		16000	4	
Antimony	-			0.15	0.15	U	0.15	0.15	U
Arsenic	-			1.2	0.3		1.5	0.3	
Barium	-			190	0.2		200	0.2	
Beryllium	-			0.58	0.3	J	0.65	0.3	J
Cadmium	-			0.56	0.08		0.24	0.08	
Calcium (Ca)	-			7100	15		7400	15	
Chromium	-			11	0.2		9.5	0.2	
Cobalt	-			3.6	0.08		3.7	0.08	
Copper	-			74	0.2	J	40	0.2	J
Iron (Fe)	-			8300	8		8500	8	
Lead	-			9.6	0.05		7.9	0.05	
Magnesium (Mg)	-			4500	5		4800	5	
Manganese (Mn)	-			430	0.08		400	0.08	
Mercury	-			0.028	0.042	J	0.03	0.044	J
Nickel	-			8.3	0.2		7.5	0.2	
Potassium (K)	-			1600	8		1600	8	
Selenium	-			0.81	0.1		0.9	0.1	
Silver	-			0.049	0.05	J	0.044	0.05	J
Sodium (Na)	-			44	8	J	42	8	
Thallium	-			0.053	0.05	J	0.058	0.05	J
Vanadium	-			11	0.1		12	0.1	
Zinc	-			24	1.5		21	1.5	
Other Parameters (mg/kg)									
Cyanide (CN-)	0.35	0.35	U	-			-		
Nitrate	7.2	2.4	J	-			-		
Perchlorate	0.0046	0.0046	U	-			-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-D22
ANALYTICAL RESULTS FOR GRID D22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	D22		
Sample Name	P3IF-SS-IS-SO-D622		
Date Collected	June 13, 2023		
	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)			
1,1,1,2-Tetrachloroethane	-		
1,1,1-Trichloroethane	-		
1,1,2,2-Tetrachloroethane	-		
1,1,2-Trichloroethane	-		
1,1-Dichloroethane	-		
1,1-Dichloroethene	-		
1,1-Dichloropropene	-		
1,2,3-Trichlorobenzene	-		
1,2,3-Trichloropropane	-		
1,2,4-Trichlorobenzene	-		
1,2,4-Trimethylbenzene	-		
1,2-Dibromo-3-chloropropane	-		
1,2-Dibromoethane	-		
1,2-Dichlorobenzene	-		
1,2-Dichloroethane	-		
1,2-Dichloropropane	-		
1,3,5-Trimethylbenzene	-		
1,3-Dichlorobenzene	-		
1,3-Dichloropropane	-		
1,4-Dichlorobenzene	-		
2,2-Dichloropropane	-		
2-Butanone	-		
2-Chlorotoluene	-		
2-Hexanone	-		
4-Chlorotoluene	-		
4-Methyl-2-pentanone	-		
Acetone	-		
Benzene	-		
Bromobenzene	-		
Bromochloromethane	-		
Bromodichloromethane	-		
Bromoform	-		
Bromomethane	-		
Carbon disulfide	-		
Carbon tetrachloride	-		
Chlorobenzene	-		
Chloroethane	-		
Chloroform	-		
Chloromethane	-		
cis-1,2-Dichloroethene	-		
cis-1,3-Dichloropropene	-		
Dibromochloromethane	-		
Dibromomethane	-		
Dichlorodifluoromethane	-		
Ethylbenzene	-		
Hexachlorobutadiene	-		
Isopropylbenzene	-		
m+p-Xylene	-		
Methyl Tertiary Butyl Ether	-		
Methylene chloride	-		
n-Butylbenzene	-		
n-Propylbenzene	-		
Naphthalene	-		
o-Xylene	-		
4-Isopropyltoluene	-		
sec-Butylbenzene	-		
Styrene	-		
tert-Butylbenzene	-		
Tetrachloroethene	-		
Toluene	-		
trans-1,2-Dichloroethene	-		
trans-1,3-Dichloropropene	-		
Trichloroethene	-		
Trichlorofluoromethane	-		
Vinyl chloride	-		
Semivolatile Organic Compounds (mg/kg)			
1,2,4-Trichlorobenzene	-		
1,2-Dichlorobenzene	-		
1,3-Dichlorobenzene	-		
1,4-Dichlorobenzene	-		
2,4,5-Trichlorophenol	-		
2,4,6-Trichlorophenol	-		
2,4-Dichlorophenol	-		
2,4-Dimethylphenol	-		
2,4-Dinitrophenol	-		
2,4-Dinitrotoluene	-		
2,6-Dinitrotoluene	-		
2-Chloronaphthalene	-		
2-Chlorophenol	-		
2-Methylnaphthalene	-		
2-Methylphenol	-		
2-Nitroaniline	-		
2-Nitrophenol	-		
3,3-Dichlorobenzidine	-		
3-Nitroaniline	-		
4,6-Dinitro-2-methylphenol	-		
4-Bromophenyl-phenylether	-		
4-Chloro-3-methylphenol	-		
4-Chloroaniline	-		

TABLE B-D22
ANALYTICAL RESULTS FOR GRID D22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	D22		
Sample Name	P3IF-SS-IS-SO-D622		
Date Collected	June 13, 2023		
	Result	LOD	Qual
Semivolatile Organic Compounds (mg/kg), continued			
4-Chlorophenyl-phenylether	-		
4-Nitroaniline	-		
4-Nitrophenol	-		
Acenaphthene	-		
Acenaphthylene	-		
Anthracene	-		
Benzo(a)anthracene	-		
Benzo(a)pyrene	-		
Benzo(b)fluoranthene	-		
Benzo(g,h,i)perylene	-		
Benzo(k)fluoranthene	-		
Benzoic acid	-		
Benzyl Alcohol	-		
Bis(2-chloro-1-methylethyl) ether	-		
Bis(2-chloroethoxy)methane	-		
Bis(2-chloroethyl)ether	-		
Bis(2-ethylhexyl)phthalate	-		
Butyl benzyl phthalate	-		
Carbazole	-		
Chrysene	-		
Di-n-butyl phthalate	-		
Di-n-octyl phthalate	-		
Dibenz(a,h)anthracene	-		
Dibenzofuran	-		
Diethyl phthalate	-		
Dimethyl phthalate	-		
Fluoranthene	-		
Fluorene	-		
Hexachlorobenzene	-		
Hexachlorobutadiene	-		
Hexachloroethane	-		
Indeno(1,2,3-cd)pyrene	-		
Isophorone	-		
n-Nitroso-di-n-propylamine	-		
n-Nitrosodimethylamine	-		
n-Nitrosodiphenylamine	-		
Naphthalene	-		
Nitrobenzene	-		
Pentachlorophenol	-		
Phenanthrene	-		
Phenol	-		
Pyrene	-		
Explosives (mg/kg)			
1,3,5-Trinitrobenzene	0.075	0.075	U
1,3-Dinitrobenzene	0.075	0.075	U
2,4,6-Trinitrotoluene	0.075	0.075	U
2,4-Dinitrotoluene	0.075	0.075	U
2,6-Dinitrotoluene	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	0.075	0.075	U
2-Nitrotoluene	0.075	0.075	U
3-Nitrotoluene	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	0.075	0.075	U
4-Nitrotoluene	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	U
Nitrobenzene	0.075	0.075	U
Nitroglycerin	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	0.25	0.25	U
Polychlorinated Biphenyls (mg/kg)			
Aroclor 1016	-		
Aroclor 1221	-		
Aroclor 1232	-		
Aroclor 1242	-		
Aroclor 1248	-		
Aroclor 1254	-		
Aroclor 1260	-		
Dioxins/Furans (mg/kg)			
Octachlorodibenzofuran (OCDF)	-		
Octachlorodibenzo-p-dioxin (OCDD)	-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	-		

TABLE B-D22
ANALYTICAL RESULTS FOR GRID D22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	D22		
Sample Name	P3IF-SS-IS-SO-D622		
Date Collected	June 13, 2023		
	Result	LOD	Qual
Metals (mg/kg)			
Aluminum	14000	4	
Antimony	0.21	0.15	
Arsenic	1.4	0.3	
Barium	210	0.2	
Beryllium	0.63	0.3	J
Cadmium	0.59	0.08	
Calcium (Ca)	8700	15	
Chromium	11	0.2	
Cobalt	3.6	0.08	
Copper	98	0.2	
Iron (Fe)	8000	8	
Lead	9.5	0.05	
Magnesium (Mg)	4200	5	
Manganese (Mn)	430	0.08	
Mercury	0.026	0.043	J
Nickel	8.7	0.2	
Potassium (K)	1500	8	
Selenium	1	0.1	
Silver	0.074	0.05	J
Sodium (Na)	83	8	J
Thallium	0.06	0.05	J
Vanadium	11	0.1	
Zinc	22	1.5	
Other Parameters (mg/kg)			
Cyanide (CN-)	-		
Nitrate	-		
Perchlorate	-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-E22
ANALYTICAL RESULTS FOR GRID E22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	E22			E22			E22		
Sample Name	P3IF-BA-GRID-E022			P3IF-SS-IS-SO-E022			P3IF-SS-IS-SO-E522		
Date Collected	June 13, 2023			June 13, 2023			June 13, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)									
1,1,1,2-Tetrachloroethane	0.0023	0.0023	U	-			-		
1,1,1-Trichloroethane	0.0023	0.0023	U	-			-		
1,1,2,2-Tetrachloroethane	0.0023	0.0023	U	-			-		
1,1,2-Trichloroethane	0.0023	0.0023	U	-			-		
1,1-Dichloroethane	0.0023	0.0023	U	-			-		
1,1-Dichloroethene	0.0023	0.0023	U	-			-		
1,1-Dichloropropene	0.0023	0.0023	U	-			-		
1,2,3-Trichlorobenzene	0.0023	0.0023	U	-			-		
1,2,3-Trichloropropane	0.0059	0.0059	U	-			-		
1,2,4-Trichlorobenzene	0.0023	0.0023	U	-			-		
1,2,4-Trimethylbenzene	0.0023	0.0023	U	-			-		
1,2-Dibromo-3-chloropropane	0.0059	0.0059	U	-			-		
1,2-Dibromoethane	0.0023	0.0023	U	-			-		
1,2-Dichlorobenzene	0.0023	0.0023	U	-			-		
1,2-Dichloroethane	0.0023	0.0023	U	-			-		
1,2-Dichloropropane	0.0023	0.0023	U	-			-		
1,3,5-Trimethylbenzene	0.0023	0.0023	U	-			-		
1,3-Dichlorobenzene	0.0023	0.0023	U	-			-		
1,3-Dichloropropane	0.0023	0.0023	U	-			-		
1,4-Dichlorobenzene	0.0023	0.0023	U	-			-		
2,2-Dichloropropane	0.0023	0.0023	U	-			-		
2-Butanone	0.0035	0.0035	U	-			-		
2-Chlorotoluene	0.0023	0.0023	U	-			-		
2-Hexanone	0.0023	0.0023	U	-			-		
4-Chlorotoluene	0.0023	0.0023	U	-			-		
4-Methyl-2-pentanone	0.0023	0.0023	U	-			-		
Acetone	0.0059	0.0059	U	-			-		
Benzene	0.0023	0.0023	U	-			-		
Bromobenzene	0.0023	0.0023	U	-			-		
Bromochloromethane	0.0023	0.0023	U	-			-		
Bromodichloromethane	0.0023	0.0023	U	-			-		
Bromoform	0.0023	0.0023	U	-			-		
Bromomethane	0.0023	0.0023	U	-			-		
Carbon disulfide	0.0023	0.0023	U	-			-		
Carbon tetrachloride	0.0023	0.0023	U	-			-		
Chlorobenzene	0.0023	0.0023	U	-			-		
Chloroethane	0.0023	0.0023	U	-			-		
Chloroform	0.0023	0.0023	U	-			-		
Chloromethane	0.0059	0.0059	U	-			-		
cis-1,2-Dichloroethene	0.0023	0.0023	U	-			-		
cis-1,3-Dichloropropene	0.0023	0.0023	U	-			-		
Dibromochloromethane	0.0023	0.0023	U	-			-		
Dibromomethane	0.0023	0.0023	U	-			-		
Dichlorodifluoromethane	0.0023	0.0023	U	-			-		
Ethylbenzene	0.0023	0.0023	U	-			-		
Hexachlorobutadiene	0.0023	0.0023	U	-			-		
Isopropylbenzene	0.0023	0.0023	U	-			-		
m+p-Xylene	0.0059	0.0059	U	-			-		
Methyl Tertiary Butyl Ether	0.0023	0.0023	U	-			-		
Methylene chloride	0.012	0.012	U	-			-		
n-Butylbenzene	0.0023	0.0023	U	-			-		
n-Propylbenzene	0.0023	0.0023	U	-			-		
Naphthalene	0.0023	0.0023	U	-			-		
o-Xylene	0.0029	0.0029	U	-			-		
4-Isopropyltoluene	0.0023	0.0023	U	-			-		
sec-Butylbenzene	0.0023	0.0023	U	-			-		
Styrene	0.0023	0.0023	U	-			-		
tert-Butylbenzene	0.0023	0.0023	U	-			-		
Tetrachloroethene	0.0023	0.0023	U	-			-		
Toluene	0.0023	0.0023	U	-			-		
trans-1,2-Dichloroethene	0.0023	0.0023	U	-			-		
trans-1,3-Dichloropropene	0.0023	0.0023	U	-			-		
Trichloroethene	0.0023	0.0023	U	-			-		
Trichlorofluoromethane	0.0023	0.0023	U	-			-		
Vinyl chloride	0.0023	0.0023	U	-			-		
Semivolatile Organic Compounds (mg/kg)									
1,2,4-Trichlorobenzene	0.2	0.2	U	-			-		
1,2-Dichlorobenzene	0.2	0.2	U	-			-		
1,3-Dichlorobenzene	0.2	0.2	U	-			-		
1,4-Dichlorobenzene	0.2	0.2	U	-			-		
2,4,5-Trichlorophenol	0.2	0.2	U	-			-		
2,4,6-Trichlorophenol	0.2	0.2	U	-			-		
2,4-Dichlorophenol	0.2	0.2	U	-			-		
2,4-Dimethylphenol	0.2	0.2	U	-			-		
2,4-Dinitrophenol	0.2	0.2	U	-			-		
2,4-Dinitrotoluene	0.2	0.2	U	-			-		
2,6-Dinitrotoluene	0.2	0.2	U	-			-		
2-Chloronaphthalene	0.2	0.2	U	-			-		
2-Chlorophenol	0.2	0.2	U	-			-		
2-Methylnaphthalene	0.2	0.2	U	-			-		
2-Methylphenol	0.2	0.2	U	-			-		
2-Nitroaniline	0.2	0.2	U	-			-		
2-Nitrophenol	0.2	0.2	U	-			-		
3,3-Dichlorobenzidine	0.2	0.2	U	-			-		
3-Nitroaniline	0.2	0.2	U	-			-		
4,6-Dinitro-2-methylphenol	0.2	0.2	U	-			-		
4-Bromophenyl-phenylether	0.2	0.2	U	-			-		
4-Chloro-3-methylphenol	0.2	0.2	U	-			-		
4-Chloroaniline	0.2	0.2	U	-			-		

TABLE B-E22
ANALYTICAL RESULTS FOR GRID E22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	E22			E22			E22		
Sample Name	P3IF-BA-GRID-E022			P3IF-SS-IS-SO-E022			P3IF-SS-IS-SO-E522		
Date Collected	June 13, 2023			June 13, 2023			June 13, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Semivolatile Organic Compounds (mg/kg), continued									
4-Chlorophenyl-phenylether	0.2	0.2	U	-			-		
4-Nitroaniline	0.2	0.2	U	-			-		
4-Nitrophenol	0.2	0.2	U	-			-		
Acenaphthene	0.2	0.2	U	-			-		
Acenaphthylene	0.2	0.2	U	-			-		
Anthracene	0.2	0.2	U	-			-		
Benzo(a)anthracene	0.2	0.2	U	-			-		
Benzo(a)pyrene	0.16	0.16	U	-			-		
Benzo(b)fluoranthene	0.2	0.2	U	-			-		
Benzo(g,h,i)perylene	0.2	0.2	U	-			-		
Benzo(k)fluoranthene	0.2	0.2	U	-			-		
Benzoic acid	0.2	0.2	U	-			-		
Benzyl Alcohol	0.2	0.2	U	-			-		
Bis(2-chloro-1-methylethyl) ether	0.2	0.2	U	-			-		
Bis(2-chloroethoxy)methane	0.2	0.2	U	-			-		
Bis(2-chloroethyl)ether	0.2	0.2	U	-			-		
Bis(2-ethylhexyl)phthalate	0.2	0.2	U	-			-		
Butyl benzyl phthalate	0.2	0.2	U	-			-		
Carbazole	0.2	0.2	U	-			-		
Chrysene	0.2	0.2	U	-			-		
Di-n-butyl phthalate	0.2	0.2	U	-			-		
Di-n-octyl phthalate	0.2	0.2	U	-			-		
Dibenz(a,h)anthracene	**0.16**	**0.16**	**U**	-			-		
Dibenzofuran	0.2	0.2	U	-			-		
Diethyl phthalate	0.2	0.2	U	-			-		
Dimethyl phthalate	0.2	0.2	U	-			-		
Fluoranthene	0.2	0.2	U	-			-		
Fluorene	0.2	0.2	U	-			-		
Hexachlorobenzene	0.2	0.2	U	-			-		
Hexachlorobutadiene	0.2	0.2	U	-			-		
Hexachloroethane	0.2	0.2	U	-			-		
Indeno(1,2,3-cd)pyrene	0.2	0.2	U	-			-		
Isophorone	0.2	0.2	U	-			-		
n-Nitroso-di-n-propylamine	0.2	0.2	U	-			-		
n-Nitrosodimethylamine	**0.024**	**0.024**	**UJ**	-			-		
n-Nitrosodiphenylamine	0.2	0.2	U	-			-		
Naphthalene	0.2	0.2	U	-			-		
Nitrobenzene	0.2	0.2	U	-			-		
Pentachlorophenol	0.2	0.2	U	-			-		
Phenanthrene	0.2	0.2	U	-			-		
Phenol	0.2	0.2	U	-			-		
Pyrene	0.2	0.2	U	-			-		
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	-			0.075	0.075	U	0.075	0.075	U
1,3-Dinitrobenzene	-			0.075	0.075	U	0.075	0.075	U
2,4,6-Trinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2,4-Dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2,6-Dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2-Nitrotoluene	-			0.075	0.075	U	0.075	0.075	U
3-Nitrotoluene	-			0.075	0.075	U	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
4-Nitrotoluene	-			0.075	0.075	U	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	-			0.075	0.075	U	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	-			0.075	0.075	U	0.075	0.075	U
Nitrobenzene	-			0.075	0.075	U	0.075	0.075	U
Nitroglycerin	-			0.15	0.15	U	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	-			0.075	0.075	U	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	-			0.25	0.25	U	0.25	0.25	U
Polychlorinated Biphenyls (mg/kg)									
Aroclor 1016	0.023	0.023	U	-			-		
Aroclor 1221	0.023	0.023	U	-			-		
Aroclor 1232	0.012	0.012	U	-			-		
Aroclor 1242	0.012	0.012	U	-			-		
Aroclor 1248	0.012	0.012	U	-			-		
Aroclor 1254	0.012	0.012	U	-			-		
Aroclor 1260	0.012	0.012	U	-			-		
Dioxins/Furans (mg/kg)									
Octachlorodibenzofuran (OCDF)	0.00000017	0.00000017	U	-			-		
Octachlorodibenzo-p-dioxin (OCDD)	0.000004	0.000004	U	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.00000016	0.00000016	U	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	0.00000071	0.00000071	U	-			-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.00000011	0.00000011	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.0000001	0.0000001	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000011	0.00000011	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000091	0.000000091	J	-			-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000011	0.00000011	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.00000012	0.00000012	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000011	0.00000011	U	-			-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.000000081	0.000000081	U	-			-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.000000058	0.000000058	U	-			-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.00000012	0.00000012	U	-			-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.000000083	0.000000083	U	-			-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.00000015	0.00000015	U	-			-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.000000078	0.000000078	U	-			-		

TABLE B-E22
ANALYTICAL RESULTS FOR GRID E22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	E22			E22			E22		
Sample Name	P3IF-BA-GRID-E022			P3IF-SS-IS-SO-E022			P3IF-SS-IS-SO-E522		
Date Collected	June 13, 2023			June 13, 2023			June 13, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Metals (mg/kg)									
Aluminum	-			13000	4		16000	4	
Antimony	-			0.53	0.15		0.13	0.15	J
Arsenic	-			1.8	0.3		1.6	0.3	
Barium	-			240	0.2		220	0.2	
Beryllium	-			0.62	0.3	J	0.59	0.3	J
Cadmium	-			0.77	0.08		0.61	0.08	
Calcium (Ca)	-			7900	15		6800	15	
Chromium	-			13	0.2		12	0.2	
Cobalt	-			3.4	0.08		3.6	0.08	
Copper	-			180	0.2		130	0.2	
Iron (Fe)	-			7700	8		8100	8	
Lead	-			12	0.05		10	0.05	
Magnesium (Mg)	-			3800	5		4900	5	
Manganese (Mn)	-			410	0.08		410	0.08	
Mercury	-			0.027	0.042	J	0.029	0.044	J
Nickel	-			9.9	0.2		9.1	0.2	
Potassium (K)	-			1200	8		1400	8	
Selenium	-			0.81	0.1		0.73	0.1	
Silver	-			0.11	0.05		0.079	0.05	J
Sodium (Na)	-			44	8		41	8	
Thallium	-			0.058	0.05	J	0.053	0.05	J
Vanadium	-			11	0.1		12	0.1	
Zinc	-			24	1.5		23	1.5	
Other Parameters (mg/kg)									
Cyanide (CN-)	0.37	0.37	U	-			-		
Nitrate	13	2.5		-			-		
Perchlorate	0.0049	0.0049	U	-			-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-E22
ANALYTICAL RESULTS FOR GRID E22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	E22		
Sample Name	P3IF-SS-IS-SO-E622		
Date Collected	June 13, 2023		
	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)			
1,1,1,2-Tetrachloroethane	-		
1,1,1-Trichloroethane	-		
1,1,2,2-Tetrachloroethane	-		
1,1,2-Trichloroethane	-		
1,1-Dichloroethane	-		
1,1-Dichloroethene	-		
1,1-Dichloropropene	-		
1,2,3-Trichlorobenzene	-		
1,2,3-Trichloropropane	-		
1,2,4-Trichlorobenzene	-		
1,2,4-Trimethylbenzene	-		
1,2-Dibromo-3-chloropropane	-		
1,2-Dibromoethane	-		
1,2-Dichlorobenzene	-		
1,2-Dichloroethane	-		
1,2-Dichloropropane	-		
1,3,5-Trimethylbenzene	-		
1,3-Dichlorobenzene	-		
1,3-Dichloropropane	-		
1,4-Dichlorobenzene	-		
2,2-Dichloropropane	-		
2-Butanone	-		
2-Chlorotoluene	-		
2-Hexanone	-		
4-Chlorotoluene	-		
4-Methyl-2-pentanone	-		
Acetone	-		
Benzene	-		
Bromobenzene	-		
Bromochloromethane	-		
Bromodichloromethane	-		
Bromoform	-		
Bromomethane	-		
Carbon disulfide	-		
Carbon tetrachloride	-		
Chlorobenzene	-		
Chloroethane	-		
Chloroform	-		
Chloromethane	-		
cis-1,2-Dichloroethene	-		
cis-1,3-Dichloropropene	-		
Dibromochloromethane	-		
Dibromomethane	-		
Dichlorodifluoromethane	-		
Ethylbenzene	-		
Hexachlorobutadiene	-		
Isopropylbenzene	-		
m+p-Xylene	-		
Methyl Tertiary Butyl Ether	-		
Methylene chloride	-		
n-Butylbenzene	-		
n-Propylbenzene	-		
Naphthalene	-		
o-Xylene	-		
4-Isopropyltoluene	-		
sec-Butylbenzene	-		
Styrene	-		
tert-Butylbenzene	-		
Tetrachloroethene	-		
Toluene	-		
trans-1,2-Dichloroethene	-		
trans-1,3-Dichloropropene	-		
Trichloroethene	-		
Trichlorofluoromethane	-		
Vinyl chloride	-		
Semivolatile Organic Compounds (mg/kg)			
1,2,4-Trichlorobenzene	-		
1,2-Dichlorobenzene	-		
1,3-Dichlorobenzene	-		
1,4-Dichlorobenzene	-		
2,4,5-Trichlorophenol	-		
2,4,6-Trichlorophenol	-		
2,4-Dichlorophenol	-		
2,4-Dimethylphenol	-		
2,4-Dinitrophenol	-		
2,4-Dinitrotoluene	-		
2,6-Dinitrotoluene	-		
2-Chloronaphthalene	-		
2-Chlorophenol	-		
2-Methylnaphthalene	-		
2-Methylphenol	-		
2-Nitroaniline	-		
2-Nitrophenol	-		
3,3-Dichlorobenzidine	-		
3-Nitroaniline	-		
4,6-Dinitro-2-methylphenol	-		
4-Bromophenyl-phenylether	-		
4-Chloro-3-methylphenol	-		
4-Chloroaniline	-		

TABLE B-E22
ANALYTICAL RESULTS FOR GRID E22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	E22		
Sample Name	P3IF-SS-IS-SO-E622		
Date Collected	June 13, 2023		
	Result	LOD	Qual
Semivolatile Organic Compounds (mg/kg), continued			
4-Chlorophenyl-phenylether	-		
4-Nitroaniline	-		
4-Nitrophenol	-		
Acenaphthene	-		
Acenaphthylene	-		
Anthracene	-		
Benzo(a)anthracene	-		
Benzo(a)pyrene	-		
Benzo(b)fluoranthene	-		
Benzo(g,h,i)perylene	-		
Benzo(k)fluoranthene	-		
Benzoic acid	-		
Benzyl Alcohol	-		
Bis(2-chloro-1-methylethyl) ether	-		
Bis(2-chloroethoxy)methane	-		
Bis(2-chloroethyl)ether	-		
Bis(2-ethylhexyl)phthalate	-		
Butyl benzyl phthalate	-		
Carbazole	-		
Chrysene	-		
Di-n-butyl phthalate	-		
Di-n-octyl phthalate	-		
Dibenz(a,h)anthracene	-		
Dibenzofuran	-		
Diethyl phthalate	-		
Dimethyl phthalate	-		
Fluoranthene	-		
Fluorene	-		
Hexachlorobenzene	-		
Hexachlorobutadiene	-		
Hexachloroethane	-		
Indeno(1,2,3-cd)pyrene	-		
Isophorone	-		
n-Nitroso-di-n-propylamine	-		
n-Nitrosodimethylamine	-		
n-Nitrosodiphenylamine	-		
Naphthalene	-		
Nitrobenzene	-		
Pentachlorophenol	-		
Phenanthrene	-		
Phenol	-		
Pyrene	-		
Explosives (mg/kg)			
1,3,5-Trinitrobenzene	0.075	0.075	U
1,3-Dinitrobenzene	0.075	0.075	U
2,4,6-Trinitrotoluene	0.075	0.075	U
2,4-Dinitrotoluene	0.075	0.075	U
2,6-Dinitrotoluene	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	0.075	0.075	U
2-Nitrotoluene	0.075	0.075	U
3-Nitrotoluene	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	0.075	0.075	U
4-Nitrotoluene	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	U
Nitrobenzene	0.075	0.075	U
Nitroglycerin	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	0.25	0.25	U
Polychlorinated Biphenyls (mg/kg)			
Aroclor 1016	-		
Aroclor 1221	-		
Aroclor 1232	-		
Aroclor 1242	-		
Aroclor 1248	-		
Aroclor 1254	-		
Aroclor 1260	-		
Dioxins/Furans (mg/kg)			
Octachlorodibenzofuran (OCDF)	-		
Octachlorodibenzo-p-dioxin (OCDD)	-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	-		

TABLE B-E22
ANALYTICAL RESULTS FOR GRID E22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	E22		
Sample Name	P3IF-SS-IS-SO-E622		
Date Collected	June 13, 2023		
	Result	LOD	Qual
Metals (mg/kg)			
Aluminum	16000	4	
Antimony	0.23	0.15	
Arsenic	1.5	0.3	
Barium	220	0.2	
Beryllium	0.6	0.3	J
Cadmium	0.67	0.08	
Calcium (Ca)	6800	15	
Chromium	14	0.2	
Cobalt	3.7	0.08	
Copper	160	0.2	
Iron (Fe)	8400	8	
Lead	11	0.05	
Magnesium (Mg)	5000	5	
Manganese (Mn)	410	0.08	
Mercury	0.029	0.043	J
Nickel	10	0.2	
Potassium (K)	1600	8	
Selenium	0.9	0.1	
Silver	0.094	0.05	J
Sodium (Na)	50	8	
Thallium	0.055	0.05	J
Vanadium	13	0.1	
Zinc	26	1.5	
Other Parameters (mg/kg)			
Cyanide (CN-)	-		
Nitrate	-		
Perchlorate	-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-E23
ANALYTICAL RESULTS FOR GRID E23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	E23			E23			E23		
Sample Name	P3IF-BA-GRID-E023			P3IF-SS-IS-SO-E023			P3IF-SS-IS-SO-E523		
Date Collected	June 13, 2023			June 13, 2023			June 13, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)									
1,1,1,2-Tetrachloroethane	0.0022	0.0022	U	-			-		
1,1,1-Trichloroethane	0.0022	0.0022	U	-			-		
1,1,2,2-Tetrachloroethane	0.0022	0.0022	U	-			-		
1,1,2-Trichloroethane	0.0022	0.0022	U	-			-		
1,1-Dichloroethane	0.0022	0.0022	U	-			-		
1,1-Dichloroethene	0.0022	0.0022	U	-			-		
1,1-Dichloropropene	0.0022	0.0022	U	-			-		
1,2,3-Trichlorobenzene	0.0022	0.0022	U	-			-		
1,2,3-Trichloropropane	0.0054	0.0054	U	-			-		
1,2,4-Trichlorobenzene	0.0022	0.0022	U	-			-		
1,2,4-Trimethylbenzene	0.0022	0.0022	U	-			-		
1,2-Dibromo-3-chloropropane	0.0054	0.0054	U	-			-		
1,2-Dibromoethane	0.0022	0.0022	U	-			-		
1,2-Dichlorobenzene	0.0022	0.0022	U	-			-		
1,2-Dichloroethane	0.0022	0.0022	U	-			-		
1,2-Dichloropropane	0.0022	0.0022	U	-			-		
1,3,5-Trimethylbenzene	0.0022	0.0022	U	-			-		
1,3-Dichlorobenzene	0.0022	0.0022	U	-			-		
1,3-Dichloropropane	0.0022	0.0022	U	-			-		
1,4-Dichlorobenzene	0.0022	0.0022	U	-			-		
2,2-Dichloropropane	0.0022	0.0022	U	-			-		
2-Butanone	0.0032	0.0032	U	-			-		
2-Chlorotoluene	0.0022	0.0022	U	-			-		
2-Hexanone	0.17	0.0022	J	-			-		
4-Chlorotoluene	0.0022	0.0022	U	-			-		
4-Methyl-2-pentanone	0.0022	0.0022	U	-			-		
Acetone	0.34	0.0054	J	-			-		
Benzene	0.0022	0.0022	U	-			-		
Bromobenzene	0.0022	0.0022	U	-			-		
Bromochloromethane	0.0022	0.0022	U	-			-		
Bromodichloromethane	0.0022	0.0022	U	-			-		
Bromoform	0.0022	0.0022	U	-			-		
Bromomethane	0.0022	0.0022	U	-			-		
Carbon disulfide	0.0022	0.0022	U	-			-		
Carbon tetrachloride	0.0022	0.0022	U	-			-		
Chlorobenzene	0.0022	0.0022	U	-			-		
Chloroethane	0.0022	0.0022	U	-			-		
Chloroform	0.0022	0.0022	U	-			-		
Chloromethane	0.0054	0.0054	U	-			-		
cis-1,2-Dichloroethene	0.0022	0.0022	U	-			-		
cis-1,3-Dichloropropene	0.0022	0.0022	U	-			-		
Dibromochloromethane	0.0022	0.0022	U	-			-		
Dibromomethane	0.0022	0.0022	U	-			-		
Dichlorodifluoromethane	0.0022	0.0022	U	-			-		
Ethylbenzene	0.0022	0.0022	U	-			-		
Hexachlorobutadiene	0.0022	0.0022	U	-			-		
Isopropylbenzene	0.0022	0.0022	U	-			-		
m+p-Xylene	0.0054	0.0054	U	-			-		
Methyl Tertiary Butyl Ether	0.0022	0.0022	U	-			-		
Methylene chloride	0.011	0.011	U	-			-		
n-Butylbenzene	0.0022	0.0022	U	-			-		
n-Propylbenzene	0.0022	0.0022	U	-			-		
Naphthalene	0.0022	0.0022	U	-			-		
o-Xylene	0.0027	0.0027	U	-			-		
4-Isopropyltoluene	0.0022	0.0022	R	-			-		
sec-Butylbenzene	0.0022	0.0022	U	-			-		
Styrene	0.0022	0.0022	U	-			-		
tert-Butylbenzene	0.0022	0.0022	U	-			-		
Tetrachloroethene	0.0022	0.0022	U	-			-		
Toluene	0.0022	0.0022	U	-			-		
trans-1,2-Dichloroethene	0.0022	0.0022	U	-			-		
trans-1,3-Dichloropropene	0.0022	0.0022	U	-			-		
Trichloroethene	0.0022	0.0022	U	-			-		
Trichlorofluoromethane	0.0022	0.0022	U	-			-		
Vinyl chloride	0.0022	0.0022	U	-			-		
Semivolatile Organic Compounds (mg/kg)									
1,2,4-Trichlorobenzene	0.17	0.17	U	-			-		
1,2-Dichlorobenzene	0.17	0.17	U	-			-		
1,3-Dichlorobenzene	0.17	0.17	U	-			-		
1,4-Dichlorobenzene	0.17	0.17	U	-			-		
2,4,5-Trichlorophenol	0.17	0.17	U	-			-		
2,4,6-Trichlorophenol	0.17	0.17	U	-			-		
2,4-Dichlorophenol	0.17	0.17	U	-			-		
2,4-Dimethylphenol	0.17	0.17	U	-			-		
2,4-Dinitrophenol	0.17	0.17	U	-			-		
2,4-Dinitrotoluene	0.17	0.17	U	-			-		
2,6-Dinitrotoluene	0.17	0.17	U	-			-		
2-Chloronaphthalene	0.17	0.17	U	-			-		
2-Chlorophenol	0.17	0.17	U	-			-		
2-Methylnaphthalene	0.17	0.17	U	-			-		
2-Methylphenol	0.17	0.17	U	-			-		
2-Nitroaniline	0.17	0.17	U	-			-		
2-Nitrophenol	0.17	0.17	U	-			-		
3,3-Dichlorobenzidine	0.17	0.17	U	-			-		
3-Nitroaniline	0.17	0.17	U	-			-		
4,6-Dinitro-2-methylphenol	0.17	0.17	U	-			-		
4-Bromophenyl-phenylether	0.17	0.17	U	-			-		
4-Chloro-3-methylphenol	0.17	0.17	U	-			-		
4-Chloroaniline	0.17	0.17	U	-			-		

TABLE B-E23
ANALYTICAL RESULTS FOR GRID E23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	E23			E23			E23		
Sample Name	P3IF-BA-GRID-E023			P3IF-SS-IS-SO-E023			P3IF-SS-IS-SO-E523		
Date Collected	June 13, 2023			June 13, 2023			June 13, 2023		
Semivolatile Organic Compounds (mg/kg), continued									
4-Chlorophenyl-phenylether	0.17	0.17	U	-			-		
4-Nitroaniline	0.17	0.17	U	-			-		
4-Nitrophenol	0.17	0.17	U	-			-		
Acenaphthene	0.17	0.17	U	-			-		
Acenaphthylene	0.17	0.17	U	-			-		
Anthracene	0.17	0.17	U	-			-		
Benzo(a)anthracene	0.17	0.17	U	-			-		
Benzo(a)pyrene	0.13	0.13	U	-			-		
Benzo(b)fluoranthene	0.17	0.17	U	-			-		
Benzo(g,h,i)perylene	0.17	0.17	U	-			-		
Benzo(k)fluoranthene	0.17	0.17	U	-			-		
Benzoic acid	0.17	0.17	U	-			-		
Benzyl Alcohol	0.17	0.17	U	-			-		
Bis(2-chloro-1-methylethyl) ether	0.17	0.17	U	-			-		
Bis(2-chloroethoxy)methane	0.17	0.17	U	-			-		
Bis(2-chloroethyl)ether	0.17	0.17	U	-			-		
Bis(2-ethylhexyl)phthalate	0.17	0.17	U	-			-		
Butyl benzyl phthalate	0.17	0.17	U	-			-		
Carbazole	0.17	0.17	U	-			-		
Chrysene	0.17	0.17	U	-			-		
Di-n-butyl phthalate	0.17	0.17	U	-			-		
Di-n-octyl phthalate	0.17	0.17	U	-			-		
Dibenz(a,h)anthracene	0.13	0.13	U	-			-		
Dibenzofuran	0.17	0.17	U	-			-		
Diethyl phthalate	0.17	0.17	U	-			-		
Dimethyl phthalate	0.17	0.17	U	-			-		
Fluoranthene	0.17	0.17	U	-			-		
Fluorene	0.17	0.17	U	-			-		
Hexachlorobenzene	0.17	0.17	U	-			-		
Hexachlorobutadiene	0.17	0.17	U	-			-		
Hexachloroethane	0.17	0.17	U	-			-		
Indeno(1,2,3-cd)pyrene	0.17	0.17	U	-			-		
Isophorone	0.17	0.17	U	-			-		
n-Nitroso-di-n-propylamine	0.17	0.17	U	-			-		
n-Nitrosodimethylamine	0.021	0.021	U	-			-		
n-Nitrosodiphenylamine	0.17	0.17	U	-			-		
Naphthalene	0.17	0.17	U	-			-		
Nitrobenzene	0.17	0.17	U	-			-		
Pentachlorophenol	0.17	0.17	U	-			-		
Phenanthrene	0.17	0.17	U	-			-		
Phenol	0.17	0.17	U	-			-		
Pyrene	0.17	0.17	U	-			-		
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	-			0.075	0.075	U	0.075	0.075	U
1,3-Dinitrobenzene	-			0.075	0.075	U	0.075	0.075	U
2,4,6-Trinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2,4-Dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2,6-Dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2-Nitrotoluene	-			0.075	0.075	U	0.075	0.075	U
3-Nitrotoluene	-			0.075	0.075	U	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	-			0.1	0.075		0.13	0.075	
4-Nitrotoluene	-			0.075	0.075	U	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	-			0.075	0.075	U	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	-			0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	-			0.075	0.075	U	0.075	0.075	U
Nitroglycerin	-			0.15	0.15	U	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	-			0.075	0.075	U	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	-			0.25	0.25	U	0.25	0.25	U
Polychlorinated Biphenyls (mg/kg)									
Aroclor 1016	0.021	0.021	U	-			-		
Aroclor 1221	0.021	0.021	U	-			-		
Aroclor 1232	0.01	0.01	U	-			-		
Aroclor 1242	0.01	0.01	U	-			-		
Aroclor 1248	0.01	0.01	U	-			-		
Aroclor 1254	0.01	0.01	U	-			-		
Aroclor 1260	0.01	0.01	U	-			-		
Dioxins/Furans (mg/kg)									
Octachlorodibenzofuran (OCDF)	0.000000089	0.000000089	U	-			-		
Octachlorodibenzo-p-dioxin (OCDD)	0.0000021	0.0000021	J	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.000000076	0.000000076	U	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	0.00000017	0.00000017	U	-			-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.000000033	0.000000033	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000025	0.000000025	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000073	0.000000073	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000025	0.000000025	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000041	0.000000041	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.000000047	0.000000047	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000062	0.000000062	U	-			-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.000000059	0.000000059	U	-			-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.000000046	0.000000046	U	-			-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000039	0.000000039	U	-			-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000007	0.00000007	U	-			-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.00000028	0.00000028	U	-			-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.000000063	0.000000063	U	-			-		

TABLE B-E23
ANALYTICAL RESULTS FOR GRID E23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	E23			E23			E23		
Sample Name	P3IF-BA-GRID-E023			P3IF-SS-IS-SO-E023			P3IF-SS-IS-SO-E523		
Date Collected	June 13, 2023			June 13, 2023			June 13, 2023		
Metals (mg/kg)									
Aluminum	-			11000	4		13000	4	
Antimony	-			0.11	0.15	J	0.31	0.15	
Arsenic	-			1.2	0.3		1.3	0.3	
Barium	-			160	0.2		200	0.2	
Beryllium	-			0.48	0.3	J	0.54	0.3	J
Cadmium	-			0.38	0.08		0.36	0.08	
Calcium (Ca)	-			4100	15		5300	15	
Chromium	-			8	0.2		9.8	0.2	
Cobalt	-			3.1	0.08		3.6	0.08	
Copper	-			62	0.2		75	0.2	
Iron (Fe)	-			6700	8		7600	8	
Lead	-			7.3	0.05		8	0.05	
Magnesium (Mg)	-			3500	5		4000	5	
Manganese (Mn)	-			340	0.08		380	0.08	
Mercury	-			0.015	0.04	J	0.018	0.041	J
Nickel	-			6.4	0.2		7.3	0.2	
Potassium (K)	-			1200	8		1200	8	
Selenium	-			0.56	0.1		0.79	0.1	
Silver	-			0.053	0.05	J	0.055	0.05	J
Sodium (Na)	-			28	8		34	8	
Thallium	-			0.048	0.05	J	0.068	0.05	J
Vanadium	-			11	0.1		13	0.1	
Zinc	-			18	1.5		20	1.5	
Other Parameters (mg/kg)									
Cyanide (CN-)	0.33	0.33	U	-			-		
Nitrate	10	2.1	J	-			-		
Perchlorate	0.0042	0.0042	U	-			-		

Notes:
**Explosives were resampled on March22, 2024. The explosive results from the original sample from June 2023 were all rejected.
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-E23
ANALYTICAL RESULTS FOR GRID E23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	E23		
Sample Name	P3IF-SS-IS-SO-E623		
Date Collected	June 13, 2023		
	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)			
1,1,1,2-Tetrachloroethane	-		
1,1,1-Trichloroethane	-		
1,1,2,2-Tetrachloroethane	-		
1,1,2-Trichloroethane	-		
1,1-Dichloroethane	-		
1,1-Dichloroethene	-		
1,1-Dichloropropene	-		
1,2,3-Trichlorobenzene	-		
1,2,3-Trichloropropane	-		
1,2,4-Trichlorobenzene	-		
1,2,4-Trimethylbenzene	-		
1,2-Dibromo-3-chloropropane	-		
1,2-Dibromoethane	-		
1,2-Dichlorobenzene	-		
1,2-Dichloroethane	-		
1,2-Dichloropropane	-		
1,3,5-Trimethylbenzene	-		
1,3-Dichlorobenzene	-		
1,3-Dichloropropane	-		
1,4-Dichlorobenzene	-		
2,2-Dichloropropane	-		
2-Butanone	-		
2-Chlorotoluene	-		
2-Hexanone	-		
4-Chlorotoluene	-		
4-Methyl-2-pentanone	-		
Acetone	-		
Benzene	-		
Bromobenzene	-		
Bromochloromethane	-		
Bromodichloromethane	-		
Bromoform	-		
Bromomethane	-		
Carbon disulfide	-		
Carbon tetrachloride	-		
Chlorobenzene	-		
Chloroethane	-		
Chloroform	-		
Chloromethane	-		
cis-1,2-Dichloroethene	-		
cis-1,3-Dichloropropene	-		
Dibromochloromethane	-		
Dibromomethane	-		
Dichlorodifluoromethane	-		
Ethylbenzene	-		
Hexachlorobutadiene	-		
Isopropylbenzene	-		
m+p-Xylene	-		
Methyl Tertiary Butyl Ether	-		
Methylene chloride	-		
n-Butylbenzene	-		
n-Propylbenzene	-		
Naphthalene	-		
o-Xylene	-		
4-Isopropyltoluene	-		
sec-Butylbenzene	-		
Styrene	-		
tert-Butylbenzene	-		
Tetrachloroethene	-		
Toluene	-		
trans-1,2-Dichloroethene	-		
trans-1,3-Dichloropropene	-		
Trichloroethene	-		
Trichlorofluoromethane	-		
Vinyl chloride	-		
Semivolatile Organic Compounds (mg/kg)			
1,2,4-Trichlorobenzene	-		
1,2-Dichlorobenzene	-		
1,3-Dichlorobenzene	-		
1,4-Dichlorobenzene	-		
2,4,5-Trichlorophenol	-		
2,4,6-Trichlorophenol	-		
2,4-Dichlorophenol	-		
2,4-Dimethylphenol	-		
2,4-Dinitrophenol	-		
2,4-Dinitrotoluene	-		
2,6-Dinitrotoluene	-		
2-Chloronaphthalene	-		
2-Chlorophenol	-		
2-Methylnaphthalene	-		
2-Methylphenol	-		
2-Nitroaniline	-		
2-Nitrophenol	-		
3,3-Dichlorobenzidine	-		
3-Nitroaniline	-		
4,6-Dinitro-2-methylphenol	-		
4-Bromophenyl-phenylether	-		
4-Chloro-3-methylphenol	-		
4-Chloroaniline	-		

TABLE B-E23
ANALYTICAL RESULTS FOR GRID E23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	E23		
Sample Name	P3IF-SS-IS-SO-E623		
Date Collected	June 13, 2023		
Semivolatile Organic Compounds (mg/kg), continued			
4-Chlorophenyl-phenylether	-		
4-Nitroaniline	-		
4-Nitrophenol	-		
Acenaphthene	-		
Acenaphthylene	-		
Anthracene	-		
Benzo(a)anthracene	-		
Benzo(a)pyrene	-		
Benzo(b)fluoranthene	-		
Benzo(g,h,i)perylene	-		
Benzo(k)fluoranthene	-		
Benzoic acid	-		
Benzyl Alcohol	-		
Bis(2-chloro-1-methylethyl) ether	-		
Bis(2-chloroethoxy)methane	-		
Bis(2-chloroethyl)ether	-		
Bis(2-ethylhexyl)phthalate	-		
Butyl benzyl phthalate	-		
Carbazole	-		
Chrysene	-		
Di-n-butyl phthalate	-		
Di-n-octyl phthalate	-		
Dibenz(a,h)anthracene	-		
Dibenzofuran	-		
Diethyl phthalate	-		
Dimethyl phthalate	-		
Fluoranthene	-		
Fluorene	-		
Hexachlorobenzene	-		
Hexachlorobutadiene	-		
Hexachloroethane	-		
Indeno(1,2,3-cd)pyrene	-		
Isophorone	-		
n-Nitroso-di-n-propylamine	-		
n-Nitrosodimethylamine	-		
n-Nitrosodiphenylamine	-		
Naphthalene	-		
Nitrobenzene	-		
Pentachlorophenol	-		
Phenanthrene	-		
Phenol	-		
Pyrene	-		
Explosives (mg/kg)			
1,3,5-Trinitrobenzene	0.075	0.075	U
1,3-Dinitrobenzene	0.075	0.075	U
2,4,6-Trinitrotoluene	0.075	0.075	U
2,4-Dinitrotoluene	0.075	0.075	U
2,6-Dinitrotoluene	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	0.075	0.075	U
2-Nitrotoluene	0.075	0.075	U
3-Nitrotoluene	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	0.13	0.075	
4-Nitrotoluene	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	U
Nitroglycerin	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	0.25	0.25	U
Polychlorinated Biphenyls (mg/kg)			
Aroclor 1016	-		
Aroclor 1221	-		
Aroclor 1232	-		
Aroclor 1242	-		
Aroclor 1248	-		
Aroclor 1254	-		
Aroclor 1260	-		
Dioxins/Furans (mg/kg)			
Octachlorodibenzofuran (OCDF)	-		
Octachlorodibenzo-p-dioxin (OCDD)	-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	-		

TABLE B-E23
ANALYTICAL RESULTS FOR GRID E23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	E23		
Sample Name	P3IF-SS-IS-SO-E623		
Date Collected	June 13, 2023		
Metals (mg/kg)			
Aluminum	15000	4	
Antimony	0.088	0.15	J
Arsenic	1.3	0.3	
Barium	190	0.2	
Beryllium	0.56	0.3	J
Cadmium	0.37	0.08	
Calcium (Ca)	4600	15	
Chromium	11	0.2	
Cobalt	3.7	0.08	
Copper	77	0.2	
Iron (Fe)	8200	8	
Lead	8.2	0.05	
Magnesium (Mg)	4700	5	
Manganese (Mn)	370	0.08	
Mercury	0.019	0.041	J
Nickel	7.5	0.2	
Potassium (K)	1500	8	
Selenium	0.62	0.1	
Silver	0.065	0.05	J
Sodium (Na)	34	8	
Thallium	0.058	0.05	J
Vanadium	15	0.1	
Zinc	21	1.5	
Other Parameters (mg/kg)			
Cyanide (CN-)	-		
Nitrate	-		
Perchlorate	-		

Notes:
**Explosives were resampled on March22, 2024. The explosive r
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-E24
ANALYTICAL RESULTS FOR GRID E24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	E24			E24			E24		
Sample Name	P3IF-BA-GRID-E024			P3IF-SS-IS-SO-E024			P3IF-SS-IS-SO-E524		
Date Collected	June 13, 2023			June 13, 2023			June 13, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)									
1,1,1,2-Tetrachloroethane	0.0019	0.0019	U	-			-		
1,1,1-Trichloroethane	0.0019	0.0019	U	-			-		
1,1,2,2-Tetrachloroethane	0.0019	0.0019	U	-			-		
1,1,2-Trichloroethane	0.0019	0.0019	U	-			-		
1,1-Dichloroethane	0.0019	0.0019	U	-			-		
1,1-Dichloroethene	0.0019	0.0019	U	-			-		
1,1-Dichloropropene	0.0019	0.0019	U	-			-		
1,2,3-Trichlorobenzene	0.0019	0.0019	U	-			-		
1,2,3-Trichloropropane	0.0047	0.0047	U	-			-		
1,2,4-Trichlorobenzene	0.0019	0.0019	U	-			-		
1,2,4-Trimethylbenzene	0.0019	0.0019	U	-			-		
1,2-Dibromo-3-chloropropane	0.0047	0.0047	U	-			-		
1,2-Dibromoethane	0.0019	0.0019	U	-			-		
1,2-Dichlorobenzene	0.0019	0.0019	U	-			-		
1,2-Dichloroethane	0.0019	0.0019	U	-			-		
1,2-Dichloropropane	0.0019	0.0019	U	-			-		
1,3,5-Trimethylbenzene	0.0019	0.0019	U	-			-		
1,3-Dichlorobenzene	0.0019	0.0019	U	-			-		
1,3-Dichloropropane	0.0019	0.0019	U	-			-		
1,4-Dichlorobenzene	0.0019	0.0019	U	-			-		
2,2-Dichloropropane	0.0019	0.0019	U	-			-		
2-Butanone	0.0028	0.0028	U	-			-		
2-Chlorotoluene	0.0019	0.0019	U	-			-		
2-Hexanone	0.0019	0.0019	U	-			-		
4-Chlorotoluene	0.0019	0.0019	U	-			-		
4-Methyl-2-pentanone	0.0019	0.0019	U	-			-		
Acetone	0.049	0.0047		-			-		
Benzene	0.0019	0.0019	U	-			-		
Bromobenzene	0.0019	0.0019	U	-			-		
Bromochloromethane	0.0019	0.0019	U	-			-		
Bromodichloromethane	0.0019	0.0019	U	-			-		
Bromoform	0.0019	0.0019	U	-			-		
Bromomethane	0.0019	0.0019	U	-			-		
Carbon disulfide	0.0019	0.0019	U	-			-		
Carbon tetrachloride	0.0019	0.0019	U	-			-		
Chlorobenzene	0.0019	0.0019	U	-			-		
Chloroethane	0.0019	0.0019	U	-			-		
Chloroform	0.0019	0.0019	U	-			-		
Chloromethane	0.0047	0.0047	U	-			-		
cis-1,2-Dichloroethene	0.0019	0.0019	U	-			-		
cis-1,3-Dichloropropene	0.0019	0.0019	U	-			-		
Dibromochloromethane	0.0019	0.0019	U	-			-		
Dibromomethane	0.0019	0.0019	U	-			-		
Dichlorodifluoromethane	0.0019	0.0019	U	-			-		
Ethylbenzene	0.0019	0.0019	U	-			-		
Hexachlorobutadiene	0.0019	0.0019	U	-			-		
Isopropylbenzene	0.0019	0.0019	U	-			-		
m+p-Xylene	0.0047	0.0047	U	-			-		
Methyl Tertiary Butyl Ether	0.0019	0.0019	U	-			-		
Methylene chloride	0.0095	0.0095	U	-			-		
n-Butylbenzene	0.0019	0.0019	U	-			-		
n-Propylbenzene	0.0019	0.0019	U	-			-		
Naphthalene	0.0019	0.0019	U	-			-		
o-Xylene	0.0024	0.0024	U	-			-		
4-Isopropyltoluene	0.0019	0.0019	U	-			-		
sec-Butylbenzene	0.0019	0.0019	U	-			-		
Styrene	0.0019	0.0019	U	-			-		
tert-Butylbenzene	0.0019	0.0019	U	-			-		
Tetrachloroethene	0.0019	0.0019	U	-			-		
Toluene	0.0019	0.0019	U	-			-		
trans-1,2-Dichloroethene	0.0019	0.0019	U	-			-		
trans-1,3-Dichloropropene	0.0019	0.0019	U	-			-		
Trichloroethene	0.0019	0.0019	U	-			-		
Trichlorofluoromethane	0.0019	0.0019	U	-			-		
Vinyl chloride	0.0019	0.0019	U	-			-		
Semivolatile Organic Compounds (mg/kg)									
1,2,4-Trichlorobenzene	0.17	0.17	U	-			-		
1,2-Dichlorobenzene	0.17	0.17	U	-			-		
1,3-Dichlorobenzene	0.17	0.17	U	-			-		
1,4-Dichlorobenzene	0.17	0.17	U	-			-		
2,4,5-Trichlorophenol	0.17	0.17	U	-			-		
2,4,6-Trichlorophenol	0.17	0.17	U	-			-		
2,4-Dichlorophenol	0.17	0.17	U	-			-		
2,4-Dimethylphenol	0.17	0.17	U	-			-		
2,4-Dinitrophenol	0.17	0.17	U	-			-		
2,4-Dinitrotoluene	0.17	0.17	U	-			-		
2,6-Dinitrotoluene	0.17	0.17	U	-			-		
2-Chloronaphthalene	0.17	0.17	U	-			-		
2-Chlorophenol	0.17	0.17	U	-			-		
2-Methylnaphthalene	0.17	0.17	U	-			-		
2-Methylphenol	0.17	0.17	U	-			-		
2-Nitroaniline	0.17	0.17	U	-			-		
2-Nitrophenol	0.17	0.17	U	-			-		
3,3-Dichlorobenzidine	0.17	0.17	U	-			-		
3-Nitroaniline	0.17	0.17	U	-			-		
4,6-Dinitro-2-methylphenol	0.17	0.17	U	-			-		
4-Bromophenyl-phenylether	0.17	0.17	U	-			-		
4-Chloro-3-methylphenol	0.17	0.17	U	-			-		
4-Chloroaniline	0.17	0.17	U	-			-		

TABLE B-E24
ANALYTICAL RESULTS FOR GRID E24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	E24			E24			E24		
Sample Name	P3IF-BA-GRID-E024			P3IF-SS-IS-SO-E024			P3IF-SS-IS-SO-E524		
Date Collected	June 13, 2023			June 13, 2023			June 13, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Semivolatile Organic Compounds (mg/kg), continued									
4-Chlorophenyl-phenylether	0.17	0.17	U	-			-		
4-Nitroaniline	0.17	0.17	U	-			-		
4-Nitrophenol	0.17	0.17	U	-			-		
Acenaphthene	0.17	0.17	U	-			-		
Acenaphthylene	0.17	0.17	U	-			-		
Anthracene	0.17	0.17	U	-			-		
Benzo(a)anthracene	0.17	0.17	U	-			-		
Benzo(a)pyrene	0.13	0.13	U	-			-		
Benzo(b)fluoranthene	0.17	0.17	U	-			-		
Benzo(g,h,i)perylene	0.17	0.17	U	-			-		
Benzo(k)fluoranthene	0.17	0.17	U	-			-		
Benzoic acid	0.17	0.17	U	-			-		
Benzyl Alcohol	0.17	0.17	U	-			-		
Bis(2-chloro-1-methylethyl) ether	0.17	0.17	U	-			-		
Bis(2-chloroethoxy)methane	0.17	0.17	U	-			-		
Bis(2-chloroethyl)ether	0.17	0.17	U	-			-		
Bis(2-ethylhexyl)phthalate	0.17	0.17	U	-			-		
Butyl benzyl phthalate	0.17	0.17	U	-			-		
Carbazole	0.17	0.17	U	-			-		
Chrysene	0.17	0.17	U	-			-		
Di-n-butyl phthalate	0.17	0.17	U	-			-		
Di-n-octyl phthalate	0.17	0.17	U	-			-		
Dibenz(a,h)anthracene	0.13	0.13	U	-			-		
Dibenzofuran	0.17	0.17	U	-			-		
Diethyl phthalate	0.17	0.17	U	-			-		
Dimethyl phthalate	0.17	0.17	U	-			-		
Fluoranthene	0.17	0.17	U	-			-		
Fluorene	0.17	0.17	U	-			-		
Hexachlorobenzene	0.17	0.17	U	-			-		
Hexachlorobutadiene	0.17	0.17	U	-			-		
Hexachloroethane	0.17	0.17	U	-			-		
Indeno(1,2,3-cd)pyrene	0.17	0.17	U	-			-		
Isophorone	0.17	0.17	U	-			-		
n-Nitroso-di-n-propylamine	0.17	0.17	U	-			-		
n-Nitrosodimethylamine	0.02	0.02	UJ	-			-		
n-Nitrosodiphenylamine	0.17	0.17	U	-			-		
Naphthalene	0.17	0.17	U	-			-		
Nitrobenzene	0.17	0.17	U	-			-		
Pentachlorophenol	0.17	0.17	U	-			-		
Phenanthrene	0.17	0.17	U	-			-		
Phenol	0.17	0.17	U	-			-		
Pyrene	0.17	0.17	U	-			-		
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	-			0.075	0.075	U	0.075	0.075	U
1,3-Dinitrobenzene	-			0.075	0.075	U	0.075	0.075	U
2,4,6-Trinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2,4-Dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2,6-Dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2-Nitrotoluene	-			0.075	0.075	U	0.075	0.075	U
3-Nitrotoluene	-			0.075	0.075	U	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
4-Nitrotoluene	-			0.075	0.075	U	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	-			0.075	0.075	U	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	-			0.075	0.075	U	0.075	0.075	U
Nitrobenzene	-			0.075	0.075	U	0.075	0.075	U
Nitroglycerin	-			0.15	0.15	U	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	-			0.075	0.075	U	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	-			0.25	0.25	U	0.25	0.25	U
Polychlorinated Biphenyls (mg/kg)									
Aroclor 1016	0.019	0.019	U	-			-		
Aroclor 1221	0.019	0.019	U	-			-		
Aroclor 1232	0.0097	0.0097	U	-			-		
Aroclor 1242	0.0097	0.0097	U	-			-		
Aroclor 1248	0.0097	0.0097	U	-			-		
Aroclor 1254	0.0097	0.0097	U	-			-		
Aroclor 1260	0.0097	0.0097	U	-			-		
Dioxins/Furans (mg/kg)									
Octachlorodibenzofuran (OCDF)	0.00000039	0.00000039	U	-			-		
Octachlorodibenzo-p-dioxin (OCDD)	0.0000036	0.0000036	U	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.000000096	0.000000096	U	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	0.0000012	0.0000012	J	-			-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.00000025	0.00000025	J	-			-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.00000011	0.00000011	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000012	0.00000012	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.00000011	0.00000011	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000072	0.000000072	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.00000014	0.00000014	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000073	0.000000073	U	-			-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000013	0.00000013	U	-			-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.000000077	0.000000077	U	-			-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.00000011	0.00000011	U	-			-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000013	0.00000013	U	-			-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.0000004	0.0000004	J	-			-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.000000085	0.000000085	U	-			-		

TABLE B-E24
ANALYTICAL RESULTS FOR GRID E24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	E24			E24			E24		
Sample Name	P3IF-BA-GRID-E024			P3IF-SS-IS-SO-E024			P3IF-SS-IS-SO-E524		
Date Collected	June 13, 2023			June 13, 2023			June 13, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Metals (mg/kg)									
Aluminum	-			17000	4		16000	4	
Antimony	-			0.15	0.15	U	0.15	0.15	U
Arsenic	-			1.5	0.3		1.6	0.3	
Barium	-			160	0.2		170	0.2	
Beryllium	-			0.62	0.3	J	0.72	0.3	J
Cadmium	-			0.3	0.08		0.29	0.08	
Calcium (Ca)	-			4100	15		4800	15	
Chromium	-			10	0.2		10	0.2	
Cobalt	-			3.7	0.08		4	0.08	
Copper	-			59	0.2		56	0.2	
Iron (Fe)	-			8500	8		8400	8	
Lead	-			7.1	0.05		8.3	0.05	
Magnesium (Mg)	-			5400	5		5100	5	
Manganese (Mn)	-			360	0.08		400	0.08	
Mercury	-			0.023	0.046	J	0.021	0.042	J
Nickel	-			7.5	0.2		7.9	0.2	
Potassium (K)	-			1200	8		1100	8	
Selenium	-			1	0.1		0.93	0.1	
Silver	-			0.047	0.05	J	0.037	0.05	J
Sodium (Na)	-			30	8		31	8	
Thallium	-			0.05	0.05	J	0.067	0.05	J
Vanadium	-			15	0.1		15	0.1	
Zinc	-			20	1.5		20	1.5	
Other Parameters (mg/kg)									
Cyanide (CN-)	0.32	0.32	U	-			-		
Nitrate	6.2	2.1	J	-			-		
Perchlorate	0.0042	0.0042	U	-			-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-E24
ANALYTICAL RESULTS FOR GRID E24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	E24		
Sample Name	P3IF-SS-IS-SO-E624		
Date Collected	June 13, 2023		
	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)			
1,1,1,2-Tetrachloroethane	-		
1,1,1-Trichloroethane	-		
1,1,2,2-Tetrachloroethane	-		
1,1,2-Trichloroethane	-		
1,1-Dichloroethane	-		
1,1-Dichloroethene	-		
1,1-Dichloropropene	-		
1,2,3-Trichlorobenzene	-		
1,2,3-Trichloropropane	-		
1,2,4-Trichlorobenzene	-		
1,2,4-Trimethylbenzene	-		
1,2-Dibromo-3-chloropropane	-		
1,2-Dibromoethane	-		
1,2-Dichlorobenzene	-		
1,2-Dichloroethane	-		
1,2-Dichloropropane	-		
1,3,5-Trimethylbenzene	-		
1,3-Dichlorobenzene	-		
1,3-Dichloropropane	-		
1,4-Dichlorobenzene	-		
2,2-Dichloropropane	-		
2-Butanone	-		
2-Chlorotoluene	-		
2-Hexanone	-		
4-Chlorotoluene	-		
4-Methyl-2-pentanone	-		
Acetone	-		
Benzene	-		
Bromobenzene	-		
Bromochloromethane	-		
Bromodichloromethane	-		
Bromoform	-		
Bromomethane	-		
Carbon disulfide	-		
Carbon tetrachloride	-		
Chlorobenzene	-		
Chloroethane	-		
Chloroform	-		
Chloromethane	-		
cis-1,2-Dichloroethene	-		
cis-1,3-Dichloropropene	-		
Dibromochloromethane	-		
Dibromomethane	-		
Dichlorodifluoromethane	-		
Ethylbenzene	-		
Hexachlorobutadiene	-		
Isopropylbenzene	-		
m+p-Xylene	-		
Methyl Tertiary Butyl Ether	-		
Methylene chloride	-		
n-Butylbenzene	-		
n-Propylbenzene	-		
Naphthalene	-		
o-Xylene	-		
4-Isopropyltoluene	-		
sec-Butylbenzene	-		
Styrene	-		
tert-Butylbenzene	-		
Tetrachloroethene	-		
Toluene	-		
trans-1,2-Dichloroethene	-		
trans-1,3-Dichloropropene	-		
Trichloroethene	-		
Trichlorofluoromethane	-		
Vinyl chloride	-		
Semivolatile Organic Compounds (mg/kg)			
1,2,4-Trichlorobenzene	-		
1,2-Dichlorobenzene	-		
1,3-Dichlorobenzene	-		
1,4-Dichlorobenzene	-		
2,4,5-Trichlorophenol	-		
2,4,6-Trichlorophenol	-		
2,4-Dichlorophenol	-		
2,4-Dimethylphenol	-		
2,4-Dinitrophenol	-		
2,4-Dinitrotoluene	-		
2,6-Dinitrotoluene	-		
2-Chloronaphthalene	-		
2-Chlorophenol	-		
2-Methylnaphthalene	-		
2-Methylphenol	-		
2-Nitroaniline	-		
2-Nitrophenol	-		
3,3-Dichlorobenzidine	-		
3-Nitroaniline	-		
4,6-Dinitro-2-methylphenol	-		
4-Bromophenyl-phenylether	-		
4-Chloro-3-methylphenol	-		
4-Chloroaniline	-		

TABLE B-E24
ANALYTICAL RESULTS FOR GRID E24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	E24		
Sample Name	P3IF-SS-IS-SO-E624		
Date Collected	June 13, 2023		
	Result	LOD	Qual
Semivolatile Organic Compounds (mg/kg), continued			
4-Chlorophenyl-phenylether	-		
4-Nitroaniline	-		
4-Nitrophenol	-		
Acenaphthene	-		
Acenaphthylene	-		
Anthracene	-		
Benzo(a)anthracene	-		
Benzo(a)pyrene	-		
Benzo(b)fluoranthene	-		
Benzo(g,h,i)perylene	-		
Benzo(k)fluoranthene	-		
Benzoic acid	-		
Benzyl Alcohol	-		
Bis(2-chloro-1-methylethyl) ether	-		
Bis(2-chloroethoxy)methane	-		
Bis(2-chloroethyl)ether	-		
Bis(2-ethylhexyl)phthalate	-		
Butyl benzyl phthalate	-		
Carbazole	-		
Chrysene	-		
Di-n-butyl phthalate	-		
Di-n-octyl phthalate	-		
Dibenz(a,h)anthracene	-		
Dibenzofuran	-		
Diethyl phthalate	-		
Dimethyl phthalate	-		
Fluoranthene	-		
Fluorene	-		
Hexachlorobenzene	-		
Hexachlorobutadiene	-		
Hexachloroethane	-		
Indeno(1,2,3-cd)pyrene	-		
Isophorone	-		
n-Nitroso-di-n-propylamine	-		
n-Nitrosodimethylamine	-		
n-Nitrosodiphenylamine	-		
Naphthalene	-		
Nitrobenzene	-		
Pentachlorophenol	-		
Phenanthrene	-		
Phenol	-		
Pyrene	-		
Explosives (mg/kg)			
1,3,5-Trinitrobenzene	0.075	0.075	U
1,3-Dinitrobenzene	0.075	0.075	U
2,4,6-Trinitrotoluene	0.075	0.075	U
2,4-Dinitrotoluene	0.075	0.075	U
2,6-Dinitrotoluene	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	0.075	0.075	U
2-Nitrotoluene	0.075	0.075	U
3-Nitrotoluene	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	0.075	0.075	U
4-Nitrotoluene	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	U
Nitrobenzene	0.075	0.075	U
Nitroglycerin	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	0.25	0.25	U
Polychlorinated Biphenyls (mg/kg)			
Aroclor 1016	-		
Aroclor 1221	-		
Aroclor 1232	-		
Aroclor 1242	-		
Aroclor 1248	-		
Aroclor 1254	-		
Aroclor 1260	-		
Dioxins/Furans (mg/kg)			
Octachlorodibenzofuran (OCDF)	-		
Octachlorodibenzo-p-dioxin (OCDD)	-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	-		

TABLE B-E24
ANALYTICAL RESULTS FOR GRID E24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	E24		
Sample Name	P3IF-SS-IS-SO-E624		
Date Collected	June 13, 2023		
	Result	LOD	Qual
Metals (mg/kg)			
Aluminum	18000	4	
Antimony	0.15	0.15	U
Arsenic	1.5	0.3	
Barium	170	0.2	
Beryllium	0.65	0.3	J
Cadmium	0.29	0.08	
Calcium (Ca)	4300	15	
Chromium	11	0.2	
Cobalt	4	0.08	
Copper	53	0.2	
Iron (Fe)	9000	8	
Lead	7.5	0.05	
Magnesium (Mg)	5600	5	
Manganese (Mn)	360	0.08	
Mercury	0.021	0.042	J
Nickel	7.9	0.2	
Potassium (K)	1300	8	
Selenium	0.9	0.1	
Silver	0.054	0.05	J
Sodium (Na)	33	8	
Thallium	0.052	0.05	J
Vanadium	16	0.1	
Zinc	22	1.5	
Other Parameters (mg/kg)			
Cyanide (CN-)	-		
Nitrate	-		
Perchlorate	-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-E25
ANALYTICAL RESULTS FOR GRID E25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	E25			E25			E25		
Sample Name	P3IF-BA-GRID-E025			P3IF-SS-IS-SO-E025			P3IF-SS-IS-SO-E525		
Date Collected	June 13, 2023			June 13, 2023			June 13, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)									
1,1,1,2-Tetrachloroethane	0.0021	0.0021	U	-			-		
1,1,1-Trichloroethane	0.0021	0.0021	U	-			-		
1,1,2,2-Tetrachloroethane	0.0021	0.0021	U	-			-		
1,1,2-Trichloroethane	0.0021	0.0021	U	-			-		
1,1-Dichloroethane	0.0021	0.0021	U	-			-		
1,1-Dichloroethene	0.0021	0.0021	U	-			-		
1,1-Dichloropropene	0.0021	0.0021	U	-			-		
1,2,3-Trichlorobenzene	0.0021	0.0021	U	-			-		
1,2,3-Trichloropropane	0.0054	0.0054	U	-			-		
1,2,4-Trichlorobenzene	0.0021	0.0021	U	-			-		
1,2,4-Trimethylbenzene	0.0021	0.0021	U	-			-		
1,2-Dibromo-3-chloropropane	0.0054	0.0054	U	-			-		
1,2-Dibromoethane	0.0021	0.0021	U	-			-		
1,2-Dichlorobenzene	0.0021	0.0021	U	-			-		
1,2-Dichloroethane	0.0021	0.0021	U	-			-		
1,2-Dichloropropane	0.0021	0.0021	U	-			-		
1,3,5-Trimethylbenzene	0.0021	0.0021	U	-			-		
1,3-Dichlorobenzene	0.0021	0.0021	U	-			-		
1,3-Dichloropropane	0.0021	0.0021	U	-			-		
1,4-Dichlorobenzene	0.0021	0.0021	U	-			-		
2,2-Dichloropropane	0.0021	0.0021	U	-			-		
2-Butanone	0.0032	0.0032	U	-			-		
2-Chlorotoluene	0.0021	0.0021	U	-			-		
2-Hexanone	0.0021	0.0021	U	-			-		
4-Chlorotoluene	0.0021	0.0021	U	-			-		
4-Methyl-2-pentanone	0.0021	0.0021	U	-			-		
Acetone	0.025	0.0054	J	-			-		
Benzene	0.0021	0.0021	U	-			-		
Bromobenzene	0.0021	0.0021	U	-			-		
Bromochloromethane	0.0021	0.0021	U	-			-		
Bromodichloromethane	0.0021	0.0021	U	-			-		
Bromoform	0.0021	0.0021	U	-			-		
Bromomethane	0.0021	0.0021	U	-			-		
Carbon disulfide	0.0021	0.0021	U	-			-		
Carbon tetrachloride	0.0021	0.0021	U	-			-		
Chlorobenzene	0.0021	0.0021	U	-			-		
Chloroethane	0.0021	0.0021	U	-			-		
Chloroform	0.0021	0.0021	U	-			-		
Chloromethane	0.0054	0.0054	U	-			-		
cis-1,2-Dichloroethene	0.0021	0.0021	U	-			-		
cis-1,3-Dichloropropene	0.0021	0.0021	U	-			-		
Dibromochloromethane	0.0021	0.0021	U	-			-		
Dibromomethane	0.0021	0.0021	U	-			-		
Dichlorodifluoromethane	0.0021	0.0021	U	-			-		
Ethylbenzene	0.0021	0.0021	U	-			-		
Hexachlorobutadiene	0.0021	0.0021	U	-			-		
Isopropylbenzene	0.0021	0.0021	U	-			-		
m+p-Xylene	0.0054	0.0054	U	-			-		
Methyl Tertiary Butyl Ether	0.0021	0.0021	U	-			-		
Methylene chloride	0.011	0.011	U	-			-		
n-Butylbenzene	0.0021	0.0021	U	-			-		
n-Propylbenzene	0.0021	0.0021	U	-			-		
Naphthalene	0.0021	0.0021	U	-			-		
o-Xylene	0.0027	0.0027	U	-			-		
4-Isopropyltoluene	0.0021	0.0021	U	-			-		
sec-Butylbenzene	0.0021	0.0021	U	-			-		
Styrene	0.0021	0.0021	U	-			-		
tert-Butylbenzene	0.0021	0.0021	U	-			-		
Tetrachloroethene	0.0021	0.0021	U	-			-		
Toluene	0.0021	0.0021	U	-			-		
trans-1,2-Dichloroethene	0.0021	0.0021	U	-			-		
trans-1,3-Dichloropropene	0.0021	0.0021	U	-			-		
Trichloroethene	0.0021	0.0021	U	-			-		
Trichlorofluoromethane	0.0021	0.0021	U	-			-		
Vinyl chloride	0.0021	0.0021	U	-			-		
Semivolatile Organic Compounds (mg/kg)									
1,2,4-Trichlorobenzene	0.17	0.17	U	-			-		
1,2-Dichlorobenzene	0.17	0.17	U	-			-		
1,3-Dichlorobenzene	0.17	0.17	U	-			-		
1,4-Dichlorobenzene	0.17	0.17	U	-			-		
2,4,5-Trichlorophenol	0.17	0.17	U	-			-		
2,4,6-Trichlorophenol	0.17	0.17	U	-			-		
2,4-Dichlorophenol	0.17	0.17	U	-			-		
2,4-Dimethylphenol	0.17	0.17	U	-			-		
2,4-Dinitrophenol	0.17	0.17	U	-			-		
2,4-Dinitrotoluene	0.17	0.17	U	-			-		
2,6-Dinitrotoluene	0.17	0.17	U	-			-		
2-Chloronaphthalene	0.17	0.17	U	-			-		
2-Chlorophenol	0.17	0.17	U	-			-		
2-Methylnaphthalene	0.17	0.17	U	-			-		
2-Methylphenol	0.17	0.17	U	-			-		
2-Nitroaniline	0.17	0.17	U	-			-		
2-Nitrophenol	0.17	0.17	U	-			-		
3,3-Dichlorobenzidine	0.17	0.17	U	-			-		
3-Nitroaniline	0.17	0.17	U	-			-		
4,6-Dinitro-2-methylphenol	0.17	0.17	U	-			-		
4-Bromophenyl-phenylether	0.17	0.17	U	-			-		
4-Chloro-3-methylphenol	0.17	0.17	U	-			-		
4-Chloroaniline	0.17	0.17	U	-			-		

TABLE B-E25
ANALYTICAL RESULTS FOR GRID E25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Semivolatile Organic Compounds (mg/kg), continued									
4-Chlorophenyl-phenylether	0.17	0.17	U	-			-		
4-Nitroaniline	0.17	0.17	U	-			-		
4-Nitrophenol	0.17	0.17	U	-			-		
Acenaphthene	0.17	0.17	U	-			-		
Acenaphthylene	0.17	0.17	U	-			-		
Anthracene	0.17	0.17	U	-			-		
Benzo(a)anthracene	0.17	0.17	U	-			-		
Benzo(a)pyrene	0.13	0.13	U	-			-		
Benzo(b)fluoranthene	0.17	0.17	U	-			-		
Benzo(g,h,i)perylene	0.17	0.17	U	-			-		
Benzo(k)fluoranthene	0.17	0.17	U	-			-		
Benzoic acid	0.17	0.17	U	-			-		
Benzyl Alcohol	0.17	0.17	U	-			-		
Bis(2-chloro-1-methylethyl) ether	0.17	0.17	U	-			-		
Bis(2-chloroethoxy)methane	0.17	0.17	U	-			-		
Bis(2-chloroethyl)ether	0.17	0.17	U	-			-		
Bis(2-ethylhexyl)phthalate	0.17	0.17	U	-			-		
Butyl benzyl phthalate	0.17	0.17	U	-			-		
Carbazole	0.17	0.17	U	-			-		
Chrysene	0.17	0.17	U	-			-		
Di-n-butyl phthalate	0.17	0.17	U	-			-		
Di-n-octyl phthalate	0.17	0.17	U	-			-		
Dibenz(a,h)anthracene	0.13	0.13	U	-			-		
Dibenzofuran	0.17	0.17	U	-			-		
Diethyl phthalate	0.17	0.17	U	-			-		
Dimethyl phthalate	0.17	0.17	U	-			-		
Fluoranthene	0.17	0.17	U	-			-		
Fluorene	0.17	0.17	U	-			-		
Hexachlorobenzene	0.17	0.17	U	-			-		
Hexachlorobutadiene	0.17	0.17	U	-			-		
Hexachloroethane	0.17	0.17	U	-			-		
Indeno(1,2,3-cd)pyrene	0.17	0.17	U	-			-		
Isophorone	0.17	0.17	U	-			-		
n-Nitroso-di-n-propylamine	0.17	0.17	U	-			-		
n-Nitrosodimethylamine	0.02	0.02	UJ	-			-		
n-Nitrosodiphenylamine	0.17	0.17	U	-			-		
Naphthalene	0.17	0.17	U	-			-		
Nitrobenzene	0.17	0.17	U	-			-		
Pentachlorophenol	0.17	0.17	U	-			-		
Phenanthrene	0.17	0.17	U	-			-		
Phenol	0.17	0.17	U	-			-		
Pyrene	0.17	0.17	U	-			-		
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	-			0.075	0.075	U	0.075	0.075	U
1,3-Dinitrobenzene	-			0.075	0.075	U	0.075	0.075	U
2,4,6-Trinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2,4-Dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2,6-Dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2-Nitrotoluene	-			0.075	0.075	U	0.075	0.075	U
3-Nitrotoluene	-			0.075	0.075	U	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
4-Nitrotoluene	-			0.075	0.075	U	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	-			0.075	0.075	U	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	-			0.075	0.075	U	0.075	0.075	U
Nitrobenzene	-			0.075	0.075	U	0.075	0.075	U
Nitroglycerin	-			0.15	0.15	U	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	-			0.075	0.075	U	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	-			0.25	0.25	U	0.25	0.25	U
Polychlorinated Biphenyls (mg/kg)									
Aroclor 1016	0.02	0.02	U	-			-		
Aroclor 1221	0.02	0.02	U	-			-		
Aroclor 1232	0.01	0.01	U	-			-		
Aroclor 1242	0.01	0.01	U	-			-		
Aroclor 1248	0.01	0.01	U	-			-		
Aroclor 1254	0.01	0.01	U	-			-		
Aroclor 1260	0.01	0.01	U	-			-		
Dioxins/Furans (mg/kg)									
Octachlorodibenzofuran (OCDF)	0.00000018	0.00000018	U	-			-		
Octachlorodibenzo-p-dioxin (OCDD)	0.0000042	0.0000042	J	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.00000017	0.00000017	U	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	0.00000078	0.00000078	U	-			-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.00000022	0.00000022	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000077	0.000000077	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000063	0.000000063	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000074	0.000000074	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000063	0.000000063	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.000000095	0.000000095	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000064	0.000000064	U	-			-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000011	0.00000011	U	-			-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.00000011	0.00000011	U	-			-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000042	0.000000042	U	-			-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.000000085	0.000000085	U	-			-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.00000033	0.00000033	U	-			-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.000000069	0.000000069	U	-			-		

TABLE B-E25
ANALYTICAL RESULTS FOR GRID E25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Metals (mg/kg)									
Aluminum	-			15000	4		15000	4	
Antimony	-			0.15	0.15	U	0.15	0.15	U
Arsenic	-			1.1	0.3		1.3	0.3	
Barium	-			150	0.2		170	0.2	
Beryllium	-			0.48	0.3	J	0.6	0.3	J
Cadmium	-			0.31	0.08		0.35	0.08	
Calcium (Ca)	-			4400	15		5100	15	
Chromium	-			11	0.2		10	0.2	
Cobalt	-			3.5	0.08		3.7	0.08	
Copper	-			85	0.2		72	0.2	
Iron (Fe)	-			8100	8		8600	8	
Lead	-			7	0.05		7.6	0.05	
Magnesium (Mg)	-			5000	5		4900	5	
Manganese (Mn)	-			350	0.08		360	0.08	
Mercury	-			0.018	0.04	J	0.02	0.042	J
Nickel	-			7.7	0.2		7.7	0.2	
Potassium (K)	-			1500	8		1400	8	
Selenium	-			0.64	0.1		0.94	0.1	
Silver	-			0.057	0.05	J	0.057	0.05	J
Sodium (Na)	-			35	8		34	8	
Thallium	-			0.049	0.05	J	0.058	0.05	J
Vanadium	-			13	0.1		14	0.1	
Zinc	-			20	1.5		21	1.5	
Other Parameters (mg/kg)									
Cyanide (CN-)	0.32	0.32	U	-			-		
Nitrate	3.2	2.1	J	-			-		
Perchlorate	0.0041	0.0041	U	-			-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-E25
ANALYTICAL RESULTS FOR GRID E25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

E25		
P3IF-SS-IS-SO-E625		
June 13, 2023		
Result	LOD	Qual
-		
-		
-

TABLE B-E25
ANALYTICAL RESULTS FOR GRID E25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

-		
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-		

TABLE B-E25
ANALYTICAL RESULTS FOR GRID E25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

17000	4	
0.15	0.15	U
1.2	0.3	
160	0.2	
0.57	0.3	J
0.34	0.08	
4500	15	
11	0.2	
3.8	0.08	
82	0.2	
9100	8	
7.4	0.05	
5600	5	
360	0.08	
0.023	0.042	J
8.1	0.2	
1600	8	
0.99	0.1	
0.057	0.05	J
36	8	
0.053	0.05	J
15	0.1	
22	1.5	

-		
-		
-		

TABLE B-E26
ANALYTICAL RESULTS FOR GRID E26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	E26			E26			E26		
Sample Name	P3IF-BA-GRID-E026			P3IF-SS-IS-SO-E026			P3IF-SS-IS-SO-E526		
Date Collected	June 14, 2023			June 14, 2023			June 14, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)									
1,1,1,2-Tetrachloroethane	0.0021	0.0021	U	-			-		
1,1,1-Trichloroethane	0.0021	0.0021	U	-			-		
1,1,2,2-Tetrachloroethane	0.0021	0.0021	U	-			-		
1,1,2-Trichloroethane	0.0021	0.0021	U	-			-		
1,1-Dichloroethane	0.0021	0.0021	U	-			-		
1,1-Dichloroethene	0.0021	0.0021	U	-			-		
1,1-Dichloropropene	0.0021	0.0021	U	-			-		
1,2,3-Trichlorobenzene	0.0021	0.0021	U	-			-		
1,2,3-Trichloropropane	0.0053	0.0053	U	-			-		
1,2,4-Trichlorobenzene	0.0021	0.0021	U	-			-		
1,2,4-Trimethylbenzene	0.0021	0.0021	U	-			-		
1,2-Dibromo-3-chloropropane	0.0053	0.0053	U	-			-		
1,2-Dibromoethane	0.0021	0.0021	U	-			-		
1,2-Dichlorobenzene	0.0021	0.0021	U	-			-		
1,2-Dichloroethane	0.0021	0.0021	U	-			-		
1,2-Dichloropropane	0.0021	0.0021	U	-			-		
1,3,5-Trimethylbenzene	0.0021	0.0021	U	-			-		
1,3-Dichlorobenzene	0.0021	0.0021	U	-			-		
1,3-Dichloropropane	0.0021	0.0021	U	-			-		
1,4-Dichlorobenzene	0.0021	0.0021	U	-			-		
2,2-Dichloropropane	0.0021	0.0021	U	-			-		
2-Butanone	0.0032	0.0032	U	-			-		
2-Chlorotoluene	0.0021	0.0021	U	-			-		
2-Hexanone	0.0021	0.0021	U	-			-		
4-Chlorotoluene	0.0021	0.0021	U	-			-		
4-Methyl-2-pentanone	0.0021	0.0021	U	-			-		
Acetone	0.39	0.0053	J	-			-		
Benzene	0.0021	0.0021	U	-			-		
Bromobenzene	0.0021	0.0021	U	-			-		
Bromochloromethane	0.0021	0.0021	U	-			-		
Bromodichloromethane	0.0021	0.0021	U	-			-		
Bromoform	0.0021	0.0021	U	-			-		
Bromomethane	0.0021	0.0021	U	-			-		
Carbon disulfide	0.0021	0.0021	U	-			-		
Carbon tetrachloride	0.0021	0.0021	U	-			-		
Chlorobenzene	0.0021	0.0021	U	-			-		
Chloroethane	0.0021	0.0021	U	-			-		
Chloroform	0.0021	0.0021	U	-			-		
Chloromethane	0.0053	0.0053	U	-			-		
cis-1,2-Dichloroethene	0.0021	0.0021	U	-			-		
cis-1,3-Dichloropropene	0.0021	0.0021	U	-			-		
Dibromochloromethane	0.0021	0.0021	U	-			-		
Dibromomethane	0.0021	0.0021	U	-			-		
Dichlorodifluoromethane	0.0021	0.0021	U	-			-		
Ethylbenzene	0.0021	0.0021	U	-			-		
Hexachlorobutadiene	0.0021	0.0021	U	-			-		
Isopropylbenzene	0.0021	0.0021	U	-			-		
m+p-Xylene	0.0053	0.0053	U	-			-		
Methyl Tertiary Butyl Ether	0.0021	0.0021	U	-			-		
Methylene chloride	0.011	0.011	U	-			-		
n-Butylbenzene	0.0021	0.0021	U	-			-		
n-Propylbenzene	0.0021	0.0021	U	-			-		
Naphthalene	0.0021	0.0021	U	-			-		
o-Xylene	0.0026	0.0026	U	-			-		
4-Isopropyltoluene	0.0021	0.0021	U	-			-		
sec-Butylbenzene	0.0021	0.0021	U	-			-		
Styrene	0.0021	0.0021	U	-			-		
tert-Butylbenzene	0.0021	0.0021	U	-			-		
Tetrachloroethene	0.0021	0.0021	U	-			-		
Toluene	0.0021	0.0021	U	-			-		
trans-1,2-Dichloroethene	0.0021	0.0021	U	-			-		
trans-1,3-Dichloropropene	0.0021	0.0021	U	-			-		
Trichloroethene	0.0021	0.0021	U	-			-		
Trichlorofluoromethane	0.0021	0.0021	U	-			-		
Vinyl chloride	0.0021	0.0021	U	-			-		
Semivolatile Organic Compounds (mg/kg)									
1,2,4-Trichlorobenzene	0.18	0.18	U	-			-		
1,2-Dichlorobenzene	0.18	0.18	U	-			-		
1,3-Dichlorobenzene	0.18	0.18	U	-			-		
1,4-Dichlorobenzene	0.18	0.18	U	-			-		
2,4,5-Trichlorophenol	0.18	0.18	U	-			-		
2,4,6-Trichlorophenol	0.18	0.18	U	-			-		
2,4-Dichlorophenol	0.18	0.18	U	-			-		
2,4-Dimethylphenol	0.18	0.18	U	-			-		
2,4-Dinitrophenol	0.18	0.18	U	-			-		
2,4-Dinitrotoluene	0.18	0.18	U	-			-		
2,6-Dinitrotoluene	0.18	0.18	U	-			-		
2-Chloronaphthalene	0.18	0.18	U	-			-		
2-Chlorophenol	0.18	0.18	U	-			-		
2-Methylnaphthalene	0.18	0.18	U	-			-		
2-Methylphenol	0.18	0.18	U	-			-		
2-Nitroaniline	0.18	0.18	U	-			-		
2-Nitrophenol	0.18	0.18	U	-			-		
3,3-Dichlorobenzidine	0.18	0.18	U	-			-		
3-Nitroaniline	0.18	0.18	U	-			-		
4,6-Dinitro-2-methylphenol	0.18	0.18	U	-			-		
4-Bromophenyl-phenylether	0.18	0.18	U	-			-		
4-Chloro-3-methylphenol	0.18	0.18	U	-			-		
4-Chloroaniline	0.18	0.18	U	-			-		

TABLE B-E26
ANALYTICAL RESULTS FOR GRID E26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	E26			E26			E26		
Sample Name	P3IF-BA-GRID-E026			P3IF-SS-IS-SO-E026			P3IF-SS-IS-SO-E526		
Date Collected	June 14, 2023			June 14, 2023			June 14, 2023		
Semivolatile Organic Compounds (mg/kg), continued									
4-Chlorophenyl-phenylether	0.18	0.18	U	-			-		
4-Nitroaniline	0.18	0.18	U	-			-		
4-Nitrophenol	0.18	0.18	U	-			-		
Acenaphthene	0.18	0.18	U	-			-		
Acenaphthylene	0.18	0.18	U	-			-		
Anthracene	0.18	0.18	U	-			-		
Benzo(a)anthracene	0.18	0.18	U	-			-		
Benzo(a)pyrene	0.14	0.14	U	-			-		
Benzo(b)fluoranthene	0.18	0.18	U	-			-		
Benzo(g,h,i)perylene	0.18	0.18	U	-			-		
Benzo(k)fluoranthene	0.18	0.18	U	-			-		
Benzoic acid	0.18	0.18	U	-			-		
Benzyl Alcohol	0.18	0.18	U	-			-		
Bis(2-chloro-1-methylethyl) ether	0.18	0.18	U	-			-		
Bis(2-chloroethoxy)methane	0.18	0.18	U	-			-		
Bis(2-chloroethyl)ether	0.18	0.18	U	-			-		
Bis(2-ethylhexyl)phthalate	0.18	0.18	U	-			-		
Butyl benzyl phthalate	0.18	0.18	U	-			-		
Carbazole	0.18	0.18	U	-			-		
Chrysene	0.18	0.18	U	-			-		
Di-n-butyl phthalate	0.18	0.18	U	-			-		
Di-n-octyl phthalate	0.18	0.18	U	-			-		
Dibenz(a,h)anthracene	0.14	0.14	U	-			-		
Dibenzofuran	0.18	0.18	U	-			-		
Diethyl phthalate	0.18	0.18	U	-			-		
Dimethyl phthalate	0.18	0.18	U	-			-		
Fluoranthene	0.18	0.18	U	-			-		
Fluorene	0.18	0.18	U	-			-		
Hexachlorobenzene	0.18	0.18	U	-			-		
Hexachlorobutadiene	0.18	0.18	U	-			-		
Hexachloroethane	0.18	0.18	U	-			-		
Indeno(1,2,3-cd)pyrene	0.18	0.18	U	-			-		
Isophorone	0.18	0.18	U	-			-		
n-Nitroso-di-n-propylamine	0.18	0.18	U	-			-		
n-Nitrosodimethylamine	0.021	0.021	UJ	-			-		
n-Nitrosodiphenylamine	0.18	0.18	U	-			-		
Naphthalene	0.18	0.18	U	-			-		
Nitrobenzene	0.18	0.18	U	-			-		
Pentachlorophenol	0.18	0.18	U	-			-		
Phenanthrene	0.18	0.18	U	-			-		
Phenol	0.18	0.18	U	-			-		
Pyrene	0.18	0.18	U	-			-		
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
1,3-Dinitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,4,6-Trinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,4-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,6-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
3-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
4-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	-			0.075	0.075	UJ	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	-			0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
Nitroglycerin	-			0.15	0.15	UJ	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	-			0.075	0.075	UJ	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	-			0.25	0.25	UJ	0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)									
Aroclor 1016	0.02	0.02	U	-			-		
Aroclor 1221	0.02	0.02	U	-			-		
Aroclor 1232	0.01	0.01	U	-			-		
Aroclor 1242	0.01	0.01	U	-			-		
Aroclor 1248	0.01	0.01	U	-			-		
Aroclor 1254	0.01	0.01	U	-			-		
Aroclor 1260	0.01	0.01	U	-			-		
Dioxins/Furans (mg/kg)									
Octachlorodibenzofuran (OCDF)	0.00000017	0.00000017	U	-			-		
Octachlorodibenzo-p-dioxin (OCDD)	0.000025	0.000025	U	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.000000095	0.000000095	U	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	0.00000045	0.00000045	U	-			-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.00000012	0.00000012	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000037	0.000000037	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000063	0.000000063	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000071	0.000000071	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000063	0.000000063	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.000000091	0.000000091	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000078	0.000000078	J	-			-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.000000092	0.000000092	U	-			-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.000000074	0.000000074	U	-			-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000076	0.000000076	U	-			-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.000000061	0.000000061	U	-			-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.00000012	0.00000012	U	-			-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.000000055	0.000000055	U	-			-		

TABLE B-E26
ANALYTICAL RESULTS FOR GRID E26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	E26			E26			E26		
Sample Name	P3IF-BA-GRID-E026			P3IF-SS-IS-SO-E026			P3IF-SS-IS-SO-E526		
Date Collected	June 14, 2023			June 14, 2023			June 14, 2023		
Metals (mg/kg)									
Aluminum	-			15000	4		18000	4	
Antimony	-			0.09	0.15	J	0.2	0.15	
Arsenic	-			0.95	0.3		1	0.3	
Barium	-			350	0.2		390	0.2	
Beryllium	-			0.75	0.3	J	0.84	0.3	J
Cadmium	-			0.33	0.08		0.29	0.08	
Calcium (Ca)	-			9300	15		12000	15	
Chromium	-			10	0.2		10	0.2	
Cobalt	-			3.5	0.08		3.7	0.08	
Copper	-			88	0.2		57	0.2	
Iron (Fe)	-			8900	8		10000	8	
Lead	-			9.4	0.05		8.7	0.05	
Magnesium (Mg)	-			5200	5		6200	5	
Manganese (Mn)	-			480	0.08		470	0.08	
Mercury	-			0.026	0.042	J	0.032	0.043	J
Nickel	-			8.3	0.2		8.2	0.2	
Potassium (K)	-			1300	8		1600	8	
Selenium	-			0.96	0.1		0.9	0.1	
Silver	-			0.036	0.05	J	0.04	0.05	J
Sodium (Na)	-			40	8		44	8	
Thallium	-			0.048	0.05	J	0.072	0.05	J
Vanadium	-			10	0.1		11	0.1	
Zinc	-			22	1.5		22	1.5	
Other Parameters (mg/kg)									
Cyanide (CN-)	0.33	0.33	U	-			-		
Nitrate	10	2.2	J	-			-		
Perchlorate	0.0042	0.0042	U	-			-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-E26
ANALYTICAL RESULTS FOR GRID E26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	E26		
Sample Name	P3IF-SS-IS-SO-E626		
Date Collected	June 14, 2023		
	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)			
1,1,1,2-Tetrachloroethane	-		
1,1,1-Trichloroethane	-		
1,1,2,2-Tetrachloroethane	-		
1,1,2-Trichloroethane	-		
1,1-Dichloroethane	-		
1,1-Dichloroethene	-		
1,1-Dichloropropene	-		
1,2,3-Trichlorobenzene	-		
1,2,3-Trichloropropane	-		
1,2,4-Trichlorobenzene	-		
1,2,4-Trimethylbenzene	-		
1,2-Dibromo-3-chloropropane	-		
1,2-Dibromoethane	-		
1,2-Dichlorobenzene	-		
1,2-Dichloroethane	-		
1,2-Dichloropropane	-		
1,3,5-Trimethylbenzene	-		
1,3-Dichlorobenzene	-		
1,3-Dichloropropane	-		
1,4-Dichlorobenzene	-		
2,2-Dichloropropane	-		
2-Butanone	-		
2-Chlorotoluene	-		
2-Hexanone	-		
4-Chlorotoluene	-		
4-Methyl-2-pentanone	-		
Acetone	-		
Benzene	-		
Bromobenzene	-		
Bromochloromethane	-		
Bromodichloromethane	-		
Bromoform	-		
Bromomethane	-		
Carbon disulfide	-		
Carbon tetrachloride	-		
Chlorobenzene	-		
Chloroethane	-		
Chloroform	-		
Chloromethane	-		
cis-1,2-Dichloroethene	-		
cis-1,3-Dichloropropene	-		
Dibromochloromethane	-		
Dibromomethane	-		
Dichlorodifluoromethane	-		
Ethylbenzene	-		
Hexachlorobutadiene	-		
Isopropylbenzene	-		
m+p-Xylene	-		
Methyl Tertiary Butyl Ether	-		
Methylene chloride	-		
n-Butylbenzene	-		
n-Propylbenzene	-		
Naphthalene	-		
o-Xylene	-		
4-Isopropyltoluene	-		
sec-Butylbenzene	-		
Styrene	-		
tert-Butylbenzene	-		
Tetrachloroethene	-		
Toluene	-		
trans-1,2-Dichloroethene	-		
trans-1,3-Dichloropropene	-		
Trichloroethene	-		
Trichlorofluoromethane	-		
Vinyl chloride	-		
Semivolatile Organic Compounds (mg/kg)			
1,2,4-Trichlorobenzene	-		
1,2-Dichlorobenzene	-		
1,3-Dichlorobenzene	-		
1,4-Dichlorobenzene	-		
2,4,5-Trichlorophenol	-		
2,4,6-Trichlorophenol	-		
2,4-Dichlorophenol	-		
2,4-Dimethylphenol	-		
2,4-Dinitrophenol	-		
2,4-Dinitrotoluene	-		
2,6-Dinitrotoluene	-		
2-Chloronaphthalene	-		
2-Chlorophenol	-		
2-Methylnaphthalene	-		
2-Methylphenol	-		
2-Nitroaniline	-		
2-Nitrophenol	-		
3,3-Dichlorobenzidine	-		
3-Nitroaniline	-		
4,6-Dinitro-2-methylphenol	-		
4-Bromophenyl-phenylether	-		
4-Chloro-3-methylphenol	-		
4-Chloroaniline	-		

TABLE B-E26
ANALYTICAL RESULTS FOR GRID E26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	E26		
Sample Name	P3IF-SS-IS-SO-E626		
Date Collected	June 14, 2023		
Semivolatile Organic Compounds (mg/kg), continued			
4-Chlorophenyl-phenylether	-		
4-Nitroaniline	-		
4-Nitrophenol	-		
Acenaphthene	-		
Acenaphthylene	-		
Anthracene	-		
Benzo(a)anthracene	-		
Benzo(a)pyrene	-		
Benzo(b)fluoranthene	-		
Benzo(g,h,i)perylene	-		
Benzo(k)fluoranthene	-		
Benzoic acid	-		
Benzyl Alcohol	-		
Bis(2-chloro-1-methylethyl) ether	-		
Bis(2-chloroethoxy)methane	-		
Bis(2-chloroethyl)ether	-		
Bis(2-ethylhexyl)phthalate	-		
Butyl benzyl phthalate	-		
Carbazole	-		
Chrysene	-		
Di-n-butyl phthalate	-		
Di-n-octyl phthalate	-		
Dibenz(a,h)anthracene	-		
Dibenzofuran	-		
Diethyl phthalate	-		
Dimethyl phthalate	-		
Fluoranthene	-		
Fluorene	-		
Hexachlorobenzene	-		
Hexachlorobutadiene	-		
Hexachloroethane	-		
Indeno(1,2,3-cd)pyrene	-		
Isophorone	-		
n-Nitroso-di-n-propylamine	-		
n-Nitrosodimethylamine	-		
n-Nitrosodiphenylamine	-		
Naphthalene	-		
Nitrobenzene	-		
Pentachlorophenol	-		
Phenanthrene	-		
Phenol	-		
Pyrene	-		
Explosives (mg/kg)			
1,3,5-Trinitrobenzene	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	UJ
2,4,6-Trinitrotoluene	0.075	0.075	UJ
2,4-Dinitrotoluene	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	UJ
2-Nitrotoluene	0.075	0.075	UJ
3-Nitrotoluene	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	0.075	0.075	UJ
4-Nitrotoluene	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	UJ
Nitroglycerin	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)			
Aroclor 1016	-		
Aroclor 1221	-		
Aroclor 1232	-		
Aroclor 1242	-		
Aroclor 1248	-		
Aroclor 1254	-		
Aroclor 1260	-		
Dioxins/Furans (mg/kg)			
Octachlorodibenzofuran (OCDF)	-		
Octachlorodibenzo-p-dioxin (OCDD)	-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	-		

TABLE B-E26
ANALYTICAL RESULTS FOR GRID E26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	E26		
Sample Name	P3IF-SS-IS-SO-E626		
Date Collected	June 14, 2023		
Metals (mg/kg)			
Aluminum	21000	4	
Antimony	0.077	0.15	J
Arsenic	1.1	0.3	
Barium	400	0.2	
Beryllium	0.8	0.3	J
Cadmium	0.34	0.08	
Calcium (Ca)	11000	15	
Chromium	11	0.2	
Cobalt	4.2	0.08	
Copper	67	0.2	
Iron (Fe)	11000	8	
Lead	10	0.05	
Magnesium (Mg)	7300	5	
Manganese (Mn)	480	0.08	
Mercury	0.035	0.043	J
Nickel	8.9	0.2	
Potassium (K)	1800	8	
Selenium	1.1	0.1	
Silver	0.041	0.05	J
Sodium (Na)	49	8	
Thallium	0.059	0.05	J
Vanadium	14	0.1	
Zinc	26	1.5	
Other Parameters (mg/kg)			
Cyanide (CN-)	-		
Nitrate	-		
Perchlorate	-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-F26
ANALYTICAL RESULTS FOR GRID F26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	F26			F26			F26		
Sample Name	P3IF-BA-GRID-F026			P3IF-SS-IS-SO-F026			P3IF-SS-IS-SO-F526		
Date Collected	June 14, 2023			June 14, 2023			June 14, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)									
1,1,1,2-Tetrachloroethane	0.002	0.002	U	-			-		
1,1,1-Trichloroethane	0.002	0.002	U	-			-		
1,1,2,2-Tetrachloroethane	0.002	0.002	U	-			-		
1,1,2-Trichloroethane	0.002	0.002	U	-			-		
1,1-Dichloroethane	0.002	0.002	U	-			-		
1,1-Dichloroethene	0.002	0.002	U	-			-		
1,1-Dichloropropene	0.002	0.002	U	-			-		
1,2,3-Trichlorobenzene	0.002	0.002	U	-			-		
1,2,3-Trichloropropane	0.005	0.005	U	-			-		
1,2,4-Trichlorobenzene	0.002	0.002	U	-			-		
1,2,4-Trimethylbenzene	0.002	0.002	U	-			-		
1,2-Dibromo-3-chloropropane	0.005	0.005	U	-			-		
1,2-Dibromoethane	0.002	0.002	U	-			-		
1,2-Dichlorobenzene	0.002	0.002	U	-			-		
1,2-Dichloroethane	0.002	0.002	U	-			-		
1,2-Dichloropropane	0.002	0.002	U	-			-		
1,3,5-Trimethylbenzene	0.002	0.002	U	-			-		
1,3-Dichlorobenzene	0.002	0.002	U	-			-		
1,3-Dichloropropane	0.002	0.002	U	-			-		
1,4-Dichlorobenzene	0.002	0.002	U	-			-		
2,2-Dichloropropane	0.002	0.002	U	-			-		
2-Butanone	0.003	0.003	U	-			-		
2-Chlorotoluene	0.002	0.002	U	-			-		
2-Hexanone	0.002	0.002	U	-			-		
4-Chlorotoluene	0.002	0.002	U	-			-		
4-Methyl-2-pentanone	0.002	0.002	U	-			-		
Acetone	0.043	0.005		-			-		
Benzene	0.002	0.002	U	-			-		
Bromobenzene	0.002	0.002	U	-			-		
Bromochloromethane	0.002	0.002	U	-			-		
Bromodichloromethane	0.002	0.002	U	-			-		
Bromoform	0.002	0.002	U	-			-		
Bromomethane	0.002	0.002	U	-			-		
Carbon disulfide	0.002	0.002	U	-			-		
Carbon tetrachloride	0.002	0.002	U	-			-		
Chlorobenzene	0.002	0.002	U	-			-		
Chloroethane	0.002	0.002	U	-			-		
Chloroform	0.002	0.002	U	-			-		
Chloromethane	0.005	0.005	U	-			-		
cis-1,2-Dichloroethene	0.002	0.002	U	-			-		
cis-1,3-Dichloropropene	0.002	0.002	U	-			-		
Dibromochloromethane	0.002	0.002	U	-			-		
Dibromomethane	0.002	0.002	U	-			-		
Dichlorodifluoromethane	0.002	0.002	U	-			-		
Ethylbenzene	0.002	0.002	U	-			-		
Hexachlorobutadiene	0.002	0.002	U	-			-		
Isopropylbenzene	0.002	0.002	U	-			-		
m+p-Xylene	0.005	0.005	U	-			-		
Methyl Tertiary Butyl Ether	0.002	0.002	U	-			-		
Methylene chloride	0.01	0.01	U	-			-		
n-Butylbenzene	0.002	0.002	U	-			-		
n-Propylbenzene	0.002	0.002	U	-			-		
Naphthalene	0.002	0.002	U	-			-		
o-Xylene	0.0025	0.0025	U	-			-		
4-Isopropyltoluene	0.002	0.002	U	-			-		
sec-Butylbenzene	0.002	0.002	U	-			-		
Styrene	0.002	0.002	U	-			-		
tert-Butylbenzene	0.002	0.002	U	-			-		
Tetrachloroethene	0.002	0.002	U	-			-		
Toluene	0.002	0.002	U	-			-		
trans-1,2-Dichloroethene	0.002	0.002	U	-			-		
trans-1,3-Dichloropropene	0.002	0.002	U	-			-		
Trichloroethene	0.002	0.002	U	-			-		
Trichlorofluoromethane	0.002	0.002	U	-			-		
Vinyl chloride	0.002	0.002	U	-			-		
Semivolatile Organic Compounds (mg/kg)									
1,2,4-Trichlorobenzene	0.18	0.18	U	-			-		
1,2-Dichlorobenzene	0.18	0.18	U	-			-		
1,3-Dichlorobenzene	0.18	0.18	U	-			-		
1,4-Dichlorobenzene	0.18	0.18	U	-			-		
2,4,5-Trichlorophenol	0.18	0.18	U	-			-		
2,4,6-Trichlorophenol	0.18	0.18	U	-			-		
2,4-Dichlorophenol	0.18	0.18	U	-			-		
2,4-Dimethylphenol	0.18	0.18	U	-			-		
2,4-Dinitrophenol	0.18	0.18	U	-			-		
2,4-Dinitrotoluene	0.18	0.18	U	-			-		
2,6-Dinitrotoluene	0.18	0.18	U	-			-		
2-Chloronaphthalene	0.18	0.18	U	-			-		
2-Chlorophenol	0.18	0.18	U	-			-		
2-Methylnaphthalene	0.18	0.18	U	-			-		
2-Methylphenol	0.18	0.18	U	-			-		
2-Nitroaniline	0.18	0.18	U	-			-		
2-Nitrophenol	0.18	0.18	U	-			-		
3,3-Dichlorobenzidine	0.18	0.18	U	-			-		
3-Nitroaniline	0.18	0.18	U	-			-		
4,6-Dinitro-2-methylphenol	0.18	0.18	U	-			-		
4-Bromophenyl-phenylether	0.18	0.18	U	-			-		
4-Chloro-3-methylphenol	0.18	0.18	U	-			-		
4-Chloroaniline	0.18	0.18	U	-			-		

TABLE B-F26
ANALYTICAL RESULTS FOR GRID F26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	F26			F26			F26		
Sample Name	P3IF-BA-GRID-F026			P3IF-SS-IS-SO-F026			P3IF-SS-IS-SO-F526		
Date Collected	June 14, 2023			June 14, 2023			June 14, 2023		
Semivolatile Organic Compounds (mg/kg), continued									
4-Chlorophenyl-phenylether	0.18	0.18	U	-			-		
4-Nitroaniline	0.18	0.18	U	-			-		
4-Nitrophenol	0.18	0.18	U	-			-		
Acenaphthene	0.18	0.18	U	-			-		
Acenaphthylene	0.18	0.18	U	-			-		
Anthracene	0.18	0.18	U	-			-		
Benzo(a)anthracene	0.18	0.18	U	-			-		
Benzo(a)pyrene	0.14	0.14	U	-			-		
Benzo(b)fluoranthene	0.18	0.18	U	-			-		
Benzo(g,h,i)perylene	0.18	0.18	U	-			-		
Benzo(k)fluoranthene	0.18	0.18	U	-			-		
Benzoic acid	0.18	0.18	U	-			-		
Benzyl Alcohol	0.18	0.18	U	-			-		
Bis(2-chloro-1-methylethyl) ether	0.18	0.18	U	-			-		
Bis(2-chloroethoxy)methane	0.18	0.18	U	-			-		
Bis(2-chloroethyl)ether	0.18	0.18	U	-			-		
Bis(2-ethylhexyl)phthalate	0.18	0.18	U	-			-		
Butyl benzyl phthalate	0.18	0.18	U	-			-		
Carbazole	0.18	0.18	U	-			-		
Chrysene	0.18	0.18	U	-			-		
Di-n-butyl phthalate	0.18	0.18	U	-			-		
Di-n-octyl phthalate	0.18	0.18	U	-			-		
Dibenz(a,h)anthracene	0.14	0.14	U	-			-		
Dibenzofuran	0.18	0.18	U	-			-		
Diethyl phthalate	0.18	0.18	U	-			-		
Dimethyl phthalate	0.18	0.18	U	-			-		
Fluoranthene	0.18	0.18	U	-			-		
Fluorene	0.18	0.18	U	-			-		
Hexachlorobenzene	0.18	0.18	U	-			-		
Hexachlorobutadiene	0.18	0.18	U	-			-		
Hexachloroethane	0.18	0.18	U	-			-		
Indeno(1,2,3-cd)pyrene	0.18	0.18	U	-			-		
Isophorone	0.18	0.18	U	-			-		
n-Nitroso-di-n-propylamine	0.18	0.18	U	-			-		
n-Nitrosodimethylamine	0.022	0.022	UJ	-			-		
n-Nitrosodiphenylamine	0.18	0.18	U	-			-		
Naphthalene	0.18	0.18	U	-			-		
Nitrobenzene	0.18	0.18	U	-			-		
Pentachlorophenol	0.18	0.18	U	-			-		
Phenanthrene	0.18	0.18	U	-			-		
Phenol	0.18	0.18	U	-			-		
Pyrene	0.18	0.18	U	-			-		
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
1,3-Dinitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,4,6-Trinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,4-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,6-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
3-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
4-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	-			0.075	0.075	UJ	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	-			0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
Nitroglycerin	-			0.15	0.15	UJ	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	-			0.075	0.075	UJ	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	-			0.25	0.25	UJ	0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)									
Aroclor 1016	0.022	0.022	U	-			-		
Aroclor 1221	0.022	0.022	U	-			-		
Aroclor 1232	0.011	0.011	U	-			-		
Aroclor 1242	0.011	0.011	U	-			-		
Aroclor 1248	0.011	0.011	U	-			-		
Aroclor 1254	0.011	0.011	U	-			-		
Aroclor 1260	0.011	0.011	U	-			-		
Dioxins/Furans (mg/kg)									
Octachlorodibenzofuran (OCDF)	0.00000019	0.00000019	U	-			-		
Octachlorodibenzo-p-dioxin (OCDD)	0.000025	0.000025	U	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.000000043	0.000000043	U	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	0.000000065	0.000000065	U	-			-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.000000054	0.000000054	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000046	0.000000046	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000035	0.000000035	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000024	0.000000024	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000036	0.000000036	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.0000001	0.0000001	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000036	0.000000036	U	-			-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000006	0.00000006	U	-			-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.000000037	0.000000037	U	-			-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000048	0.000000048	U	-			-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.000000093	0.000000093	U	-			-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.00000033	0.00000033	U	-			-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.000000035	0.000000035	U	-			-		

TABLE B-F26
ANALYTICAL RESULTS FOR GRID F26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	F26			F26			F26		
Sample Name	P3IF-BA-GRID-F026			P3IF-SS-IS-SO-F026			P3IF-SS-IS-SO-F526		
Date Collected	June 14, 2023			June 14, 2023			June 14, 2023		
Metals (mg/kg)									
Aluminum	-			14000	4		13000	4	
Antimony	-			0.15	0.15	U	0.086	0.15	J
Arsenic	-			0.74	0.3		0.79	0.3	
Barium	-			220	0.2		230	0.2	
Beryllium	-			0.82	0.3	J	0.81	0.3	J
Cadmium	-			0.16	0.08		0.19	0.08	
Calcium (Ca)	-			18000	15		17000	15	
Chromium	-			7.2	0.2		7.3	0.2	
Cobalt	-			3.5	0.08		3.3	0.08	
Copper	-			35	0.2		33	0.2	
Iron (Fe)	-			6600	8		6600	8	
Lead	-			8.7	0.05		8.1	0.05	
Magnesium (Mg)	-			5000	5		4700	5	
Manganese (Mn)	-			500	0.08		390	0.08	
Mercury	-			0.018	0.042	J	0.019	0.042	J
Nickel	-			6.5	0.2		6.6	0.2	
Potassium (K)	-			740	8		660	8	
Selenium	-			0.94	0.1		0.8	0.1	
Silver	-			0.021	0.05	J	0.05	0.05	U
Sodium (Na)	-			37	8		28	8	
Thallium	-			0.03	0.05	J	0.038	0.05	J
Vanadium	-			10	0.1		10	0.1	
Zinc	-			15	1.5		13	1.5	
Other Parameters (mg/kg)									
Cyanide (CN-)	0.34	0.34	U	-			-		
Nitrate	2	2.2	J	-			-		
Perchlorate	0.0044	0.0044	U	-			-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-F26
ANALYTICAL RESULTS FOR GRID F26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	F26		
Sample Name	P3IF-SS-IS-SO-F626		
Date Collected	June 14, 2023		
	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)			
1,1,1,2-Tetrachloroethane	-		
1,1,1-Trichloroethane	-		
1,1,2,2-Tetrachloroethane	-		
1,1,2-Trichloroethane	-		
1,1-Dichloroethane	-		
1,1-Dichloroethene	-		
1,1-Dichloropropene	-		
1,2,3-Trichlorobenzene	-		
1,2,3-Trichloropropane	-		
1,2,4-Trichlorobenzene	-		
1,2,4-Trimethylbenzene	-		
1,2-Dibromo-3-chloropropane	-		
1,2-Dibromoethane	-		
1,2-Dichlorobenzene	-		
1,2-Dichloroethane	-		
1,2-Dichloropropane	-		
1,3,5-Trimethylbenzene	-		
1,3-Dichlorobenzene	-		
1,3-Dichloropropane	-		
1,4-Dichlorobenzene	-		
2,2-Dichloropropane	-		
2-Butanone	-		
2-Chlorotoluene	-		
2-Hexanone	-		
4-Chlorotoluene	-		
4-Methyl-2-pentanone	-		
Acetone	-		
Benzene	-		
Bromobenzene	-		
Bromochloromethane	-		
Bromodichloromethane	-		
Bromoform	-		
Bromomethane	-		
Carbon disulfide	-		
Carbon tetrachloride	-		
Chlorobenzene	-		
Chloroethane	-		
Chloroform	-		
Chloromethane	-		
cis-1,2-Dichloroethene	-		
cis-1,3-Dichloropropene	-		
Dibromochloromethane	-		
Dibromomethane	-		
Dichlorodifluoromethane	-		
Ethylbenzene	-		
Hexachlorobutadiene	-		
Isopropylbenzene	-		
m+p-Xylene	-		
Methyl Tertiary Butyl Ether	-		
Methylene chloride	-		
n-Butylbenzene	-		
n-Propylbenzene	-		
Naphthalene	-		
o-Xylene	-		
4-Isopropyltoluene	-		
sec-Butylbenzene	-		
Styrene	-		
tert-Butylbenzene	-		
Tetrachloroethene	-		
Toluene	-		
trans-1,2-Dichloroethene	-		
trans-1,3-Dichloropropene	-		
Trichloroethene	-		
Trichlorofluoromethane	-		
Vinyl chloride	-		
Semivolatile Organic Compounds (mg/kg)			
1,2,4-Trichlorobenzene	-		
1,2-Dichlorobenzene	-		
1,3-Dichlorobenzene	-		
1,4-Dichlorobenzene	-		
2,4,5-Trichlorophenol	-		
2,4,6-Trichlorophenol	-		
2,4-Dichlorophenol	-		
2,4-Dimethylphenol	-		
2,4-Dinitrophenol	-		
2,4-Dinitrotoluene	-		
2,6-Dinitrotoluene	-		
2-Chloronaphthalene	-		
2-Chlorophenol	-		
2-Methylnaphthalene	-		
2-Methylphenol	-		
2-Nitroaniline	-		
2-Nitrophenol	-		
3,3-Dichlorobenzidine	-		
3-Nitroaniline	-		
4,6-Dinitro-2-methylphenol	-		
4-Bromophenyl-phenylether	-		
4-Chloro-3-methylphenol	-		
4-Chloroaniline	-		

TABLE B-F26
ANALYTICAL RESULTS FOR GRID F26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	F26		
Sample Name	P3IF-SS-IS-SO-F626		
Date Collected	June 14, 2023		
Semivolatile Organic Compounds (mg/kg), continued			
4-Chlorophenyl-phenylether	-		
4-Nitroaniline	-		
4-Nitrophenol	-		
Acenaphthene	-		
Acenaphthylene	-		
Anthracene	-		
Benzo(a)anthracene	-		
Benzo(a)pyrene	-		
Benzo(b)fluoranthene	-		
Benzo(g,h,i)perylene	-		
Benzo(k)fluoranthene	-		
Benzoic acid	-		
Benzyl Alcohol	-		
Bis(2-chloro-1-methylethyl) ether	-		
Bis(2-chloroethoxy)methane	-		
Bis(2-chloroethyl)ether	-		
Bis(2-ethylhexyl)phthalate	-		
Butyl benzyl phthalate	-		
Carbazole	-		
Chrysene	-		
Di-n-butyl phthalate	-		
Di-n-octyl phthalate	-		
Dibenz(a,h)anthracene	-		
Dibenzofuran	-		
Diethyl phthalate	-		
Dimethyl phthalate	-		
Fluoranthene	-		
Fluorene	-		
Hexachlorobenzene	-		
Hexachlorobutadiene	-		
Hexachloroethane	-		
Indeno(1,2,3-cd)pyrene	-		
Isophorone	-		
n-Nitroso-di-n-propylamine	-		
n-Nitrosodimethylamine	-		
n-Nitrosodiphenylamine	-		
Naphthalene	-		
Nitrobenzene	-		
Pentachlorophenol	-		
Phenanthrene	-		
Phenol	-		
Pyrene	-		
Explosives (mg/kg)			
1,3,5-Trinitrobenzene	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	UJ
2,4,6-Trinitrotoluene	0.075	0.075	UJ
2,4-Dinitrotoluene	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	UJ
2-Nitrotoluene	0.075	0.075	UJ
3-Nitrotoluene	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	0.075	0.075	UJ
4-Nitrotoluene	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	UJ
Nitroglycerin	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)			
Aroclor 1016	-		
Aroclor 1221	-		
Aroclor 1232	-		
Aroclor 1242	-		
Aroclor 1248	-		
Aroclor 1254	-		
Aroclor 1260	-		
Dioxins/Furans (mg/kg)			
Octachlorodibenzofuran (OCDF)	-		
Octachlorodibenzo-p-dioxin (OCDD)	-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	-		

TABLE B-F26
ANALYTICAL RESULTS FOR GRID F26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	F26		
Sample Name	P3IF-SS-IS-SO-F626		
Date Collected	June 14, 2023		
Metals (mg/kg)			
Aluminum	16000	4	
Antimony	0.15	0.15	U
Arsenic	0.85	0.3	
Barium	260	0.2	
Beryllium	0.73	0.3	J
Cadmium	0.26	0.08	
Calcium (Ca)	20000	15	
Chromium	8.6	0.2	
Cobalt	3.9	0.08	
Copper	42	0.2	
Iron (Fe)	7400	8	
Lead	8.6	0.05	
Magnesium (Mg)	6100	5	
Manganese (Mn)	490	0.08	
Mercury	0.02	0.041	J
Nickel	7.6	0.2	
Potassium (K)	820	8	
Selenium	1.1	0.1	
Silver	0.03	0.05	J
Sodium (Na)	38	8	
Thallium	0.028	0.05	J
Vanadium	12	0.1	
Zinc	18	1.5	
Other Parameters (mg/kg)			
Cyanide (CN-)	-		
Nitrate	-		
Perchlorate	-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-G25
ANALYTICAL RESULTS FOR GRID G25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	G25			G25			G25		
Sample Name	P3IF-BA-GRID-G025			P3IF-SS-IS-SO-G025			P3IF-SS-IS-SO-G525		
Date Collected	June 14, 2023			June 14, 2023			June 14, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)									
1,1,1,2-Tetrachloroethane	0.0018	0.0018	U	-			-		
1,1,1-Trichloroethane	0.0018	0.0018	U	-			-		
1,1,2,2-Tetrachloroethane	0.0018	0.0018	U	-			-		
1,1,2-Trichloroethane	0.0018	0.0018	U	-			-		
1,1-Dichloroethane	0.0018	0.0018	U	-			-		
1,1-Dichloroethene	0.0018	0.0018	U	-			-		
1,1-Dichloropropene	0.0018	0.0018	U	-			-		
1,2,3-Trichlorobenzene	0.0018	0.0018	U	-			-		
1,2,3-Trichloropropane	0.0045	0.0045	U	-			-		
1,2,4-Trichlorobenzene	0.0018	0.0018	U	-			-		
1,2,4-Trimethylbenzene	0.0018	0.0018	U	-			-		
1,2-Dibromo-3-chloropropane	0.0045	0.0045	U	-			-		
1,2-Dibromoethane	0.0018	0.0018	U	-			-		
1,2-Dichlorobenzene	0.0018	0.0018	U	-			-		
1,2-Dichloroethane	0.0018	0.0018	U	-			-		
1,2-Dichloropropane	0.0018	0.0018	U	-			-		
1,3,5-Trimethylbenzene	0.0018	0.0018	U	-			-		
1,3-Dichlorobenzene	0.0018	0.0018	U	-			-		
1,3-Dichloropropane	0.0018	0.0018	U	-			-		
1,4-Dichlorobenzene	0.0018	0.0018	U	-			-		
2,2-Dichloropropane	0.0018	0.0018	U	-			-		
2-Butanone	0.0027	0.0027	U	-			-		
2-Chlorotoluene	0.0018	0.0018	U	-			-		
2-Hexanone	0.0018	0.0018	U	-			-		
4-Chlorotoluene	0.0018	0.0018	U	-			-		
4-Methyl-2-pentanone	0.0018	0.0018	U	-			-		
Acetone	0.4	0.0045		-			-		
Benzene	0.0018	0.0018	U	-			-		
Bromobenzene	0.0018	0.0018	U	-			-		
Bromochloromethane	0.0018	0.0018	U	-			-		
Bromodichloromethane	0.0018	0.0018	U	-			-		
Bromoform	0.0018	0.0018	U	-			-		
Bromomethane	0.0018	0.0018	U	-			-		
Carbon disulfide	0.0018	0.0018	U	-			-		
Carbon tetrachloride	0.0018	0.0018	U	-			-		
Chlorobenzene	0.0018	0.0018	U	-			-		
Chloroethane	0.0018	0.0018	U	-			-		
Chloroform	0.0018	0.0018	U	-			-		
Chloromethane	0.0045	0.0045	U	-			-		
cis-1,2-Dichloroethene	0.0018	0.0018	U	-			-		
cis-1,3-Dichloropropene	0.0018	0.0018	U	-			-		
Dibromochloromethane	0.0018	0.0018	U	-			-		
Dibromomethane	0.0018	0.0018	U	-			-		
Dichlorodifluoromethane	0.0018	0.0018	U	-			-		
Ethylbenzene	0.0018	0.0018	U	-			-		
Hexachlorobutadiene	0.0018	0.0018	U	-			-		
Isopropylbenzene	0.0018	0.0018	U	-			-		
m+p-Xylene	0.0045	0.0045	U	-			-		
Methyl Tertiary Butyl Ether	0.0018	0.0018	U	-			-		
Methylene chloride	0.009	0.009	U	-			-		
n-Butylbenzene	0.0018	0.0018	U	-			-		
n-Propylbenzene	0.0018	0.0018	U	-			-		
Naphthalene	0.0018	0.0018	U	-			-		
o-Xylene	0.0023	0.0023	U	-			-		
4-Isopropyltoluene	0.0018	0.0018	U	-			-		
sec-Butylbenzene	0.0018	0.0018	U	-			-		
Styrene	0.0018	0.0018	U	-			-		
tert-Butylbenzene	0.0018	0.0018	U	-			-		
Tetrachloroethene	0.0018	0.0018	U	-			-		
Toluene	0.0018	0.0018	U	-			-		
trans-1,2-Dichloroethene	0.0018	0.0018	U	-			-		
trans-1,3-Dichloropropene	0.0018	0.0018	U	-			-		
Trichloroethene	0.0018	0.0018	U	-			-		
Trichlorofluoromethane	0.0018	0.0018	U	-			-		
Vinyl chloride	0.0018	0.0018	U	-			-		
Semivolatile Organic Compounds (mg/kg)									
1,2,4-Trichlorobenzene	0.18	0.18	U	-			-		
1,2-Dichlorobenzene	0.18	0.18	U	-			-		
1,3-Dichlorobenzene	0.18	0.18	U	-			-		
1,4-Dichlorobenzene	0.18	0.18	U	-			-		
2,4,5-Trichlorophenol	0.18	0.18	U	-			-		
2,4,6-Trichlorophenol	0.18	0.18	U	-			-		
2,4-Dichlorophenol	0.18	0.18	U	-			-		
2,4-Dimethylphenol	0.18	0.18	U	-			-		
2,4-Dinitrophenol	0.18	0.18	U	-			-		
2,4-Dinitrotoluene	0.18	0.18	U	-			-		
2,6-Dinitrotoluene	0.18	0.18	U	-			-		
2-Chloronaphthalene	0.18	0.18	U	-			-		
2-Chlorophenol	0.18	0.18	U	-			-		
2-Methylnaphthalene	0.18	0.18	U	-			-		
2-Methylphenol	0.18	0.18	U	-			-		
2-Nitroaniline	0.18	0.18	U	-			-		
2-Nitrophenol	0.18	0.18	U	-			-		
3,3-Dichlorobenzidine	0.18	0.18	U	-			-		
3-Nitroaniline	0.18	0.18	U	-			-		
4,6-Dinitro-2-methylphenol	0.18	0.18	U	-			-		
4-Bromophenyl-phenylether	0.18	0.18	U	-			-		
4-Chloro-3-methylphenol	0.18	0.18	U	-			-		
4-Chloroaniline	0.18	0.18	U	-			-		

TABLE B-G25
ANALYTICAL RESULTS FOR GRID G25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	G25			G25			G25		
Sample Name	P3IF-BA-GRID-G025			P3IF-SS-IS-SO-G025			P3IF-SS-IS-SO-G525		
Date Collected	June 14, 2023			June 14, 2023			June 14, 2023		
Semivolatile Organic Compounds (mg/kg), continued									
4-Chlorophenyl-phenylether	0.18	0.18	U	-			-		
4-Nitroaniline	0.18	0.18	U	-			-		
4-Nitrophenol	0.18	0.18	U	-			-		
Acenaphthene	0.18	0.18	U	-			-		
Acenaphthylene	0.18	0.18	U	-			-		
Anthracene	0.18	0.18	U	-			-		
Benzo(a)anthracene	0.18	0.18	U	-			-		
Benzo(a)pyrene	0.14	0.14	U	-			-		
Benzo(b)fluoranthene	0.18	0.18	U	-			-		
Benzo(g,h,i)perylene	0.18	0.18	U	-			-		
Benzo(k)fluoranthene	0.18	0.18	U	-			-		
Benzoic acid	0.18	0.18	U	-			-		
Benzyl Alcohol	0.18	0.18	U	-			-		
Bis(2-chloro-1-methylethyl) ether	0.18	0.18	U	-			-		
Bis(2-chloroethoxy)methane	0.18	0.18	U	-			-		
Bis(2-chloroethyl)ether	0.18	0.18	U	-			-		
Bis(2-ethylhexyl)phthalate	0.18	0.18	U	-			-		
Butyl benzyl phthalate	0.18	0.18	U	-			-		
Carbazole	0.18	0.18	U	-			-		
Chrysene	0.18	0.18	U	-			-		
Di-n-butyl phthalate	0.18	0.18	U	-			-		
Di-n-octyl phthalate	0.18	0.18	U	-			-		
Dibenz(a,h)anthracene	0.14	0.14	U	-			-		
Dibenzofuran	0.18	0.18	U	-			-		
Diethyl phthalate	0.18	0.18	U	-			-		
Dimethyl phthalate	0.18	0.18	U	-			-		
Fluoranthene	0.18	0.18	U	-			-		
Fluorene	0.18	0.18	U	-			-		
Hexachlorobenzene	0.18	0.18	U	-			-		
Hexachlorobutadiene	0.18	0.18	U	-			-		
Hexachloroethane	0.18	0.18	U	-			-		
Indeno(1,2,3-cd)pyrene	0.18	0.18	U	-			-		
Isophorone	0.18	0.18	U	-			-		
n-Nitroso-di-n-propylamine	0.18	0.18	U	-			-		
n-Nitrosodimethylamine	0.021	0.021	U	-			-		
n-Nitrosodiphenylamine	0.18	0.18	U	-			-		
Naphthalene	0.18	0.18	U	-			-		
Nitrobenzene	0.18	0.18	U	-			-		
Pentachlorophenol	0.18	0.18	U	-			-		
Phenanthrene	0.18	0.18	U	-			-		
Phenol	0.18	0.18	U	-			-		
Pyrene	0.18	0.18	U	-			-		
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
1,3-Dinitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,4,6-Trinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,4-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,6-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
3-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
4-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	-			0.075	0.075	UJ	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	-			0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
Nitroglycerin	-			0.15	0.15	UJ	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	-			0.075	0.075	UJ	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	-			0.25	0.25	UJ	0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)									
Aroclor 1016	0.021	0.021	U	-			-		
Aroclor 1221	0.021	0.021	U	-			-		
Aroclor 1232	0.011	0.011	U	-			-		
Aroclor 1242	0.011	0.011	U	-			-		
Aroclor 1248	0.011	0.011	U	-			-		
Aroclor 1254	0.011	0.011	U	-			-		
Aroclor 1260	0.011	0.011	U	-			-		
Dioxins/Furans (mg/kg)									
Octachlorodibenzofuran (OCDF)	0.00000012	0.00000012	U	-			-		
Octachlorodibenzo-p-dioxin (OCDD)	0.0000034	0.0000034	U	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.00000025	0.00000025	U	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	0.00000062	0.00000062	J	-			-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.000000099	0.000000099	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000071	0.000000071	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000081	0.000000081	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000066	0.000000066	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000074	0.000000074	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.000000087	0.000000087	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000078	0.000000078	U	-			-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000014	0.00000014	U	-			-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.000000042	0.000000042	U	-			-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000072	0.000000072	U	-			-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000014	0.00000014	U	-			-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.0000003	0.0000003	U	-			-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.000000061	0.000000061	U	-			-		

TABLE B-G25
ANALYTICAL RESULTS FOR GRID G25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	G25			G25			G25		
Sample Name	P3IF-BA-GRID-G025			P3IF-SS-IS-SO-G025			P3IF-SS-IS-SO-G525		
Date Collected	June 14, 2023			June 14, 2023			June 14, 2023		
Metals (mg/kg)									
Aluminum	-			13000	4		18000	4	
Antimony	-			0.18	0.15	J	0.15	0.15	U
Arsenic	-			1.2	0.3		1.5	0.3	
Barium	-			330	0.2		360	0.2	
Beryllium	-			0.42	0.3	J	0.54	0.3	J
Cadmium	-			0.75	0.08		0.63	0.08	
Calcium (Ca)	-			15000	15		15000	15	
Chromium	-			12	0.2		14	0.2	
Cobalt	-			3.4	0.08		4.1	0.08	
Copper	-			180	0.2		130	0.2	
Iron (Fe)	-			6700	8		8300	8	
Lead	-			12	0.05		11	0.05	
Magnesium (Mg)	-			4900	5		6800	5	
Manganese (Mn)	-			470	0.08		500	0.08	
Mercury	-			0.042	0.043	J	0.04	0.043	J
Nickel	-			9.6	0.2		9.9	0.2	
Potassium (K)	-			1200	8		1600	8	
Selenium	-			1.1	0.1		0.98	0.1	
Silver	-			0.076	0.05	J	0.069	0.05	J
Sodium (Na)	-			32	8		38	8	
Thallium	-			0.054	0.05	J	0.058	0.05	J
Vanadium	-			9	0.1		12	0.1	
Zinc	-			23	1.5		27	1.5	
Other Parameters (mg/kg)									
Cyanide (CN-)	0.33	0.33	U	-			-		
Nitrate	41	2.1		-			-		
Perchlorate	0.0042	0.0042	U	-			-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-G25
ANALYTICAL RESULTS FOR GRID G25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	G25		
Sample Name	P3IF-SS-IS-SO-G625		
Date Collected	June 14, 2023		
	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)			
1,1,1,2-Tetrachloroethane	-		
1,1,1-Trichloroethane	-		
1,1,2,2-Tetrachloroethane	-		
1,1,2-Trichloroethane	-		
1,1-Dichloroethane	-		
1,1-Dichloroethene	-		
1,1-Dichloropropene	-		
1,2,3-Trichlorobenzene	-		
1,2,3-Trichloropropane	-		
1,2,4-Trichlorobenzene	-		
1,2,4-Trimethylbenzene	-		
1,2-Dibromo-3-chloropropane	-		
1,2-Dibromoethane	-		
1,2-Dichlorobenzene	-		
1,2-Dichloroethane	-		
1,2-Dichloropropane	-		
1,3,5-Trimethylbenzene	-		
1,3-Dichlorobenzene	-		
1,3-Dichloropropane	-		
1,4-Dichlorobenzene	-		
2,2-Dichloropropane	-		
2-Butanone	-		
2-Chlorotoluene	-		
2-Hexanone	-		
4-Chlorotoluene	-		
4-Methyl-2-pentanone	-		
Acetone	-		
Benzene	-		
Bromobenzene	-		
Bromochloromethane	-		
Bromodichloromethane	-		
Bromoform	-		
Bromomethane	-		
Carbon disulfide	-		
Carbon tetrachloride	-		
Chlorobenzene	-		
Chloroethane	-		
Chloroform	-		
Chloromethane	-		
cis-1,2-Dichloroethene	-		
cis-1,3-Dichloropropene	-		
Dibromochloromethane	-		
Dibromomethane	-		
Dichlorodifluoromethane	-		
Ethylbenzene	-		
Hexachlorobutadiene	-		
Isopropylbenzene	-		
m+p-Xylene	-		
Methyl Tertiary Butyl Ether	-		
Methylene chloride	-		
n-Butylbenzene	-		
n-Propylbenzene	-		
Naphthalene	-		
o-Xylene	-		
4-Isopropyltoluene	-		
sec-Butylbenzene	-		
Styrene	-		
tert-Butylbenzene	-		
Tetrachloroethene	-		
Toluene	-		
trans-1,2-Dichloroethene	-		
trans-1,3-Dichloropropene	-		
Trichloroethene	-		
Trichlorofluoromethane	-		
Vinyl chloride	-		
Semivolatile Organic Compounds (mg/kg)			
1,2,4-Trichlorobenzene	-		
1,2-Dichlorobenzene	-		
1,3-Dichlorobenzene	-		
1,4-Dichlorobenzene	-		
2,4,5-Trichlorophenol	-		
2,4,6-Trichlorophenol	-		
2,4-Dichlorophenol	-		
2,4-Dimethylphenol	-		
2,4-Dinitrophenol	-		
2,4-Dinitrotoluene	-		
2,6-Dinitrotoluene	-		
2-Chloronaphthalene	-		
2-Chlorophenol	-		
2-Methylnaphthalene	-		
2-Methylphenol	-		
2-Nitroaniline	-		
2-Nitrophenol	-		
3,3-Dichlorobenzidine	-		
3-Nitroaniline	-		
4,6-Dinitro-2-methylphenol	-		
4-Bromophenyl-phenylether	-		
4-Chloro-3-methylphenol	-		
4-Chloroaniline	-		

TABLE B-G25
ANALYTICAL RESULTS FOR GRID G25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	G25		
Sample Name	P3IF-SS-IS-SO-G625		
Date Collected	June 14, 2023		
Semivolatile Organic Compounds (mg/kg), continued			
4-Chlorophenyl-phenylether	-		
4-Nitroaniline	-		
4-Nitrophenol	-		
Acenaphthene	-		
Acenaphthylene	-		
Anthracene	-		
Benzo(a)anthracene	-		
Benzo(a)pyrene	-		
Benzo(b)fluoranthene	-		
Benzo(g,h,i)perylene	-		
Benzo(k)fluoranthene	-		
Benzoic acid	-		
Benzyl Alcohol	-		
Bis(2-chloro-1-methylethyl) ether	-		
Bis(2-chloroethoxy)methane	-		
Bis(2-chloroethyl)ether	-		
Bis(2-ethylhexyl)phthalate	-		
Butyl benzyl phthalate	-		
Carbazole	-		
Chrysene	-		
Di-n-butyl phthalate	-		
Di-n-octyl phthalate	-		
Dibenz(a,h)anthracene	-		
Dibenzofuran	-		
Diethyl phthalate	-		
Dimethyl phthalate	-		
Fluoranthene	-		
Fluorene	-		
Hexachlorobenzene	-		
Hexachlorobutadiene	-		
Hexachloroethane	-		
Indeno(1,2,3-cd)pyrene	-		
Isophorone	-		
n-Nitroso-di-n-propylamine	-		
n-Nitrosodimethylamine	-		
n-Nitrosodiphenylamine	-		
Naphthalene	-		
Nitrobenzene	-		
Pentachlorophenol	-		
Phenanthrene	-		
Phenol	-		
Pyrene	-		
Explosives (mg/kg)			
1,3,5-Trinitrobenzene	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	UJ
2,4,6-Trinitrotoluene	0.075	0.075	UJ
2,4-Dinitrotoluene	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	UJ
2-Nitrotoluene	0.075	0.075	UJ
3-Nitrotoluene	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	0.075	0.075	UJ
4-Nitrotoluene	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	UJ
Nitroglycerin	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)			
Aroclor 1016	-		
Aroclor 1221	-		
Aroclor 1232	-		
Aroclor 1242	-		
Aroclor 1248	-		
Aroclor 1254	-		
Aroclor 1260	-		
Dioxins/Furans (mg/kg)			
Octachlorodibenzofuran (OCDF)	-		
Octachlorodibenzo-p-dioxin (OCDD)	-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	-		

TABLE B-G25
ANALYTICAL RESULTS FOR GRID G25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	G25		
Sample Name	P3IF-SS-IS-SO-G625		
Date Collected	June 14, 2023		
Metals (mg/kg)			
Aluminum	17000	4	
Antimony	0.15	0.15	U
Arsenic	1.3	0.3	
Barium	330	0.2	
Beryllium	0.46	0.3	J
Cadmium	0.58	0.08	
Calcium (Ca)	12000	15	
Chromium	13	0.2	
Cobalt	3.7	0.08	
Copper	150	0.2	
Iron (Fe)	7500	8	
Lead	11	0.05	
Magnesium (Mg)	6000	5	
Manganese (Mn)	450	0.08	
Mercury	0.041	0.042	J
Nickel	9.9	0.2	
Potassium (K)	1600	8	
Selenium	1.1	0.1	
Silver	0.071	0.05	J
Sodium (Na)	38	8	
Thallium	0.055	0.05	J
Vanadium	10	0.1	
Zinc	23	1.5	
Other Parameters (mg/kg)			
Cyanide (CN-)	-		
Nitrate	-		
Perchlorate	-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-G26
ANALYTICAL RESULTS FOR GRID G26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	G26			G26			G26		
Sample Name	P3IF-BA-GRID-G026			P3IF-SS-IS-SO-G026			P3IF-SS-IS-SO-G526		
Date Collected	June 14, 2023			June 14, 2023			June 14, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)									
1,1,1,2-Tetrachloroethane	0.0021	0.0021	U	-			-		
1,1,1-Trichloroethane	0.0021	0.0021	U	-			-		
1,1,2,2-Tetrachloroethane	0.0021	0.0021	U	-			-		
1,1,2-Trichloroethane	0.0021	0.0021	U	-			-		
1,1-Dichloroethane	0.0021	0.0021	U	-			-		
1,1-Dichloroethene	0.0021	0.0021	U	-			-		
1,1-Dichloropropene	0.0021	0.0021	U	-			-		
1,2,3-Trichlorobenzene	0.0021	0.0021	U	-			-		
1,2,3-Trichloropropane	0.0053	0.0053	U	-			-		
1,2,4-Trichlorobenzene	0.0021	0.0021	U	-			-		
1,2,4-Trimethylbenzene	0.0021	0.0021	U	-			-		
1,2-Dibromo-3-chloropropane	0.0053	0.0053	U	-			-		
1,2-Dibromoethane	0.0021	0.0021	U	-			-		
1,2-Dichlorobenzene	0.0021	0.0021	U	-			-		
1,2-Dichloroethane	0.0021	0.0021	U	-			-		
1,2-Dichloropropane	0.0021	0.0021	U	-			-		
1,3,5-Trimethylbenzene	0.0021	0.0021	U	-			-		
1,3-Dichlorobenzene	0.0021	0.0021	U	-			-		
1,3-Dichloropropane	0.0021	0.0021	U	-			-		
1,4-Dichlorobenzene	0.0021	0.0021	U	-			-		
2,2-Dichloropropane	0.0021	0.0021	U	-			-		
2-Butanone	0.0032	0.0032	U	-			-		
2-Chlorotoluene	0.0021	0.0021	U	-			-		
2-Hexanone	0.11	0.0021		-			-		
4-Chlorotoluene	0.0021	0.0021	U	-			-		
4-Methyl-2-pentanone	0.0021	0.0021	U	-			-		
Acetone	0.26	0.0053		-			-		
Benzene	0.0021	0.0021	U	-			-		
Bromobenzene	0.0021	0.0021	U	-			-		
Bromochloromethane	0.0021	0.0021	U	-			-		
Bromodichloromethane	0.0021	0.0021	U	-			-		
Bromoform	0.0021	0.0021	U	-			-		
Bromomethane	0.0021	0.0021	U	-			-		
Carbon disulfide	0.0021	0.0021	U	-			-		
Carbon tetrachloride	0.0021	0.0021	U	-			-		
Chlorobenzene	0.0021	0.0021	U	-			-		
Chloroethane	0.0021	0.0021	U	-			-		
Chloroform	0.0021	0.0021	U	-			-		
Chloromethane	0.0053	0.0053	U	-			-		
cis-1,2-Dichloroethene	0.0021	0.0021	U	-			-		
cis-1,3-Dichloropropene	0.0021	0.0021	U	-			-		
Dibromochloromethane	0.0021	0.0021	U	-			-		
Dibromomethane	0.0021	0.0021	U	-			-		
Dichlorodifluoromethane	0.0021	0.0021	U	-			-		
Ethylbenzene	0.0021	0.0021	U	-			-		
Hexachlorobutadiene	0.0021	0.0021	U	-			-		
Isopropylbenzene	0.0021	0.0021	U	-			-		
m+p-Xylene	0.0053	0.0053	U	-			-		
Methyl Tertiary Butyl Ether	0.0021	0.0021	U	-			-		
Methylene chloride	0.011	0.011	U	-			-		
n-Butylbenzene	0.0021	0.0021	U	-			-		
n-Propylbenzene	0.0021	0.0021	U	-			-		
Naphthalene	0.0021	0.0021	U	-			-		
o-Xylene	0.0026	0.0026	U	-			-		
4-Isopropyltoluene	0.0021	0.0021	U	-			-		
sec-Butylbenzene	0.0021	0.0021	U	-			-		
Styrene	0.0021	0.0021	U	-			-		
tert-Butylbenzene	0.0021	0.0021	U	-			-		
Tetrachloroethene	0.0021	0.0021	U	-			-		
Toluene	0.0021	0.0021	U	-			-		
trans-1,2-Dichloroethene	0.0021	0.0021	U	-			-		
trans-1,3-Dichloropropene	0.0021	0.0021	U	-			-		
Trichloroethene	0.0021	0.0021	U	-			-		
Trichlorofluoromethane	0.0021	0.0021	U	-			-		
Vinyl chloride	0.0021	0.0021	U	-			-		
Semivolatile Organic Compounds (mg/kg)									
1,2,4-Trichlorobenzene	0.18	0.18	U	-			-		
1,2-Dichlorobenzene	0.18	0.18	U	-			-		
1,3-Dichlorobenzene	0.18	0.18	U	-			-		
1,4-Dichlorobenzene	0.18	0.18	U	-			-		
2,4,5-Trichlorophenol	0.18	0.18	U	-			-		
2,4,6-Trichlorophenol	0.18	0.18	U	-			-		
2,4-Dichlorophenol	0.18	0.18	U	-			-		
2,4-Dimethylphenol	0.18	0.18	U	-			-		
2,4-Dinitrophenol	0.18	0.18	U	-			-		
2,4-Dinitrotoluene	0.18	0.18	U	-			-		
2,6-Dinitrotoluene	0.18	0.18	U	-			-		
2-Chloronaphthalene	0.18	0.18	U	-			-		
2-Chlorophenol	0.18	0.18	U	-			-		
2-Methylnaphthalene	0.18	0.18	U	-			-		
2-Methylphenol	0.18	0.18	U	-			-		
2-Nitroaniline	0.18	0.18	U	-			-		
2-Nitrophenol	0.18	0.18	U	-			-		
3,3-Dichlorobenzidine	0.18	0.18	U	-			-		
3-Nitroaniline	0.18	0.18	U	-			-		
4,6-Dinitro-2-methylphenol	0.18	0.18	U	-			-		
4-Bromophenyl-phenylether	0.18	0.18	U	-			-		
4-Chloro-3-methylphenol	0.18	0.18	U	-			-		
4-Chloroaniline	0.18	0.18	U	-			-		

TABLE B-G26
ANALYTICAL RESULTS FOR GRID G26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	G26			G26			G26		
Sample Name	P3IF-BA-GRID-G026			P3IF-SS-IS-SO-G026			P3IF-SS-IS-SO-G526		
Date Collected	June 14, 2023			June 14, 2023			June 14, 2023		
Semivolatile Organic Compounds (mg/kg), continued									
4-Chlorophenyl-phenylether	0.18	0.18	U	-			-		
4-Nitroaniline	0.18	0.18	U	-			-		
4-Nitrophenol	0.18	0.18	U	-			-		
Acenaphthene	0.18	0.18	U	-			-		
Acenaphthylene	0.18	0.18	U	-			-		
Anthracene	0.18	0.18	U	-			-		
Benzo(a)anthracene	0.18	0.18	U	-			-		
Benzo(a)pyrene	0.14	0.14	U	-			-		
Benzo(b)fluoranthene	0.18	0.18	U	-			-		
Benzo(g,h,i)perylene	0.18	0.18	U	-			-		
Benzo(k)fluoranthene	0.18	0.18	U	-			-		
Benzoic acid	0.18	0.18	U	-			-		
Benzyl Alcohol	0.18	0.18	U	-			-		
Bis(2-chloro-1-methylethyl) ether	0.18	0.18	U	-			-		
Bis(2-chloroethoxy)methane	0.18	0.18	U	-			-		
Bis(2-chloroethyl)ether	0.18	0.18	U	-			-		
Bis(2-ethylhexyl)phthalate	0.18	0.18	U	-			-		
Butyl benzyl phthalate	0.18	0.18	U	-			-		
Carbazole	0.18	0.18	U	-			-		
Chrysene	0.18	0.18	U	-			-		
Dibenz(a,h)anthracene	0.14	0.14	U	-			-		
Dibenzofuran	0.18	0.18	U	-			-		
Diethyl phthalate	0.18	0.18	U	-			-		
Dimethyl phthalate	0.18	0.18	U	-			-		
Di-n-butyl phthalate	0.18	0.18	U	-			-		
Di-n-octyl phthalate	0.18	0.18	U	-			-		
Fluoranthene	0.18	0.18	U	-			-		
Fluorene	0.18	0.18	U	-			-		
Hexachlorobenzene	0.18	0.18	U	-			-		
Hexachlorobutadiene	0.18	0.18	U	-			-		
Hexachloroethane	0.18	0.18	U	-			-		
Indeno(1,2,3-cd)pyrene	0.18	0.18	U	-			-		
Isophorone	0.18	0.18	U	-			-		
n-Nitroso-di-n-propylamine	0.18	0.18	U	-			-		
n-Nitrosodimethylamine	0.022	0.022	U	-			-		
n-Nitrosodiphenylamine	0.18	0.18	U	-			-		
Naphthalene	0.18	0.18	U	-			-		
Nitrobenzene	0.18	0.18	U	-			-		
Pentachlorophenol	0.18	0.18	U	-			-		
Phenanthrene	0.18	0.18	U	-			-		
Phenol	0.18	0.18	U	-			-		
Pyrene	0.18	0.18	U	-			-		
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
1,3-Dinitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,4,6-Trinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,4-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,6-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
3-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
4-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	-			0.075	0.075	UJ	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	-			0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
Nitroglycerin	-			0.15	0.15	UJ	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	-			0.075	0.075	UJ	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	-			0.25	0.25	UJ	0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)									
Aroclor 1016	0.022	0.022	U	-			-		
Aroclor 1221	0.022	0.022	U	-			-		
Aroclor 1232	0.011	0.011	U	-			-		
Aroclor 1242	0.011	0.011	U	-			-		
Aroclor 1248	0.011	0.011	U	-			-		
Aroclor 1254	0.011	0.011	U	-			-		
Aroclor 1260	0.011	0.011	U	-			-		
Dioxins/Furans (mg/kg)									
Octachlorodibenzofuran (OCDF)	0.000000098	0.000000098	U	-			-		
Octachlorodibenzo-p-dioxin (OCDD)	0.0000014	0.0000014	U	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.000000037	0.000000037	U	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	0.00000021	0.00000021	U	-			-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.000000047	0.000000047	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000031	0.000000031	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000012	0.00000012	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.00000002	0.00000002	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000011	0.00000011	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.000000026	0.000000026	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000012	0.00000012	U	-			-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.000000072	0.000000072	U	-			-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.000000078	0.000000078	U	-			-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000021	0.000000021	U	-			-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.000000074	0.000000074	U	-			-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.00000051	0.00000051	U	-			-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.000000046	0.000000046	U	-			-		

TABLE B-G26
ANALYTICAL RESULTS FOR GRID G26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	G26			G26			G26		
Sample Name	P3IF-BA-GRID-G026			P3IF-SS-IS-SO-G026			P3IF-SS-IS-SO-G526		
Date Collected	June 14, 2023			June 14, 2023			June 14, 2023		
Metals (mg/kg)									
Aluminum	-			16000	4		18000	4	
Antimony	-			0.076	0.15	J	0.15	0.15	J
Arsenic	-			0.95	0.3		1.1	0.3	
Barium	-			290	0.2		340	0.2	
Beryllium	-			0.65	0.3	J	0.75	0.3	J
Cadmium	-			0.45	0.08		0.48	0.08	
Calcium (Ca)	-			31000	15		34000	15	
Chromium	-			9.8	0.2		12	0.2	
Cobalt	-			3.7	0.08		3.8	0.08	
Copper	-			91	0.2		110	0.2	
Iron (Fe)	-			6900	8		8300	8	
Lead	-			9.7	0.05		10	0.05	
Magnesium (Mg)	-			6800	5		6900	5	
Manganese (Mn)	-			490	0.08		470	0.08	
Mercury	-			0.021	0.042	J	0.022	0.043	J
Nickel	-			8.5	0.2		9.5	0.2	
Potassium (K)	-			1200	8		1700	8	
Selenium	-			1.1	0.1		0.97	0.1	
Silver	-			0.051	0.05	J	0.049	0.05	J
Sodium (Na)	-			39	8		42	8	
Thallium	-			0.05	0.05	J	0.072	0.05	J
Vanadium	-			7.7	0.1		8.3	0.1	
Zinc	-			21	1.5		22	1.5	
Other Parameters (mg/kg)									
Cyanide (CN-)	0.34	0.34	U	-			-		
Nitrate	13	2.2		-			-		
Perchlorate	0.0044	0.0044	U	-			-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-G26
ANALYTICAL RESULTS FOR GRID G26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	G26		
Sample Name	P3IF-SS-IS-SO-G626		
Date Collected	June 14, 2023		
	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)			
1,1,1,2-Tetrachloroethane	-		
1,1,1-Trichloroethane	-		
1,1,2,2-Tetrachloroethane	-		
1,1,2-Trichloroethane	-		
1,1-Dichloroethane	-		
1,1-Dichloroethene	-		
1,1-Dichloropropene	-		
1,2,3-Trichlorobenzene	-		
1,2,3-Trichloropropane	-		
1,2,4-Trichlorobenzene	-		
1,2,4-Trimethylbenzene	-		
1,2-Dibromo-3-chloropropane	-		
1,2-Dibromoethane	-		
1,2-Dichlorobenzene	-		
1,2-Dichloroethane	-		
1,2-Dichloropropane	-		
1,3,5-Trimethylbenzene	-		
1,3-Dichlorobenzene	-		
1,3-Dichloropropane	-		
1,4-Dichlorobenzene	-		
2,2-Dichloropropane	-		
2-Butanone	-		
2-Chlorotoluene	-		
2-Hexanone	-		
4-Chlorotoluene	-		
4-Methyl-2-pentanone	-		
Acetone	-		
Benzene	-		
Bromobenzene	-		
Bromochloromethane	-		
Bromodichloromethane	-		
Bromoform	-		
Bromomethane	-		
Carbon disulfide	-		
Carbon tetrachloride	-		
Chlorobenzene	-		
Chloroethane	-		
Chloroform	-		
Chloromethane	-		
cis-1,2-Dichloroethene	-		
cis-1,3-Dichloropropene	-		
Dibromochloromethane	-		
Dibromomethane	-		
Dichlorodifluoromethane	-		
Ethylbenzene	-		
Hexachlorobutadiene	-		
Isopropylbenzene	-		
m+p-Xylene	-		
Methyl Tertiary Butyl Ether	-		
Methylene chloride	-		
n-Butylbenzene	-		
n-Propylbenzene	-		
Naphthalene	-		
o-Xylene	-		
4-Isopropyltoluene	-		
sec-Butylbenzene	-		
Styrene	-		
tert-Butylbenzene	-		
Tetrachloroethene	-		
Toluene	-		
trans-1,2-Dichloroethene	-		
trans-1,3-Dichloropropene	-		
Trichloroethene	-		
Trichlorofluoromethane	-		
Vinyl chloride	-		
Semivolatile Organic Compounds (mg/kg)			
1,2,4-Trichlorobenzene	-		
1,2-Dichlorobenzene	-		
1,3-Dichlorobenzene	-		
1,4-Dichlorobenzene	-		
2,4,5-Trichlorophenol	-		
2,4,6-Trichlorophenol	-		
2,4-Dichlorophenol	-		
2,4-Dimethylphenol	-		
2,4-Dinitrophenol	-		
2,4-Dinitrotoluene	-		
2,6-Dinitrotoluene	-		
2-Chloronaphthalene	-		
2-Chlorophenol	-		
2-Methylnaphthalene	-		
2-Methylphenol	-		
2-Nitroaniline	-		
2-Nitrophenol	-		
3,3-Dichlorobenzidine	-		
3-Nitroaniline	-		
4,6-Dinitro-2-methylphenol	-		
4-Bromophenyl-phenylether	-		
4-Chloro-3-methylphenol	-		
4-Chloroaniline	-		

TABLE B-G26
ANALYTICAL RESULTS FOR GRID G26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	G26		
Sample Name	P3IF-SS-IS-SO-G626		
Date Collected	June 14, 2023		
Semivolatile Organic Compounds (mg/kg), continued			
4-Chlorophenyl-phenylether	-		
4-Nitroaniline	-		
4-Nitrophenol	-		
Acenaphthene	-		
Acenaphthylene	-		
Anthracene	-		
Benzo(a)anthracene	-		
Benzo(a)pyrene	-		
Benzo(b)fluoranthene	-		
Benzo(g,h,i)perylene	-		
Benzo(k)fluoranthene	-		
Benzoic acid	-		
Benzyl Alcohol	-		
Bis(2-chloro-1-methylethyl) ether	-		
Bis(2-chloroethoxy)methane	-		
Bis(2-chloroethyl)ether	-		
Bis(2-ethylhexyl)phthalate	-		
Butyl benzyl phthalate	-		
Carbazole	-		
Chrysene	-		
Dibenz(a,h)anthracene	-		
Dibenzofuran	-		
Diethyl phthalate	-		
Dimethyl phthalate	-		
Di-n-butyl phthalate	-		
Di-n-octyl phthalate	-		
Fluoranthene	-		
Fluorene	-		
Hexachlorobenzene	-		
Hexachlorobutadiene	-		
Hexachloroethane	-		
Indeno(1,2,3-cd)pyrene	-		
Isophorone	-		
n-Nitroso-di-n-propylamine	-		
n-Nitrosodimethylamine	-		
n-Nitrosodiphenylamine	-		
Naphthalene	-		
Nitrobenzene	-		
Pentachlorophenol	-		
Phenanthrene	-		
Phenol	-		
Pyrene	-		
Explosives (mg/kg)			
1,3,5-Trinitrobenzene	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	UJ
2,4,6-Trinitrotoluene	0.075	0.075	UJ
2,4-Dinitrotoluene	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	UJ
2-Nitrotoluene	0.075	0.075	UJ
3-Nitrotoluene	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	0.075	0.075	UJ
4-Nitrotoluene	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	UJ
Nitroglycerin	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)			
Aroclor 1016	-		
Aroclor 1221	-		
Aroclor 1232	-		
Aroclor 1242	-		
Aroclor 1248	-		
Aroclor 1254	-		
Aroclor 1260	-		
Dioxins/Furans (mg/kg)			
Octachlorodibenzofuran (OCDF)	-		
Octachlorodibenzo-p-dioxin (OCDD)	-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	-		

TABLE B-G26
ANALYTICAL RESULTS FOR GRID G26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	G26		
Sample Name	P3IF-SS-IS-SO-G626		
Date Collected	June 14, 2023		
Metals (mg/kg)			
Aluminum	18000	4	
Antimony	0.15	0.15	U
Arsenic	0.97	0.3	
Barium	330	0.2	
Beryllium	0.67	0.3	J
Cadmium	0.54	0.08	
Calcium (Ca)	30000	15	
Chromium	12	0.2	
Cobalt	3.8	0.08	
Copper	110	0.2	
Iron (Fe)	7800	8	
Lead	9.4	0.05	
Magnesium (Mg)	7000	5	
Manganese (Mn)	450	0.08	
Mercury	0.021	0.043	J
Nickel	9.5	0.2	
Potassium (K)	1700	8	
Selenium	1.1	0.1	
Silver	0.051	0.05	J
Sodium (Na)	42	8	
Thallium	0.058	0.05	J
Vanadium	8.4	0.1	
Zinc	21	1.5	
Other Parameters (mg/kg)			
Cyanide (CN-)	-		
Nitrate	-		
Perchlorate	-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-H25
ANALYTICAL RESULTS FOR GRID H25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	H25			H25			H25		
Sample Name	P3IF-BA-GRID-H025			P3IF-SS-IS-SO-H025			P3IF-SS-IS-SO-H525		
Date Collected	June 14, 2023			June 14, 2023			June 14, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)									
1,1,1,2-Tetrachloroethane	0.0026	0.0026	U	-			-		
1,1,1-Trichloroethane	0.0026	0.0026	U	-			-		
1,1,2,2-Tetrachloroethane	0.0026	0.0026	U	-			-		
1,1,2-Trichloroethane	0.0026	0.0026	U	-			-		
1,1-Dichloroethane	0.0026	0.0026	U	-			-		
1,1-Dichloroethene	0.0026	0.0026	U	-			-		
1,1-Dichloropropene	0.0026	0.0026	U	-			-		
1,2,3-Trichlorobenzene	0.0026	0.0026	U	-			-		
1,2,3-Trichloropropane	0.0065	0.0065	U	-			-		
1,2,4-Trichlorobenzene	0.0026	0.0026	U	-			-		
1,2,4-Trimethylbenzene	0.0026	0.0026	U	-			-		
1,2-Dibromo-3-chloropropane	0.0065	0.0065	U	-			-		
1,2-Dibromoethane	0.0026	0.0026	U	-			-		
1,2-Dichlorobenzene	0.0026	0.0026	U	-			-		
1,2-Dichloroethane	0.0026	0.0026	U	-			-		
1,2-Dichloropropane	0.0026	0.0026	U	-			-		
1,3,5-Trimethylbenzene	0.0026	0.0026	U	-			-		
1,3-Dichlorobenzene	0.0026	0.0026	U	-			-		
1,3-Dichloropropane	0.0026	0.0026	U	-			-		
1,4-Dichlorobenzene	0.0026	0.0026	U	-			-		
2,2-Dichloropropane	0.0026	0.0026	U	-			-		
2-Butanone	0.0039	0.0039	U	-			-		
2-Chlorotoluene	0.0026	0.0026	U	-			-		
2-Hexanone	0.34	0.0026	J	-			-		
4-Chlorotoluene	0.0026	0.0026	U	-			-		
4-Methyl-2-pentanone	0.0026	0.0026	U	-			-		
Acetone	0.55	0.0065	J	-			-		
Benzene	0.0026	0.0026	U	-			-		
Bromobenzene	0.0026	0.0026	U	-			-		
Bromochloromethane	0.0026	0.0026	U	-			-		
Bromodichloromethane	0.0026	0.0026	U	-			-		
Bromoform	0.0026	0.0026	U	-			-		
Bromomethane	0.0026	0.0026	U	-			-		
Carbon disulfide	0.0026	0.0026	U	-			-		
Carbon tetrachloride	0.0026	0.0026	U	-			-		
Chlorobenzene	0.0026	0.0026	U	-			-		
Chloroethane	0.0026	0.0026	U	-			-		
Chloroform	0.0026	0.0026	U	-			-		
Chloromethane	0.0065	0.0065	U	-			-		
cis-1,2-Dichloroethene	0.0026	0.0026	U	-			-		
cis-1,3-Dichloropropene	0.0026	0.0026	U	-			-		
Dibromochloromethane	0.0026	0.0026	U	-			-		
Dibromomethane	0.0026	0.0026	U	-			-		
Dichlorodifluoromethane	0.0026	0.0026	U	-			-		
Ethylbenzene	0.0026	0.0026	U	-			-		
Hexachlorobutadiene	0.0026	0.0026	U	-			-		
Isopropylbenzene	0.0026	0.0026	U	-			-		
m+p-Xylene	0.0065	0.0065	U	-			-		
Methyl Tertiary Butyl Ether	0.0026	0.0026	U	-			-		
Methylene chloride	0.013	0.013	U	-			-		
n-Butylbenzene	0.0026	0.0026	U	-			-		
n-Propylbenzene	0.0026	0.0026	U	-			-		
Naphthalene	0.0026	0.0026	U	-			-		
o-Xylene	0.0032	0.0032	U	-			-		
4-Isopropyltoluene	0.0026	0.0026	R	-			-		
sec-Butylbenzene	0.0026	0.0026	U	-			-		
Styrene	0.0026	0.0026	U	-			-		
tert-Butylbenzene	0.0026	0.0026	U	-			-		
Tetrachloroethene	0.0026	0.0026	U	-			-		
Toluene	0.0026	0.0026	U	-			-		
trans-1,2-Dichloroethene	0.0026	0.0026	U	-			-		
trans-1,3-Dichloropropene	0.0026	0.0026	U	-			-		
Trichloroethene	0.0026	0.0026	U	-			-		
Trichlorofluoromethane	0.0026	0.0026	U	-			-		
Vinyl chloride	0.0026	0.0026	U	-			-		
Semivolatile Organic Compounds (mg/kg)									
1,2,4-Trichlorobenzene	0.17	0.17	U	-			-		
1,2-Dichlorobenzene	0.17	0.17	U	-			-		
1,3-Dichlorobenzene	0.17	0.17	U	-			-		
1,4-Dichlorobenzene	0.17	0.17	U	-			-		
2,4,5-Trichlorophenol	0.17	0.17	U	-			-		
2,4,6-Trichlorophenol	0.17	0.17	U	-			-		
2,4-Dichlorophenol	0.17	0.17	U	-			-		
2,4-Dimethylphenol	0.17	0.17	U	-			-		
2,4-Dinitrophenol	0.17	0.17	U	-			-		
2,4-Dinitrotoluene	0.17	0.17	U	-			-		
2,6-Dinitrotoluene	0.17	0.17	U	-			-		
2-Chloronaphthalene	0.17	0.17	U	-			-		
2-Chlorophenol	0.17	0.17	U	-			-		
2-Methylnaphthalene	0.17	0.17	U	-			-		
2-Methylphenol	0.17	0.17	U	-			-		
2-Nitroaniline	0.17	0.17	U	-			-		
2-Nitrophenol	0.17	0.17	U	-			-		
3,3-Dichlorobenzidine	0.17	0.17	U	-			-		
3-Nitroaniline	0.17	0.17	U	-			-		
4,6-Dinitro-2-methylphenol	0.17	0.17	U	-			-		
4-Bromophenyl-phenylether	0.17	0.17	U	-			-		
4-Chloro-3-methylphenol	0.17	0.17	U	-			-		
4-Chloroaniline	0.17	0.17	U	-			-		

TABLE B-H25
ANALYTICAL RESULTS FOR GRID H25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	H25			H25			H25		
Sample Name	P3IF-BA-GRID-H025			P3IF-SS-IS-SO-H025			P3IF-SS-IS-SO-H525		
Date Collected	June 14, 2023			June 14, 2023			June 14, 2023		
Semivolatile Organic Compounds (mg/kg), continued									
4-Chlorophenyl-phenylether	0.17	0.17	U	-			-		
4-Nitroaniline	0.17	0.17	U	-			-		
4-Nitrophenol	0.17	0.17	U	-			-		
Acenaphthene	0.17	0.17	U	-			-		
Acenaphthylene	0.17	0.17	U	-			-		
Anthracene	0.17	0.17	U	-			-		
Benzo(a)anthracene	0.17	0.17	U	-			-		
Benzo(a)pyrene	0.14	0.14	U	-			-		
Benzo(b)fluoranthene	0.17	0.17	U	-			-		
Benzo(g,h,i)perylene	0.17	0.17	U	-			-		
Benzo(k)fluoranthene	0.17	0.17	U	-			-		
Benzoic acid	0.17	0.17	U	-			-		
Benzyl Alcohol	0.17	0.17	U	-			-		
Bis(2-chloro-1-methylethyl) ether	0.17	0.17	U	-			-		
Bis(2-chloroethoxy)methane	0.17	0.17	U	-			-		
Bis(2-chloroethyl)ether	0.17	0.17	U	-			-		
Bis(2-ethylhexyl)phthalate	0.17	0.17	U	-			-		
Butyl benzyl phthalate	0.17	0.17	U	-			-		
Carbazole	0.17	0.17	U	-			-		
Chrysene	0.17	0.17	U	-			-		
Di-n-butyl phthalate	0.17	0.17	U	-			-		
Di-n-octyl phthalate	0.17	0.17	U	-			-		
Dibenz(a,h)anthracene	0.14	0.14	U	-			-		
Dibenzofuran	0.17	0.17	U	-			-		
Diethyl phthalate	0.17	0.17	U	-			-		
Dimethyl phthalate	0.17	0.17	U	-			-		
Fluoranthene	0.17	0.17	U	-			-		
Fluorene	0.17	0.17	U	-			-		
Hexachlorobenzene	0.17	0.17	U	-			-		
Hexachlorobutadiene	0.17	0.17	U	-			-		
Hexachloroethane	0.17	0.17	U	-			-		
Indeno(1,2,3-cd)pyrene	0.17	0.17	U	-			-		
Isophorone	0.17	0.17	U	-			-		
n-Nitrosodimethylamine	0.021	0.021	U	-			-		
n-Nitroso-di-n-propylamine	0.17	0.17	U	-			-		
n-Nitrosodiphenylamine	0.17	0.17	U	-			-		
Naphthalene	0.17	0.17	U	-			-		
Nitrobenzene	0.17	0.17	U	-			-		
Pentachlorophenol	0.17	0.17	U	-			-		
Phenanthrene	0.17	0.17	U	-			-		
Phenol	0.17	0.17	U	-			-		
Pyrene	0.17	0.17	U	-			-		
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
1,3-Dinitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,4,6-Trinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,4-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,6-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
3-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
4-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	-			0.075	0.075	UJ	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	-			0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
Nitroglycerin	-			0.15	0.15	UJ	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	-			0.075	0.075	UJ	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	-			0.25	0.25	UJ	0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)									
Aroclor 1016	0.021	0.021	U	-			-		
Aroclor 1221	0.021	0.021	U	-			-		
Aroclor 1232	0.01	0.01	U	-			-		
Aroclor 1242	0.01	0.01	U	-			-		
Aroclor 1248	0.01	0.01	U	-			-		
Aroclor 1254	0.01	0.01	U	-			-		
Aroclor 1260	0.01	0.01	U	-			-		
Dioxins/Furans (mg/kg)									
Octachlorodibenzofuran (OCDF)	0.00000093	0.00000093	J	-			-		
Octachlorodibenzo-p-dioxin (OCDD)	0.000013	0.000013	U	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.00000026	0.00000026	U	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	0.0000017	0.0000017	J	-			-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.00000011	0.00000011	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000088	0.000000088	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000078	0.000000078	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000081	0.000000081	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000071	0.000000071	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.00000011	0.00000011	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000075	0.000000075	U	-			-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000024	0.00000024	U	-			-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.000000078	0.000000078	U	-			-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.00000043	0.00000043	J	-			-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000024	0.00000024	U	-			-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.00000027	0.00000027	U	-			-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.000000084	0.000000084	U	-			-		

TABLE B-H25
ANALYTICAL RESULTS FOR GRID H25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	H25			H25			H25		
Sample Name	P3IF-BA-GRID-H025			P3IF-SS-IS-SO-H025			P3IF-SS-IS-SO-H525		
Date Collected	June 14, 2023			June 14, 2023			June 14, 2023		
Metals (mg/kg)									
Aluminum	-			21000	4		16000	4	
Antimony	-			0.082	0.15	J	0.2	0.15	
Arsenic	-			1.4	0.3		1.4	0.3	
Barium	-			350	0.2		380	0.2	
Beryllium	-			0.77	0.3	J	0.81	0.3	J
Cadmium	-			0.83	0.08		0.66	0.08	
Calcium (Ca)	-			23000	15		28000	15	
Chromium	-			15	0.2		12	0.2	
Cobalt	-			4.6	0.08		3.9	0.08	
Copper	-			120	0.2		99	0.2	
Iron (Fe)	-			9300	8		7700	8	
Lead	-			11	0.05		10	0.05	
Magnesium (Mg)	-			7800	5		6100	5	
Manganese (Mn)	-			510	0.08		520	0.08	
Mercury	-			0.029	0.042	J	0.032	0.042	J
Nickel	-			11	0.2		9.8	0.2	
Potassium (K)	-			2200	8		1600	8	
Selenium	-			1.3	0.1		1	0.1	
Silver	-			0.076	0.05	J	0.067	0.05	J
Sodium (Na)	-			62	8		54	8	
Thallium	-			0.075	0.05	J	0.068	0.05	J
Vanadium	-			12	0.1		8.7	0.1	
Zinc	-			29	1.5		24	1.5	
Other Parameters (mg/kg)									
Cyanide (CN-)	0.33	0.33	U	-			-		
Nitrate	13	2.2		-			-		
Perchlorate	0.0042	0.0042	U	-			-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-H25
ANALYTICAL RESULTS FOR GRID H25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	H25		
Sample Name	P3IF-SS-IS-SO-H625		
Date Collected	June 14, 2023		
	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)			
1,1,1,2-Tetrachloroethane	-		
1,1,1-Trichloroethane	-		
1,1,2,2-Tetrachloroethane	-		
1,1,2-Trichloroethane	-		
1,1-Dichloroethane	-		
1,1-Dichloroethene	-		
1,1-Dichloropropene	-		
1,2,3-Trichlorobenzene	-		
1,2,3-Trichloropropane	-		
1,2,4-Trichlorobenzene	-		
1,2,4-Trimethylbenzene	-		
1,2-Dibromo-3-chloropropane	-		
1,2-Dibromoethane	-		
1,2-Dichlorobenzene	-		
1,2-Dichloroethane	-		
1,2-Dichloropropane	-		
1,3,5-Trimethylbenzene	-		
1,3-Dichlorobenzene	-		
1,3-Dichloropropane	-		
1,4-Dichlorobenzene	-		
2,2-Dichloropropane	-		
2-Butanone	-		
2-Chlorotoluene	-		
2-Hexanone	-		
4-Chlorotoluene	-		
4-Methyl-2-pentanone	-		
Acetone	-		
Benzene	-		
Bromobenzene	-		
Bromochloromethane	-		
Bromodichloromethane	-		
Bromoform	-		
Bromomethane	-		
Carbon disulfide	-		
Carbon tetrachloride	-		
Chlorobenzene	-		
Chloroethane	-		
Chloroform	-		
Chloromethane	-		
cis-1,2-Dichloroethene	-		
cis-1,3-Dichloropropene	-		
Dibromochloromethane	-		
Dibromomethane	-		
Dichlorodifluoromethane	-		
Ethylbenzene	-		
Hexachlorobutadiene	-		
Isopropylbenzene	-		
m+p-Xylene	-		
Methyl Tertiary Butyl Ether	-		
Methylene chloride	-		
n-Butylbenzene	-		
n-Propylbenzene	-		
Naphthalene	-		
o-Xylene	-		
4-Isopropyltoluene	-		
sec-Butylbenzene	-		
Styrene	-		
tert-Butylbenzene	-		
Tetrachloroethene	-		
Toluene	-		
trans-1,2-Dichloroethene	-		
trans-1,3-Dichloropropene	-		
Trichloroethene	-		
Trichlorofluoromethane	-		
Vinyl chloride	-		
Semivolatile Organic Compounds (mg/kg)			
1,2,4-Trichlorobenzene	-		
1,2-Dichlorobenzene	-		
1,3-Dichlorobenzene	-		
1,4-Dichlorobenzene	-		
2,4,5-Trichlorophenol	-		
2,4,6-Trichlorophenol	-		
2,4-Dichlorophenol	-		
2,4-Dimethylphenol	-		
2,4-Dinitrophenol	-		
2,4-Dinitrotoluene	-		
2,6-Dinitrotoluene	-		
2-Chloronaphthalene	-		
2-Chlorophenol	-		
2-Methylnaphthalene	-		
2-Methylphenol	-		
2-Nitroaniline	-		
2-Nitrophenol	-		
3,3-Dichlorobenzidine	-		
3-Nitroaniline	-		
4,6-Dinitro-2-methylphenol	-		
4-Bromophenyl-phenylether	-		
4-Chloro-3-methylphenol	-		
4-Chloroaniline	-		

TABLE B-H25
ANALYTICAL RESULTS FOR GRID H25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	H25		
Sample Name	P3IF-SS-IS-SO-H625		
Date Collected	June 14, 2023		
Semivolatile Organic Compounds (mg/kg), continued			
4-Chlorophenyl-phenylether	-		
4-Nitroaniline	-		
4-Nitrophenol	-		
Acenaphthene	-		
Acenaphthylene	-		
Anthracene	-		
Benzo(a)anthracene	-		
Benzo(a)pyrene	-		
Benzo(b)fluoranthene	-		
Benzo(g,h,i)perylene	-		
Benzo(k)fluoranthene	-		
Benzoic acid	-		
Benzyl Alcohol	-		
Bis(2-chloro-1-methylethyl) ether	-		
Bis(2-chloroethoxy)methane	-		
Bis(2-chloroethyl)ether	-		
Bis(2-ethylhexyl)phthalate	-		
Butyl benzyl phthalate	-		
Carbazole	-		
Chrysene	-		
Di-n-butyl phthalate	-		
Di-n-octyl phthalate	-		
Dibenz(a,h)anthracene	-		
Dibenzofuran	-		
Diethyl phthalate	-		
Dimethyl phthalate	-		
Fluoranthene	-		
Fluorene	-		
Hexachlorobenzene	-		
Hexachlorobutadiene	-		
Hexachloroethane	-		
Indeno(1,2,3-cd)pyrene	-		
Isophorone	-		
n-Nitrosodimethylamine	-		
n-Nitroso-di-n-propylamine	-		
n-Nitrosodiphenylamine	-		
Naphthalene	-		
Nitrobenzene	-		
Pentachlorophenol	-		
Phenanthrene	-		
Phenol	-		
Pyrene	-		
Explosives (mg/kg)			
1,3,5-Trinitrobenzene	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	UJ
2,4,6-Trinitrotoluene	0.075	0.075	UJ
2,4-Dinitrotoluene	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	UJ
2-Nitrotoluene	0.075	0.075	UJ
3-Nitrotoluene	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	0.075	0.075	UJ
4-Nitrotoluene	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	UJ
Nitroglycerin	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)			
Aroclor 1016	-		
Aroclor 1221	-		
Aroclor 1232	-		
Aroclor 1242	-		
Aroclor 1248	-		
Aroclor 1254	-		
Aroclor 1260	-		
Dioxins/Furans (mg/kg)			
Octachlorodibenzofuran (OCDF)	-		
Octachlorodibenzo-p-dioxin (OCDD)	-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	-		

TABLE B-H25
ANALYTICAL RESULTS FOR GRID H25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	H25		
Sample Name	P3IF-SS-IS-SO-H625		
Date Collected	June 14, 2023		
Metals (mg/kg)			
Aluminum	21000	4	
Antimony	0.088	0.15	J
Arsenic	1.4	0.3	
Barium	370	0.2	
Beryllium	0.82	0.3	J
Cadmium	0.76	0.08	
Calcium (Ca)	25000	15	
Chromium	15	0.2	
Cobalt	4.7	0.08	
Copper	130	0.2	
Iron (Fe)	9500	8	
Lead	12	0.05	
Magnesium (Mg)	8000	5	
Manganese (Mn)	520	0.08	
Mercury	0.032	0.042	J
Nickel	11	0.2	
Potassium (K)	2200	8	
Selenium	1.2	0.1	
Silver	0.082	0.05	J
Sodium (Na)	60	8	
Thallium	0.071	0.05	J
Vanadium	12	0.1	
Zinc	36	1.5	
Other Parameters (mg/kg)			
Cyanide (CN-)	-		
Nitrate	-		
Perchlorate	-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-I25
ANALYTICAL RESULTS FOR GRID I25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	I25			I25			I25		
Sample Name	P3IF-BA-GRID-I025			P3IF-BA-GRID-I525			P3IF-SS-IS-SO-I025		
Date Collected	15 Jun 2023			15 Jun 2023			15 Jun 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)									
1,1,1,2-Tetrachloroethane	0.002	0.002	UJ	0.0023	0.0023	UJ	-		
1,1,1-Trichloroethane	0.002	0.002	UJ	0.0023	0.0023	UJ	-		
1,1,2,2-Tetrachloroethane	0.002	0.002	UJ	0.0023	0.0023	UJ	-		
1,1,2-Trichloroethane	0.002	0.002	UJ	0.0023	0.0023	UJ	-		
1,1-Dichloroethane	0.002	0.002	UJ	0.0023	0.0023	UJ	-		
1,1-Dichloroethene	0.002	0.002	UJ	0.0023	0.0023	UJ	-		
1,1-Dichloropropene	0.002	0.002	UJ	0.0023	0.0023	UJ	-		
1,2,3-Trichlorobenzene	0.002	0.002	UJ	0.0023	0.0023	UJ	-		
1,2,3-Trichloropropane	0.0049	0.0049	UJ	0.0057	0.0057	UJ	-		
1,2,4-Trichlorobenzene	0.002	0.002	UJ	0.0023	0.0023	UJ	-		
1,2,4-Trimethylbenzene	0.002	0.002	UJ	0.0023	0.0023	UJ	-		
1,2-Dibromo-3-chloropropane	0.0049	0.0049	UJ	0.0057	0.0057	UJ	-		
1,2-Dibromoethane	0.002	0.002	UJ	0.0023	0.0023	UJ	-		
1,2-Dichlorobenzene	0.002	0.002	UJ	0.0023	0.0023	UJ	-		
1,2-Dichloroethane	0.002	0.002	UJ	0.0023	0.0023	UJ	-		
1,2-Dichloropropane	0.002	0.002	UJ	0.0023	0.0023	UJ	-		
1,3,5-Trimethylbenzene	0.002	0.002	UJ	0.0023	0.0023	UJ	-		
1,3-Dichlorobenzene	0.002	0.002	UJ	0.0023	0.0023	UJ	-		
1,3-Dichloropropane	0.002	0.002	UJ	0.0023	0.0023	UJ	-		
1,4-Dichlorobenzene	0.002	0.002	UJ	0.0023	0.0023	UJ	-		
2,2-Dichloropropane	0.002	0.002	UJ	0.0023	0.0023	UJ	-		
2-Butanone	0.0029	0.0029	UJ	0.0034	0.0034	UJ	-		
2-Chlorotoluene	0.002	0.002	UJ	0.0023	0.0023	UJ	-		
2-Hexanone	0.002	0.002	UJ	0.0023	0.0023	UJ	-		
4-Chlorotoluene	0.002	0.002	UJ	0.0023	0.0023	UJ	-		
4-Methyl-2-pentanone	0.002	0.002	UJ	0.0023	0.0023	UJ	-		
Acetone	0.085	0.0049	J	0.13	0.0057	J	-		
Benzene	0.002	0.002	UJ	0.0023	0.0023	UJ	-		
Bromobenzene	0.002	0.002	UJ	0.0023	0.0023	UJ	-		
Bromochloromethane	0.002	0.002	UJ	0.0023	0.0023	UJ	-		
Bromodichloromethane	0.002	0.002	UJ	0.0023	0.0023	UJ	-		
Bromoform	0.002	0.002	UJ	0.0023	0.0023	UJ	-		
Bromomethane	0.002	0.002	UJ	0.0023	0.0023	UJ	-		
Carbon disulfide	0.002	0.002	UJ	0.0023	0.0023	UJ	-		
Carbon tetrachloride	0.002	0.002	UJ	0.0023	0.0023	UJ	-		
Chlorobenzene	0.002	0.002	UJ	0.0023	0.0023	UJ	-		
Chloroethane	0.002	0.002	UJ	0.0023	0.0023	UJ	-		
Chloroform	0.002	0.002	UJ	0.0023	0.0023	UJ	-		
Chloromethane	0.0049	0.0049	UJ	0.0057	0.0057	UJ	-		
cis-1,2-Dichloroethene	0.002	0.002	UJ	0.0023	0.0023	UJ	-		
cis-1,3-Dichloropropene	0.002	0.002	UJ	0.0023	0.0023	UJ	-		
Dibromochloromethane	0.002	0.002	UJ	0.0023	0.0023	UJ	-		
Dibromomethane	0.002	0.002	UJ	0.0023	0.0023	UJ	-		
Dichlorodifluoromethane	0.002	0.002	UJ	0.0023	0.0023	UJ	-		
Ethylbenzene	0.002	0.002	UJ	0.0023	0.0023	UJ	-		
Hexachlorobutadiene	0.002	0.002	UJ	0.0023	0.0023	UJ	-		
Isopropylbenzene	0.002	0.002	UJ	0.0023	0.0023	UJ	-		
m+p-Xylene	0.0049	0.0049	UJ	0.0057	0.0057	UJ	-		
Methyl Tertiary Butyl Ether	0.002	0.002	UJ	0.0023	0.0023	UJ	-		
Methylene chloride	0.0098	0.0098	UJ	0.011	0.011	UJ	-		
n-Butylbenzene	0.002	0.002	UJ	0.0023	0.0023	UJ	-		
n-Propylbenzene	0.002	0.002	UJ	0.0023	0.0023	UJ	-		
Naphthalene	0.002	0.002	UJ	0.0023	0.0023	UJ	-		
o-Xylene	0.0024	0.0024	UJ	0.0029	0.0029	UJ	-		
4-Isopropyltoluene	0.01	0.002	J	0.0023	0.0023	UJ	-		
sec-Butylbenzene	0.002	0.002	UJ	0.0023	0.0023	UJ	-		
Styrene	0.002	0.002	UJ	0.0023	0.0023	UJ	-		
tert-Butylbenzene	0.002	0.002	UJ	0.0023	0.0023	UJ	-		
Tetrachloroethene	0.002	0.002	UJ	0.0023	0.0023	UJ	-		
Toluene	0.002	0.002	UJ	0.0023	0.0023	UJ	-		
trans-1,2-Dichloroethene	0.002	0.002	UJ	0.0023	0.0023	UJ	-		
trans-1,3-Dichloropropene	0.002	0.002	UJ	0.0023	0.0023	UJ	-		
Trichloroethene	0.002	0.002	UJ	0.0023	0.0023	UJ	-		
Trichlorofluoromethane	0.002	0.002	UJ	0.0023	0.0023	UJ	-		
Vinyl chloride	0.002	0.002	UJ	0.0023	0.0023	UJ	-		
Semivolatile Organic Compounds (mg/kg)									
1,2,4-Trichlorobenzene	0.18	0.18	UJ	0.18	0.18	UJ	-		
1,2-Dichlorobenzene	0.18	0.18	UJ	0.18	0.18	UJ	-		
1,3-Dichlorobenzene	0.18	0.18	UJ	0.18	0.18	UJ	-		
1,4-Dichlorobenzene	0.18	0.18	UJ	0.18	0.18	UJ	-		
2,4,5-Trichlorophenol	0.18	0.18	UJ	0.18	0.18	UJ	-		
2,4,6-Trichlorophenol	0.18	0.18	UJ	0.18	0.18	UJ	-		
2,4-Dichlorophenol	0.18	0.18	UJ	0.18	0.18	UJ	-		
2,4-Dimethylphenol	0.18	0.18	UJ	0.18	0.18	UJ	-		
2,4-Dinitrophenol	0.18	0.18	UJ	0.18	0.18	UJ	-		
2,4-Dinitrotoluene	0.18	0.18	UJ	0.18	0.18	UJ	-		
2,6-Dinitrotoluene	0.18	0.18	UJ	0.18	0.18	UJ	-		
2-Chloronaphthalene	0.18	0.18	UJ	0.18	0.18	UJ	-		
2-Chlorophenol	0.18	0.18	UJ	0.18	0.18	UJ	-		
2-Methylnaphthalene	0.18	0.18	UJ	0.18	0.18	UJ	-		
2-Methylphenol	0.18	0.18	UJ	0.18	0.18	UJ	-		
2-Nitroaniline	0.18	0.18	UJ	0.18	0.18	UJ	-		
2-Nitrophenol	0.18	0.18	UJ	0.18	0.18	UJ	-		
3,3-Dichlorobenzidine	0.18	0.18	UJ	0.18	0.18	UJ	-		
3-Nitroaniline	0.18	0.18	UJ	0.18	0.18	UJ	-		
4,6-Dinitro-2-methylphenol	0.18	0.18	UJ	0.18	0.18	UJ	-		
4-Bromophenyl-phenylether	0.18	0.18	UJ	0.18	0.18	UJ	-		
4-Chloro-3-methylphenol	0.18	0.18	UJ	0.18	0.18	UJ	-		
4-Chloroaniline	0.18	0.18	UJ	0.18	0.18	UJ	-		

TABLE B-I25
ANALYTICAL RESULTS FOR GRID I25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	I25			I25			I25		
Sample Name	P3IF-BA-GRID-I025			P3IF-BA-GRID-I525			P3IF-SS-IS-SO-I025		
Date Collected	15 Jun 2023			15 Jun 2023			15 Jun 2023		
Semivolatile Organic Compounds (mg/kg), continued									
4-Chlorophenyl-phenylether	0.18	0.18	UJ	0.18	0.18	UJ	-		
4-Nitroaniline	0.18	0.18	UJ	0.18	0.18	UJ	-		
4-Nitrophenol	0.18	0.18	UJ	0.18	0.18	UJ	-		
Acenaphthene	0.18	0.18	UJ	0.18	0.18	UJ	-		
Acenaphthylene	0.18	0.18	UJ	0.18	0.18	UJ	-		
Anthracene	0.18	0.18	UJ	0.18	0.18	UJ	-		
Benzo(a)anthracene	0.18	0.18	UJ	0.18	0.18	UJ	-		
Benzo(a)pyrene	0.14	0.14	UJ	0.14	0.14	UJ	-		
Benzo(b)fluoranthene	0.18	0.18	UJ	0.18	0.18	UJ	-		
Benzo(g,h,i)perylene	0.18	0.18	UJ	0.18	0.18	UJ	-		
Benzo(k)fluoranthene	0.18	0.18	UJ	0.18	0.18	UJ	-		
Benzoic acid	0.18	0.18	UJ	0.18	0.18	UJ	-		
Benzyl Alcohol	0.18	0.18	UJ	0.18	0.18	UJ	-		
Bis(2-chloro-1-methylethyl) ether	0.18	0.18	UJ	0.18	0.18	UJ	-		
Bis(2-chloroethoxy)methane	0.18	0.18	UJ	0.18	0.18	UJ	-		
Bis(2-chloroethyl)ether	0.18	0.18	UJ	0.18	0.18	UJ	-		
Bis(2-ethylhexyl)phthalate	0.18	0.18	UJ	0.18	0.18	UJ	-		
Butyl benzyl phthalate	0.18	0.18	UJ	0.18	0.18	UJ	-		
Carbazole	0.18	0.18	UJ	0.18	0.18	UJ	-		
Chrysene	0.18	0.18	UJ	0.18	0.18	UJ	-		
Di-n-butyl phthalate	0.18	0.18	UJ	0.18	0.18	UJ	-		
Di-n-octyl phthalate	0.18	0.18	UJ	0.18	0.18	UJ	-		
Dibenz(a,h)anthracene	0.14	0.14	UJ	0.14	0.14	UJ	-		
Dibenzofuran	0.18	0.18	UJ	0.18	0.18	UJ	-		
Diethyl phthalate	0.18	0.18	UJ	0.18	0.18	UJ	-		
Dimethyl phthalate	0.18	0.18	UJ	0.18	0.18	UJ	-		
Fluoranthene	0.18	0.18	UJ	0.18	0.18	UJ	-		
Fluorene	0.18	0.18	UJ	0.18	0.18	UJ	-		
Hexachlorobenzene	0.18	0.18	UJ	0.18	0.18	UJ	-		
Hexachlorobutadiene	0.18	0.18	UJ	0.18	0.18	UJ	-		
Hexachloroethane	0.18	0.18	UJ	0.18	0.18	UJ	-		
Indeno(1,2,3-cd)pyrene	0.18	0.18	UJ	0.18	0.18	UJ	-		
Isophorone	0.18	0.18	UJ	0.18	0.18	UJ	-		
n-Nitroso-di-n-propylamine	0.18	0.18	UJ	0.18	0.18	UJ	-		
n-Nitrosodimethylamine	0.021	0.021	UJ	0.021	0.021	UJ	-		
n-Nitrosodiphenylamine	0.18	0.18	UJ	0.18	0.18	UJ	-		
Naphthalene	0.18	0.18	UJ	0.18	0.18	UJ	-		
Nitrobenzene	0.18	0.18	UJ	0.18	0.18	UJ	-		
Pentachlorophenol	0.18	0.18	UJ	0.18	0.18	UJ	-		
Phenanthrene	0.18	0.18	UJ	0.18	0.18	UJ	-		
Phenol	0.18	0.18	UJ	0.18	0.18	UJ	-		
Pyrene	0.18	0.18	UJ	0.18	0.18	UJ	-		
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	-			-			0.075	0.075	UJ
1,3-Dinitrobenzene	-			-			0.075	0.075	UJ
2,4,6-Trinitrotoluene	-			-			0.075	0.075	UJ
2,4-Dinitrotoluene	-			-			0.075	0.075	UJ
2,6-Dinitrotoluene	-			-			0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	-			-			0.075	0.075	UJ
2-Nitrotoluene	-			-			0.075	0.075	UJ
3-Nitrotoluene	-			-			0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	-			-			0.075	0.075	UJ
4-Nitrotoluene	-			-			0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	-			-			0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	-			-			0.075	0.075	UJ
Nitrobenzene	-			-			0.075	0.075	UJ
Nitroglycerin	-			-			0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	-			-			0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	-			-			0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)									
Aroclor 1016	0.021	0.021	UJ	0.021	0.021	UJ	-		
Aroclor 1221	0.021	0.021	UJ	0.021	0.021	UJ	-		
Aroclor 1232	0.011	0.011	UJ	0.011	0.011	UJ	-		
Aroclor 1242	0.011	0.011	UJ	0.011	0.011	UJ	-		
Aroclor 1248	0.011	0.011	UJ	0.011	0.011	UJ	-		
Aroclor 1254	0.011	0.011	UJ	0.011	0.011	UJ	-		
Aroclor 1260	0.011	0.011	UJ	0.011	0.011	UJ	-		
Dioxins/Furans (mg/kg)									
Octachlorodibenzofuran (OCDF)	0.00000029	0.00000029	UJ	0.00000027	0.00000027	UJ	-		
Octachlorodibenzo-p-dioxin (OCDD)	0.000025	0.000025	UJ	0.0000016	0.0000016	UJ	-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.00000027	0.00000027	UJ	6.3E-08	6.3E-08	UJ	-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	0.00000062	0.00000062	UJ	0.00000017	0.00000017	UJ	-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.000000046	0.000000046	UJ	7.9E-08	7.9E-08	UJ	-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000067	0.000000067	UJ	7.4E-08	7.4E-08	UJ	-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000078	0.000000078	UJ	5.8E-08	5.8E-08	UJ	-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000065	0.000000065	UJ	7.2E-08	7.2E-08	UJ	-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000078	0.000000078	UJ	5.9E-08	5.9E-08	UJ	-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.000000083	0.000000083	UJ	9.2E-08	9.2E-08	UJ	-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.0000001	0.0000001	UJ	7.4E-08	7.4E-08	UJ	-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000013	0.00000013	UJ	6.4E-08	6.4E-08	UJ	-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.000000048	0.000000048	UJ	6.8E-08	6.8E-08	UJ	-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000055	0.000000055	UJ	7.7E-08	7.7E-08	UJ	-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.000000091	0.000000091	UJ	6.5E-08	6.5E-08	UJ	-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.00000048	0.00000048	UJ	0.00000038	0.00000038	J	-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.000000088	0.000000088	UJ	6.4E-08	6.4E-08	UJ	-		

TABLE B-I25
ANALYTICAL RESULTS FOR GRID I25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	I25			I25			I25		
Sample Name	P3IF-BA-GRID-I025			P3IF-BA-GRID-I525			P3IF-SS-IS-SO-I025		
Date Collected	15 Jun 2023			15 Jun 2023			15 Jun 2023		
Metals (mg/kg)									
Aluminum	-			-			18000	4	
Antimony	-			-			0.15	0.15	U
Arsenic	-			-			1.2	0.3	
Barium	-			-			320	0.2	
Beryllium	-			-			0.89	0.3	J
Cadmium	-			-			0.52	0.08	
Calcium (Ca)	-			-			48000	15	
Chromium	-			-			12	0.2	
Cobalt	-			-			4	0.08	
Copper	-			-			64	0.2	
Iron (Fe)	-			-			9700	8	
Lead	-			-			11	0.05	
Magnesium (Mg)	-			-			6300	5	
Manganese (Mn)	-			-			580	0.08	
Mercury	-			-			0.023	0.041	J
Nickel	-			-			9.9	0.2	
Potassium (K)	-			-			2200	8	
Selenium	-			-			1.1	0.1	
Silver	-			-			0.042	0.05	J
Sodium (Na)	-			-			59	8	
Thallium	-			-			0.076	0.05	J
Vanadium	-			-			7.2	0.1	
Zinc	-			-			20	1.5	
Other Parameters (mg/kg)									
Cyanide (CN-)	0.33	0.33	R	0.34	0.34	R	-		
Nitrate	3.4	2.2	J	5	2.1	J	-		
Perchlorate	0.0043	0.0043	R	0.0043	0.0043	R	-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-I25
ANALYTICAL RESULTS FOR GRID I25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	I25			I25		
Sample Name	P3IF-SS-IS-SO-I525			P3IF-SS-IS-SO-I625		
Date Collected	June 19, 2023			15 Jun 2023		
	Result	LOD	Qual	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)						
1,1,1,2-Tetrachloroethane	-			-		
1,1,1-Trichloroethane	-			-		
1,1,2,2-Tetrachloroethane	-			-		
1,1,2-Trichloroethane	-			-		
1,1-Dichloroethane	-			-		
1,1-Dichloroethene	-			-		
1,1-Dichloropropene	-			-		
1,2,3-Trichlorobenzene	-			-		
1,2,3-Trichloropropane	-			-		
1,2,4-Trichlorobenzene	-			-		
1,2,4-Trimethylbenzene	-			-		
1,2-Dibromo-3-chloropropane	-			-		
1,2-Dibromoethane	-			-		
1,2-Dichlorobenzene	-			-		
1,2-Dichloroethane	-			-		
1,2-Dichloropropane	-			-		
1,3,5-Trimethylbenzene	-			-		
1,3-Dichlorobenzene	-			-		
1,3-Dichloropropane	-			-		
1,4-Dichlorobenzene	-			-		
2,2-Dichloropropane	-			-		
2-Butanone	-			-		
2-Chlorotoluene	-			-		
2-Hexanone	-			-		
4-Chlorotoluene	-			-		
4-Methyl-2-pentanone	-			-		
Acetone	-			-		
Benzene	-			-		
Bromobenzene	-			-		
Bromochloromethane	-			-		
Bromodichloromethane	-			-		
Bromoform	-			-		
Bromomethane	-			-		
Carbon disulfide	-			-		
Carbon tetrachloride	-			-		
Chlorobenzene	-			-		
Chloroethane	-			-		
Chloroform	-			-		
Chloromethane	-			-		
cis-1,2-Dichloroethene	-			-		
cis-1,3-Dichloropropene	-			-		
Dibromochloromethane	-			-		
Dibromomethane	-			-		
Dichlorodifluoromethane	-			-		
Ethylbenzene	-			-		
Hexachlorobutadiene	-			-		
Isopropylbenzene	-			-		
m+p-Xylene	-			-		
Methyl Tertiary Butyl Ether	-			-		
Methylene chloride	-			-		
n-Butylbenzene	-			-		
n-Propylbenzene	-			-		
Naphthalene	-			-		
o-Xylene	-			-		
4-Isopropyltoluene	-			-		
sec-Butylbenzene	-			-		
Styrene	-			-		
tert-Butylbenzene	-			-		
Tetrachloroethene	-			-		
Toluene	-			-		
trans-1,2-Dichloroethene	-			-		
trans-1,3-Dichloropropene	-			-		
Trichloroethene	-			-		
Trichlorofluoromethane	-			-		
Vinyl chloride	-			-		
Semivolatile Organic Compounds (mg/kg)						
1,2,4-Trichlorobenzene	-			-		
1,2-Dichlorobenzene	-			-		
1,3-Dichlorobenzene	-			-		
1,4-Dichlorobenzene	-			-		
2,4,5-Trichlorophenol	-			-		
2,4,6-Trichlorophenol	-			-		
2,4-Dichlorophenol	-			-		
2,4-Dimethylphenol	-			-		
2,4-Dinitrophenol	-			-		
2,4-Dinitrotoluene	-			-		
2,6-Dinitrotoluene	-			-		
2-Chloronaphthalene	-			-		
2-Chlorophenol	-			-		
2-Methylnaphthalene	-			-		
2-Methylphenol	-			-		
2-Nitroaniline	-			-		
2-Nitrophenol	-			-		
3,3-Dichlorobenzidine	-			-		
3-Nitroaniline	-			-		
4,6-Dinitro-2-methylphenol	-			-		
4-Bromophenyl-phenylether	-			-		
4-Chloro-3-methylphenol	-			-		
4-Chloroaniline	-			-		

TABLE B-I25
ANALYTICAL RESULTS FOR GRID I25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	I25			I25		
Sample Name	P3IF-SS-IS-SO-I525			P3IF-SS-IS-SO-I625		
Date Collected	June 19, 2023			15 Jun 2023		
Semivolatile Organic Compounds (mg/kg), continued						
4-Chlorophenyl-phenylether	-			-		
4-Nitroaniline	-			-		
4-Nitrophenol	-			-		
Acenaphthene	-			-		
Acenaphthylene	-			-		
Anthracene	-			-		
Benzo(a)anthracene	-			-		
Benzo(a)pyrene	-			-		
Benzo(b)fluoranthene	-			-		
Benzo(g,h,i)perylene	-			-		
Benzo(k)fluoranthene	-			-		
Benzoic acid	-			-		
Benzyl Alcohol	-			-		
Bis(2-chloro-1-methylethyl) ether	-			-		
Bis(2-chloroethoxy)methane	-			-		
Bis(2-chloroethyl)ether	-			-		
Bis(2-ethylhexyl)phthalate	-			-		
Butyl benzyl phthalate	-			-		
Carbazole	-			-		
Chrysene	-			-		
Di-n-butyl phthalate	-			-		
Di-n-octyl phthalate	-			-		
Dibenz(a,h)anthracene	-			-		
Dibenzofuran	-			-		
Diethyl phthalate	-			-		
Dimethyl phthalate	-			-		
Fluoranthene	-			-		
Fluorene	-			-		
Hexachlorobenzene	-			-		
Hexachlorobutadiene	-			-		
Hexachloroethane	-			-		
Indeno(1,2,3-cd)pyrene	-			-		
Isophorone	-			-		
n-Nitroso-di-n-propylamine	-			-		
n-Nitrosodimethylamine	-			-		
n-Nitrosodiphenylamine	-			-		
Naphthalene	-			-		
Nitrobenzene	-			-		
Pentachlorophenol	-			-		
Phenanthrene	-			-		
Phenol	-			-		
Pyrene	-			-		
Explosives (mg/kg)						
1,3,5-Trinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ
2,4,6-Trinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ
2,4-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ
2-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ
3-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ
4-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	UJ	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ
Nitroglycerin	0.15	0.15	UJ	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	UJ	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.25	0.25	UJ	0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)						
Aroclor 1016	-			-		
Aroclor 1221	-			-		
Aroclor 1232	-			-		
Aroclor 1242	-			-		
Aroclor 1248	-			-		
Aroclor 1254	-			-		
Aroclor 1260	-			-		
Dioxins/Furans (mg/kg)						
Octachlorodibenzofuran (OCDF)	-			-		
Octachlorodibenzo-p-dioxin (OCDD)	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	-			-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	-			-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	-			-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-			-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	-			-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-			-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	-			-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	-			-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	-			-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	-			-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	-			-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	-			-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	-			-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	-			-		

TABLE B-I25
ANALYTICAL RESULTS FOR GRID I25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	I25			I25		
Sample Name	P3IF-SS-IS-SO-I525			P3IF-SS-IS-SO-I625		
Date Collected	June 19, 2023			15 Jun 2023		
Metals (mg/kg)						
Aluminum	15000	4		17000	4	
Antimony	0.075	0.15	J	0.15	0.15	U
Arsenic	1.1	0.3		1.2	0.3	
Barium	300	0.2		350	0.2	
Beryllium	0.79	0.3	J	0.85	0.3	J
Cadmium	0.36	0.08		0.5	0.08	
Calcium (Ca)	45000	15		49000	15	
Chromium	9.4	0.2		12	0.2	
Cobalt	3.3	0.08		3.9	0.08	
Copper	54	0.2		75	0.2	
Iron (Fe)	8200	8		9300	8	
Lead	9.1	0.05		10	0.05	
Magnesium (Mg)	5200	5		5900	5	
Manganese (Mn)	540	0.08		620	0.08	
Mercury	0.017	0.043	J	0.043	0.042	J
Nickel	8.1	0.2		9.9	0.2	
Potassium (K)	1900	8		2200	8	
Selenium	0.86	0.1		1.2	0.1	
Silver	0.047	0.05	J	0.053	0.05	J
Sodium (Na)	51	8		58	8	
Thallium	0.066	0.05	J	0.073	0.05	J
Vanadium	5.6	0.1		7	0.1	
Zinc	19	1.5		20	1.5	
Other Parameters (mg/kg)						
Cyanide (CN-)	-			-		
Nitrate	-			-		
Perchlorate	-			-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-J22
ANALYTICAL RESULTS FOR GRID J22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	J22			J22			J22		
Sample Name	P3IF-BA-GRID-J022			P3IF-SS-IS-SO-J022			P3IF-SS-IS-SO-J522		
Date Collected	June 15, 2023			June 15, 2023			June 15, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)									
1,1,1,2-Tetrachloroethane	0.0021	0.0021	U	-			-		
1,1,1-Trichloroethane	0.0021	0.0021	U	-			-		
1,1,2,2-Tetrachloroethane	0.0021	0.0021	U	-			-		
1,1,2-Trichloroethane	0.0021	0.0021	U	-			-		
1,1-Dichloroethane	0.0021	0.0021	U	-			-		
1,1-Dichloroethene	0.0021	0.0021	U	-			-		
1,1-Dichloropropene	0.0021	0.0021	U	-			-		
1,2,3-Trichlorobenzene	0.0021	0.0021	U	-			-		
1,2,3-Trichloropropane	0.0052	0.0052	U	-			-		
1,2,4-Trichlorobenzene	0.0021	0.0021	U	-			-		
1,2,4-Trimethylbenzene	0.0021	0.0021	U	-			-		
1,2-Dibromo-3-chloropropane	0.0052	0.0052	U	-			-		
1,2-Dibromoethane	0.0021	0.0021	U	-			-		
1,2-Dichlorobenzene	0.0021	0.0021	U	-			-		
1,2-Dichloroethane	0.0021	0.0021	U	-			-		
1,2-Dichloropropane	0.0021	0.0021	U	-			-		
1,3,5-Trimethylbenzene	0.0021	0.0021	U	-			-		
1,3-Dichlorobenzene	0.0021	0.0021	U	-			-		
1,3-Dichloropropane	0.0021	0.0021	U	-			-		
1,4-Dichlorobenzene	0.0021	0.0021	U	-			-		
2,2-Dichloropropane	0.0021	0.0021	U	-			-		
2-Butanone	0.041	0.0031		-			-		
2-Chlorotoluene	0.0021	0.0021	U	-			-		
2-Hexanone	0.0021	0.0021	U	-			-		
4-Chlorotoluene	0.0021	0.0021	U	-			-		
4-Methyl-2-pentanone	0.0021	0.0021	U	-			-		
Acetone	0.46	0.0052	J	-			-		
Benzene	0.0021	0.0021	U	-			-		
Bromobenzene	0.0021	0.0021	U	-			-		
Bromochloromethane	0.0021	0.0021	U	-			-		
Bromodichloromethane	0.0021	0.0021	U	-			-		
Bromoform	0.0021	0.0021	U	-			-		
Bromomethane	0.0021	0.0021	U	-			-		
Carbon disulfide	0.17	0.0021		-			-		
Carbon tetrachloride	0.0021	0.0021	U	-			-		
Chlorobenzene	0.0021	0.0021	U	-			-		
Chloroethane	0.0021	0.0021	U	-			-		
Chloroform	0.0021	0.0021	U	-			-		
Chloromethane	0.0052	0.0052	U	-			-		
cis-1,2-Dichloroethene	0.0021	0.0021	U	-			-		
cis-1,3-Dichloropropene	0.0021	0.0021	U	-			-		
Dibromochloromethane	0.0021	0.0021	U	-			-		
Dibromomethane	0.0021	0.0021	U	-			-		
Dichlorodifluoromethane	0.0021	0.0021	U	-			-		
Ethylbenzene	0.0021	0.0021	U	-			-		
Hexachlorobutadiene	0.0021	0.0021	U	-			-		
Isopropylbenzene	0.0021	0.0021	U	-			-		
m+p-Xylene	0.011	0.0052		-			-		
Methyl Tertiary Butyl Ether	0.0021	0.0021	U	-			-		
Methylene chloride	0.01	0.01	U	-			-		
n-Butylbenzene	0.0021	0.0021	U	-			-		
n-Propylbenzene	0.0021	0.0021	U	-			-		
Naphthalene	0.0021	0.0021	U	-			-		
o-Xylene	0.0026	0.0026	U	-			-		
4-Isopropyltoluene	0.0021	0.0021	U	-			-		
sec-Butylbenzene	0.0021	0.0021	U	-			-		
Styrene	0.0021	0.0021	U	-			-		
tert-Butylbenzene	0.0021	0.0021	U	-			-		
Tetrachloroethene	0.0021	0.0021	U	-			-		
Toluene	0.0021	0.0021	U	-			-		
trans-1,2-Dichloroethene	0.0021	0.0021	U	-			-		
trans-1,3-Dichloropropene	0.0021	0.0021	U	-			-		
Trichloroethene	0.0021	0.0021	U	-			-		
Trichlorofluoromethane	0.0021	0.0021	U	-			-		
Vinyl chloride	0.0021	0.0021	U	-			-		
Semivolatile Organic Compounds (mg/kg)									
1,2,4-Trichlorobenzene	0.17	0.17	U	-			-		
1,2-Dichlorobenzene	0.17	0.17	U	-			-		
1,3-Dichlorobenzene	0.17	0.17	U	-			-		
1,4-Dichlorobenzene	0.17	0.17	U	-			-		
2,4,5-Trichlorophenol	0.17	0.17	U	-			-		
2,4,6-Trichlorophenol	0.17	0.17	U	-			-		
2,4-Dichlorophenol	0.17	0.17	U	-			-		
2,4-Dimethylphenol	0.17	0.17	U	-			-		
2,4-Dinitrophenol	0.17	0.17	U	-			-		
2,4-Dinitrotoluene	0.17	0.17	U	-			-		
2,6-Dinitrotoluene	0.17	0.17	U	-			-		
2-Chloronaphthalene	0.17	0.17	U	-			-		
2-Chlorophenol	0.17	0.17	U	-			-		
2-Methylnaphthalene	0.17	0.17	U	-			-		
2-Methylphenol	0.17	0.17	U	-			-		
2-Nitroaniline	0.17	0.17	U	-			-		
2-Nitrophenol	0.17	0.17	U	-			-		
3,3-Dichlorobenzidine	0.17	0.17	U	-			-		
3-Nitroaniline	0.17	0.17	U	-			-		
4,6-Dinitro-2-methylphenol	0.17	0.17	U	-			-		
4-Bromophenyl-phenylether	0.17	0.17	U	-			-		
4-Chloro-3-methylphenol	0.17	0.17	U	-			-		
4-Chloroaniline	0.17	0.17	U	-			-		

TABLE B-J22
ANALYTICAL RESULTS FOR GRID J22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	J22			J22			J22		
Sample Name	P3IF-BA-GRID-J022			P3IF-SS-IS-SO-J022			P3IF-SS-IS-SO-J522		
Date Collected	June 15, 2023			June 15, 2023			June 15, 2023		
Semivolatile Organic Compounds (mg/kg), continued									
4-Chlorophenyl-phenylether	0.17	0.17	U	-			-		
4-Nitroaniline	0.17	0.17	U	-			-		
4-Nitrophenol	0.17	0.17	U	-			-		
Acenaphthene	0.17	0.17	U	-			-		
Acenaphthylene	0.17	0.17	U	-			-		
Anthracene	0.17	0.17	U	-			-		
Benzo(a)anthracene	0.17	0.17	U	-			-		
Benzo(a)pyrene	0.14	0.14	U	-			-		
Benzo(b)fluoranthene	0.17	0.17	U	-			-		
Benzo(g,h,i)perylene	0.17	0.17	U	-			-		
Benzo(k)fluoranthene	0.17	0.17	U	-			-		
Benzoic acid	0.17	0.17	U	-			-		
Benzyl Alcohol	0.17	0.17	U	-			-		
Bis(2-chloro-1-methylethyl) ether	0.17	0.17	U	-			-		
Bis(2-chloroethoxy)methane	0.17	0.17	U	-			-		
Bis(2-chloroethyl)ether	0.17	0.17	U	-			-		
Bis(2-ethylhexyl)phthalate	0.17	0.17	U	-			-		
Butyl benzyl phthalate	0.17	0.17	U	-			-		
Carbazole	0.17	0.17	U	-			-		
Chrysene	0.17	0.17	U	-			-		
Di-n-butyl phthalate	0.17	0.17	U	-			-		
Di-n-octyl phthalate	0.17	0.17	U	-			-		
Dibenz(a,h)anthracene	0.14	0.14	U	-			-		
Dibenzofuran	0.17	0.17	U	-			-		
Diethyl phthalate	0.17	0.17	U	-			-		
Dimethyl phthalate	0.17	0.17	U	-			-		
Fluoranthene	0.17	0.17	U	-			-		
Fluorene	0.17	0.17	U	-			-		
Hexachlorobenzene	0.17	0.17	U	-			-		
Hexachlorobutadiene	0.17	0.17	U	-			-		
Hexachloroethane	0.17	0.17	U	-			-		
Indeno(1,2,3-cd)pyrene	0.17	0.17	U	-			-		
Isophorone	0.17	0.17	U	-			-		
n-Nitroso-di-n-propylamine	0.17	0.17	U	-			-		
n-Nitrosodimethylamine	0.021	0.021	U	-			-		
n-Nitrosodiphenylamine	0.17	0.17	U	-			-		
Naphthalene	0.17	0.17	U	-			-		
Nitrobenzene	0.17	0.17	U	-			-		
Pentachlorophenol	0.17	0.17	U	-			-		
Phenanthrene	0.17	0.17	U	-			-		
Phenol	0.17	0.17	U	-			-		
Pyrene	0.17	0.17	U	-			-		
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
1,3-Dinitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,4,6-Trinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,4-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,6-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
3-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
4-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	-			0.075	0.075	UJ	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	-			0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
Nitroglycerin	-			0.15	0.15	UJ	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	-			0.075	0.075	UJ	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	-			0.25	0.25	UJ	0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)									
Aroclor 1016	0.021	0.021	U	-			-		
Aroclor 1221	0.021	0.021	U	-			-		
Aroclor 1232	0.01	0.01	U	-			-		
Aroclor 1242	0.01	0.01	U	-			-		
Aroclor 1248	0.01	0.01	U	-			-		
Aroclor 1254	0.01	0.01	U	-			-		
Aroclor 1260	0.01	0.01	U	-			-		
Dioxins/Furans (mg/kg)									
Octachlorodibenzofuran (OCDF)	0.0000006	0.0000006	J	-			-		
Octachlorodibenzo-p-dioxin (OCDD)	0.000013	0.000013	J	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.00000014	0.00000014	U	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	0.0000014	0.0000014	U	-			-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.00000018	0.00000018	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000099	0.000000099	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000069	0.000000069	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000096	0.000000096	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000011	0.00000011	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.00000012	0.00000012	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000007	0.00000007	U	-			-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.0000001	0.0000001	U	-			-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.000000082	0.000000082	U	-			-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.00000028	0.00000028	U	-			-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000011	0.00000011	U	-			-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.00000019	0.00000019	U	-			-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.00000008	0.00000008	U	-			-		

TABLE B-J22
ANALYTICAL RESULTS FOR GRID J22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	J22			J22			J22		
Sample Name	P3IF-BA-GRID-J022			P3IF-SS-IS-SO-J022			P3IF-SS-IS-SO-J522		
Date Collected	June 15, 2023			June 15, 2023			June 15, 2023		
Metals (mg/kg)									
Aluminum	-			20000	4		18000	4	
Antimony	-			0.13	0.15	J	0.31	0.15	
Arsenic	-			1.2	0.3		1.3	0.3	
Barium	-			320	0.2		310	0.2	
Beryllium	-			0.78	0.3	J	0.75	0.3	J
Cadmium	-			1.6	0.08		1.1	0.08	
Calcium (Ca)	-			33000	15		35000	15	
Chromium	-			19	0.2		17	0.2	
Cobalt	-			4.3	0.08		4.2	0.08	
Copper	-			190	0.2		160	0.2	
Iron (Fe)	-			10000	8		9500	8	
Lead	-			12	0.05		17	0.05	
Magnesium (Mg)	-			6400	5	J	6200	5	
Manganese (Mn)	-			550	0.08		550	0.08	
Mercury	-			0.038	0.042	J	0.037	0.042	J
Nickel	-			13	0.2		12	0.2	
Potassium (K)	-			2400	8		2100	8	
Selenium	-			1.3	0.1		0.99	0.1	
Silver	-			0.18	0.05		0.097	0.05	J
Sodium (Na)	-			66	8		60	8	
Thallium	-			0.077	0.05	J	0.071	0.05	J
Vanadium	-			10	0.1		9.4	0.1	
Zinc	-			31	1.5		27	1.5	
Other Parameters (mg/kg)									
Cyanide (CN-)	0.32	0.32	U	-			-		
Nitrate	21	2.1		-			-		
Perchlorate	0.0042	0.0042	U	-			-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-J22
ANALYTICAL RESULTS FOR GRID J22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	J22		
Sample Name	P3IF-SS-IS-SO-J622		
Date Collected	June 15, 2023		
	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)			
1,1,1,2-Tetrachloroethane	-		
1,1,1-Trichloroethane	-		
1,1,2,2-Tetrachloroethane	-		
1,1,2-Trichloroethane	-		
1,1-Dichloroethane	-		
1,1-Dichloroethene	-		
1,1-Dichloropropene	-		
1,2,3-Trichlorobenzene	-		
1,2,3-Trichloropropane	-		
1,2,4-Trichlorobenzene	-		
1,2,4-Trimethylbenzene	-		
1,2-Dibromo-3-chloropropane	-		
1,2-Dibromoethane	-		
1,2-Dichlorobenzene	-		
1,2-Dichloroethane	-		
1,2-Dichloropropane	-		
1,3,5-Trimethylbenzene	-		
1,3-Dichlorobenzene	-		
1,3-Dichloropropane	-		
1,4-Dichlorobenzene	-		
2,2-Dichloropropane	-		
2-Butanone	-		
2-Chlorotoluene	-		
2-Hexanone	-		
4-Chlorotoluene	-		
4-Methyl-2-pentanone	-		
Acetone	-		
Benzene	-		
Bromobenzene	-		
Bromochloromethane	-		
Bromodichloromethane	-		
Bromoform	-		
Bromomethane	-		
Carbon disulfide	-		
Carbon tetrachloride	-		
Chlorobenzene	-		
Chloroethane	-		
Chloroform	-		
Chloromethane	-		
cis-1,2-Dichloroethene	-		
cis-1,3-Dichloropropene	-		
Dibromochloromethane	-		
Dibromomethane	-		
Dichlorodifluoromethane	-		
Ethylbenzene	-		
Hexachlorobutadiene	-		
Isopropylbenzene	-		
m+p-Xylene	-		
Methyl Tertiary Butyl Ether	-		
Methylene chloride	-		
n-Butylbenzene	-		
n-Propylbenzene	-		
Naphthalene	-		
o-Xylene	-		
4-Isopropyltoluene	-		
sec-Butylbenzene	-		
Styrene	-		
tert-Butylbenzene	-		
Tetrachloroethene	-		
Toluene	-		
trans-1,2-Dichloroethene	-		
trans-1,3-Dichloropropene	-		
Trichloroethene	-		
Trichlorofluoromethane	-		
Vinyl chloride	-		
Semivolatile Organic Compounds (mg/kg)			
1,2,4-Trichlorobenzene	-		
1,2-Dichlorobenzene	-		
1,3-Dichlorobenzene	-		
1,4-Dichlorobenzene	-		
2,4,5-Trichlorophenol	-		
2,4,6-Trichlorophenol	-		
2,4-Dichlorophenol	-		
2,4-Dimethylphenol	-		
2,4-Dinitrophenol	-		
2,4-Dinitrotoluene	-		
2,6-Dinitrotoluene	-		
2-Chloronaphthalene	-		
2-Chlorophenol	-		
2-Methylnaphthalene	-		
2-Methylphenol	-		
2-Nitroaniline	-		
2-Nitrophenol	-		
3,3-Dichlorobenzidine	-		
3-Nitroaniline	-		
4,6-Dinitro-2-methylphenol	-		
4-Bromophenyl-phenylether	-		
4-Chloro-3-methylphenol	-		
4-Chloroaniline	-		

TABLE B-J22
ANALYTICAL RESULTS FOR GRID J22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	J22		
Sample Name	P3IF-SS-IS-SO-J622		
Date Collected	June 15, 2023		
Semivolatile Organic Compounds (mg/kg), continued			
4-Chlorophenyl-phenylether	-		
4-Nitroaniline	-		
4-Nitrophenol	-		
Acenaphthene	-		
Acenaphthylene	-		
Anthracene	-		
Benzo(a)anthracene	-		
Benzo(a)pyrene	-		
Benzo(b)fluoranthene	-		
Benzo(g,h,i)perylene	-		
Benzo(k)fluoranthene	-		
Benzoic acid	-		
Benzyl Alcohol	-		
Bis(2-chloro-1-methylethyl) ether	-		
Bis(2-chloroethoxy)methane	-		
Bis(2-chloroethyl)ether	-		
Bis(2-ethylhexyl)phthalate	-		
Butyl benzyl phthalate	-		
Carbazole	-		
Chrysene	-		
Di-n-butyl phthalate	-		
Di-n-octyl phthalate	-		
Dibenz(a,h)anthracene	-		
Dibenzofuran	-		
Diethyl phthalate	-		
Dimethyl phthalate	-		
Fluoranthene	-		
Fluorene	-		
Hexachlorobenzene	-		
Hexachlorobutadiene	-		
Hexachloroethane	-		
Indeno(1,2,3-cd)pyrene	-		
Isophorone	-		
n-Nitroso-di-n-propylamine	-		
n-Nitrosodimethylamine	-		
n-Nitrosodiphenylamine	-		
Naphthalene	-		
Nitrobenzene	-		
Pentachlorophenol	-		
Phenanthrene	-		
Phenol	-		
Pyrene	-		
Explosives (mg/kg)			
1,3,5-Trinitrobenzene	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	UJ
2,4,6-Trinitrotoluene	0.075	0.075	UJ
2,4-Dinitrotoluene	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	UJ
2-Nitrotoluene	0.075	0.075	UJ
3-Nitrotoluene	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	0.075	0.075	UJ
4-Nitrotoluene	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	UJ
Nitroglycerin	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)			
Aroclor 1016	-		
Aroclor 1221	-		
Aroclor 1232	-		
Aroclor 1242	-		
Aroclor 1248	-		
Aroclor 1254	-		
Aroclor 1260	-		
Dioxins/Furans (mg/kg)			
Octachlorodibenzofuran (OCDF)	-		
Octachlorodibenzo-p-dioxin (OCDD)	-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	-		

TABLE B-J22
ANALYTICAL RESULTS FOR GRID J22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	J22		
Sample Name	P3IF-SS-IS-SO-J622		
Date Collected	June 15, 2023		
Metals (mg/kg)			
Aluminum	20000	4	
Antimony	0.11	0.15	J
Arsenic	1.3	0.3	
Barium	320	0.2	
Beryllium	0.87	0.3	J
Cadmium	1.3	0.08	
Calcium (Ca)	32000	15	
Chromium	18	0.2	
Cobalt	4.4	0.08	
Copper	160	0.2	
Iron (Fe)	10000	8	
Lead	13	0.05	
Magnesium (Mg)	6300	5	J
Manganese (Mn)	550	0.08	
Mercury	0.038	0.041	J
Nickel	13	0.2	
Potassium (K)	2600	8	
Selenium	0.88	0.1	
Silver	0.12	0.05	
Sodium (Na)	65	8	
Thallium	0.078	0.05	J
Vanadium	11	0.1	
Zinc	30	1.5	
Other Parameters (mg/kg)			
Cyanide (CN-)	-		
Nitrate	-		
Perchlorate	-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-J23
ANALYTICAL RESULTS FOR GRID J23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	J23			J23			J23		
Sample Name	P3IF-BA-GRID-J023			P3IF-SS-IS-SO-J023			P3IF-SS-IS-SO-J523		
Date Collected	June 15, 2023			June 15, 2023			June 15, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)									
1,1,1,2-Tetrachloroethane	0.0023	0.0023	U	-			-		
1,1,1-Trichloroethane	0.0023	0.0023	U	-			-		
1,1,2,2-Tetrachloroethane	0.0023	0.0023	U	-			-		
1,1,2-Trichloroethane	0.0023	0.0023	U	-			-		
1,1-Dichloroethane	0.0023	0.0023	U	-			-		
1,1-Dichloroethene	0.0023	0.0023	U	-			-		
1,1-Dichloropropene	0.0023	0.0023	U	-			-		
1,2,3-Trichlorobenzene	0.0023	0.0023	U	-			-		
1,2,3-Trichloropropane	0.0058	0.0058	U	-			-		
1,2,4-Trichlorobenzene	0.0023	0.0023	U	-			-		
1,2,4-Trimethylbenzene	0.0023	0.0023	U	-			-		
1,2-Dibromo-3-chloropropane	0.0058	0.0058	U	-			-		
1,2-Dibromoethane	0.0023	0.0023	U	-			-		
1,2-Dichlorobenzene	0.0023	0.0023	U	-			-		
1,2-Dichloroethane	0.0023	0.0023	U	-			-		
1,2-Dichloropropane	0.0023	0.0023	U	-			-		
1,3,5-Trimethylbenzene	0.0023	0.0023	U	-			-		
1,3-Dichlorobenzene	0.0023	0.0023	U	-			-		
1,3-Dichloropropane	0.0023	0.0023	U	-			-		
1,4-Dichlorobenzene	0.0023	0.0023	U	-			-		
2,2-Dichloropropane	0.0023	0.0023	U	-			-		
2-Butanone	0.0035	0.0035	U	-			-		
2-Chlorotoluene	0.0023	0.0023	U	-			-		
2-Hexanone	0.0023	0.0023	U	-			-		
4-Chlorotoluene	0.0023	0.0023	U	-			-		
4-Methyl-2-pentanone	0.0023	0.0023	U	-			-		
Acetone	0.37	0.0058		-			-		
Benzene	0.0023	0.0023	U	-			-		
Bromobenzene	0.0023	0.0023	U	-			-		
Bromochloromethane	0.0023	0.0023	U	-			-		
Bromodichloromethane	0.0023	0.0023	U	-			-		
Bromoform	0.0023	0.0023	U	-			-		
Bromomethane	0.0023	0.0023	U	-			-		
Carbon disulfide	0.0023	0.0023	U	-			-		
Carbon tetrachloride	0.0023	0.0023	U	-			-		
Chlorobenzene	0.0023	0.0023	U	-			-		
Chloroethane	0.0023	0.0023	U	-			-		
Chloroform	0.0023	0.0023	U	-			-		
Chloromethane	0.0058	0.0058	U	-			-		
cis-1,2-Dichloroethene	0.0023	0.0023	U	-			-		
cis-1,3-Dichloropropene	0.0023	0.0023	U	-			-		
Dibromochloromethane	0.0023	0.0023	U	-			-		
Dibromomethane	0.0023	0.0023	U	-			-		
Dichlorodifluoromethane	0.0023	0.0023	U	-			-		
Ethylbenzene	0.0023	0.0023	U	-			-		
Hexachlorobutadiene	0.0023	0.0023	U	-			-		
Isopropylbenzene	0.0023	0.0023	U	-			-		
m+p-Xylene	0.0058	0.0058	U	-			-		
Methyl Tertiary Butyl Ether	0.0023	0.0023	U	-			-		
Methylene chloride	0.012	0.012	U	-			-		
n-Butylbenzene	0.0023	0.0023	U	-			-		
n-Propylbenzene	0.0023	0.0023	U	-			-		
Naphthalene	0.0023	0.0023	U	-			-		
o-Xylene	0.0029	0.0029	U	-			-		
4-Isopropyltoluene	0.0023	0.0023	U	-			-		
sec-Butylbenzene	0.0023	0.0023	U	-			-		
Styrene	0.0023	0.0023	U	-			-		
tert-Butylbenzene	0.0023	0.0023	U	-			-		
Tetrachloroethene	0.0023	0.0023	U	-			-		
Toluene	0.0023	0.0023	U	-			-		
trans-1,2-Dichloroethene	0.0023	0.0023	U	-			-		
trans-1,3-Dichloropropene	0.0023	0.0023	U	-			-		
Trichloroethene	0.0023	0.0023	U	-			-		
Trichlorofluoromethane	0.0023	0.0023	U	-			-		
Vinyl chloride	0.0023	0.0023	U	-			-		
Semivolatile Organic Compounds (mg/kg)									
1,2,4-Trichlorobenzene	0.17	0.17	U	-			-		
1,2-Dichlorobenzene	0.17	0.17	U	-			-		
1,3-Dichlorobenzene	0.17	0.17	U	-			-		
1,4-Dichlorobenzene	0.17	0.17	U	-			-		
2,4,5-Trichlorophenol	0.17	0.17	U	-			-		
2,4,6-Trichlorophenol	0.17	0.17	U	-			-		
2,4-Dichlorophenol	0.17	0.17	U	-			-		
2,4-Dimethylphenol	0.17	0.17	U	-			-		
2,4-Dinitrophenol	0.17	0.17	U	-			-		
2,4-Dinitrotoluene	0.17	0.17	U	-			-		
2,6-Dinitrotoluene	0.17	0.17	U	-			-		
2-Chloronaphthalene	0.17	0.17	U	-			-		
2-Chlorophenol	0.17	0.17	U	-			-		
2-Methylnaphthalene	0.17	0.17	U	-			-		
2-Methylphenol	0.17	0.17	U	-			-		
2-Nitroaniline	0.17	0.17	U	-			-		
2-Nitrophenol	0.17	0.17	U	-			-		
3,3-Dichlorobenzidine	0.17	0.17	U	-			-		
3-Nitroaniline	0.17	0.17	U	-			-		
4,6-Dinitro-2-methylphenol	0.17	0.17	U	-			-		
4-Bromophenyl-phenylether	0.17	0.17	U	-			-		
4-Chloro-3-methylphenol	0.17	0.17	U	-			-		
4-Chloroaniline	0.17	0.17	U	-			-		

TABLE B-J23
ANALYTICAL RESULTS FOR GRID J23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	J23			J23			J23		
Sample Name	P3IF-BA-GRID-J023			P3IF-SS-IS-SO-J023			P3IF-SS-IS-SO-J523		
Date Collected	June 15, 2023			June 15, 2023			June 15, 2023		
Semivolatile Organic Compounds (mg/kg), continued									
4-Chlorophenyl-phenylether	0.17	0.17	U	-			-		
4-Nitroaniline	0.17	0.17	U	-			-		
4-Nitrophenol	0.17	0.17	U	-			-		
Acenaphthene	0.17	0.17	U	-			-		
Acenaphthylene	0.17	0.17	U	-			-		
Anthracene	0.17	0.17	U	-			-		
Benzo(a)anthracene	0.17	0.17	U	-			-		
Benzo(a)pyrene	0.13	0.13	U	-			-		
Benzo(b)fluoranthene	0.17	0.17	U	-			-		
Benzo(g,h,i)perylene	0.17	0.17	U	-			-		
Benzo(k)fluoranthene	0.17	0.17	U	-			-		
Benzoic acid	0.17	0.17	U	-			-		
Benzyl Alcohol	0.17	0.17	U	-			-		
Bis(2-chloro-1-methylethyl) ether	0.17	0.17	U	-			-		
Bis(2-chloroethoxy)methane	0.17	0.17	U	-			-		
Bis(2-chloroethyl)ether	0.17	0.17	U	-			-		
Bis(2-ethylhexyl)phthalate	0.17	0.17	U	-			-		
Butyl benzyl phthalate	0.17	0.17	U	-			-		
Carbazole	0.17	0.17	U	-			-		
Chrysene	0.17	0.17	U	-			-		
Di-n-butyl phthalate	0.17	0.17	U	-			-		
Di-n-octyl phthalate	0.17	0.17	U	-			-		
Dibenz(a,h)anthracene	0.13	0.13	U	-			-		
Dibenzofuran	0.17	0.17	U	-			-		
Diethyl phthalate	0.17	0.17	U	-			-		
Dimethyl phthalate	0.17	0.17	U	-			-		
Fluoranthene	0.17	0.17	U	-			-		
Fluorene	0.17	0.17	U	-			-		
Hexachlorobenzene	0.17	0.17	U	-			-		
Hexachlorobutadiene	0.17	0.17	U	-			-		
Hexachloroethane	0.17	0.17	U	-			-		
Indeno(1,2,3-cd)pyrene	0.17	0.17	U	-			-		
Isophorone	0.17	0.17	U	-			-		
n-Nitroso-di-n-propylamine	0.17	0.17	U	-			-		
n-Nitrosodimethylamine	0.021	0.021	UJ	-			-		
n-Nitrosodiphenylamine	0.17	0.17	U	-			-		
Naphthalene	0.17	0.17	U	-			-		
Nitrobenzene	0.17	0.17	U	-			-		
Pentachlorophenol	0.17	0.17	U	-			-		
Phenanthrene	0.17	0.17	U	-			-		
Phenol	0.17	0.17	U	-			-		
Pyrene	0.17	0.17	U	-			-		
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
1,3-Dinitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,4,6-Trinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,4-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,6-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
3-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
4-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	-			0.075	0.075	UJ	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	-			0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
Nitroglycerin	-			0.15	0.15	UJ	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	-			0.075	0.075	UJ	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	-			0.25	0.25	UJ	0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)									
Aroclor 1016	0.021	0.021	U	-			-		
Aroclor 1221	0.021	0.021	U	-			-		
Aroclor 1232	0.010	0.010	U	-			-		
Aroclor 1242	0.010	0.010	U	-			-		
Aroclor 1248	0.010	0.010	U	-			-		
Aroclor 1254	0.010	0.010	U	-			-		
Aroclor 1260	0.010	0.010	U	-			-		
Dioxins/Furans (mg/kg)									
Octachlorodibenzofuran (OCDF)	0.00000055	0.00000055	U	-			-		
Octachlorodibenzo-p-dioxin (OCDD)	0.0000048	0.0000048	U	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.00000026	0.00000026	U	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	0.00000069	0.00000069	U	-			-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.00000033	0.00000033	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.00000014	0.00000014	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000012	0.00000012	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000077	0.000000077	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000012	0.00000012	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.00000017	0.00000017	UJ	-			-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000012	0.00000012	U	-			-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000018	0.00000018	U	-			-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.000000096	0.000000096	U	-			-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.00000015	0.00000015	UJ	-			-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000019	0.00000019	U	-			-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.00000022	0.00000022	U	-			-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.00000011	0.00000011	U	-			-		

TABLE B-J23
ANALYTICAL RESULTS FOR GRID J23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	J23			J23			J23		
Sample Name	P3IF-BA-GRID-J023			P3IF-SS-IS-SO-J023			P3IF-SS-IS-SO-J523		
Date Collected	June 15, 2023			June 15, 2023			June 15, 2023		
Metals (mg/kg)									
Aluminum	-			20000	4.0		18000	4.0	
Antimony	-			0.16	0.15	J	0.15	0.15	U
Arsenic	-			0.98	0.30		0.89	0.30	
Barium	-			300	0.20		290	0.20	
Beryllium	-			0.94	0.30	J	0.95	0.30	J
Cadmium	-			0.70	0.080	J	0.39	0.080	J
Calcium (Ca)	-			35000	15		47000	15	
Chromium	-			13	0.20		11	0.20	
Cobalt	-			4.5	0.080		4.1	0.080	
Copper	-			80	0.20		54	0.20	
Iron (Fe)	-			12000	8.0		11000	8.0	
Lead	-			11	0.050		9.6	0.050	
Magnesium (Mg)	-			7700	5.0		6300	5.0	
Manganese (Mn)	-			610	0.080		740	0.080	
Mercury	-			0.016	0.042	J	0.018	0.042	J
Nickel	-			11	0.20		9.5	0.20	
Potassium (K)	-			2300	8.0		2100	8.0	
Selenium	-			0.79	0.10		0.83	0.10	
Silver	-			0.022	0.050	J	0.050	0.050	U
Sodium (Na)	-			67	8.0		64	8.0	
Thallium	-			0.074	0.050	J	0.073	0.050	J
Vanadium	-			9.9	0.10		7.9	0.10	
Zinc	-			27	1.5		21	1.5	
Other Parameters (mg/kg)									
Cyanide (CN-)	0.33	0.33	U	-			-		
Nitrate	36	2.1		-			-		
Perchlorate	0.0020	0.0020	U	-			-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-J23
ANALYTICAL RESULTS FOR GRID J23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	J23		
Sample Name	P3IF-SS-IS-SO-J623		
Date Collected	June 15, 2023		
	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)			
1,1,1,2-Tetrachloroethane	-		
1,1,1-Trichloroethane	-		
1,1,2,2-Tetrachloroethane	-		
1,1,2-Trichloroethane	-		
1,1-Dichloroethane	-		
1,1-Dichloroethene	-		
1,1-Dichloropropene	-		
1,2,3-Trichlorobenzene	-		
1,2,3-Trichloropropane	-		
1,2,4-Trichlorobenzene	-		
1,2,4-Trimethylbenzene	-		
1,2-Dibromo-3-chloropropane	-		
1,2-Dibromoethane	-		
1,2-Dichlorobenzene	-		
1,2-Dichloroethane	-		
1,2-Dichloropropane	-		
1,3,5-Trimethylbenzene	-		
1,3-Dichlorobenzene	-		
1,3-Dichloropropane	-		
1,4-Dichlorobenzene	-		
2,2-Dichloropropane	-		
2-Butanone	-		
2-Chlorotoluene	-		
2-Hexanone	-		
4-Chlorotoluene	-		
4-Methyl-2-pentanone	-		
Acetone	-		
Benzene	-		
Bromobenzene	-		
Bromochloromethane	-		
Bromodichloromethane	-		
Bromoform	-		
Bromomethane	-		
Carbon disulfide	-		
Carbon tetrachloride	-		
Chlorobenzene	-		
Chloroethane	-		
Chloroform	-		
Chloromethane	-		
cis-1,2-Dichloroethene	-		
cis-1,3-Dichloropropene	-		
Dibromochloromethane	-		
Dibromomethane	-		
Dichlorodifluoromethane	-		
Ethylbenzene	-		
Hexachlorobutadiene	-		
Isopropylbenzene	-		
m+p-Xylene	-		
Methyl Tertiary Butyl Ether	-		
Methylene chloride	-		
n-Butylbenzene	-		
n-Propylbenzene	-		
Naphthalene	-		
o-Xylene	-		
4-Isopropyltoluene	-		
sec-Butylbenzene	-		
Styrene	-		
tert-Butylbenzene	-		
Tetrachloroethene	-		
Toluene	-		
trans-1,2-Dichloroethene	-		
trans-1,3-Dichloropropene	-		
Trichloroethene	-		
Trichlorofluoromethane	-		
Vinyl chloride	-		
Semivolatile Organic Compounds (mg/kg)			
1,2,4-Trichlorobenzene	-		
1,2-Dichlorobenzene	-		
1,3-Dichlorobenzene	-		
1,4-Dichlorobenzene	-		
2,4,5-Trichlorophenol	-		
2,4,6-Trichlorophenol	-		
2,4-Dichlorophenol	-		
2,4-Dimethylphenol	-		
2,4-Dinitrophenol	-		
2,4-Dinitrotoluene	-		
2,6-Dinitrotoluene	-		
2-Chloronaphthalene	-		
2-Chlorophenol	-		
2-Methylnaphthalene	-		
2-Methylphenol	-		
2-Nitroaniline	-		
2-Nitrophenol	-		
3,3-Dichlorobenzidine	-		
3-Nitroaniline	-		
4,6-Dinitro-2-methylphenol	-		
4-Bromophenyl-phenylether	-		
4-Chloro-3-methylphenol	-		
4-Chloroaniline	-		

TABLE B-J23
ANALYTICAL RESULTS FOR GRID J23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	J23		
Sample Name	P3IF-SS-IS-SO-J623		
Date Collected	June 15, 2023		
Semivolatile Organic Compounds (mg/kg), continued			
4-Chlorophenyl-phenylether	-		
4-Nitroaniline	-		
4-Nitrophenol	-		
Acenaphthene	-		
Acenaphthylene	-		
Anthracene	-		
Benzo(a)anthracene	-		
Benzo(a)pyrene	-		
Benzo(b)fluoranthene	-		
Benzo(g,h,i)perylene	-		
Benzo(k)fluoranthene	-		
Benzoic acid	-		
Benzyl Alcohol	-		
Bis(2-chloro-1-methylethyl) ether	-		
Bis(2-chloroethoxy)methane	-		
Bis(2-chloroethyl)ether	-		
Bis(2-ethylhexyl)phthalate	-		
Butyl benzyl phthalate	-		
Carbazole	-		
Chrysene	-		
Di-n-butyl phthalate	-		
Di-n-octyl phthalate	-		
Dibenz(a,h)anthracene	-		
Dibenzofuran	-		
Diethyl phthalate	-		
Dimethyl phthalate	-		
Fluoranthene	-		
Fluorene	-		
Hexachlorobenzene	-		
Hexachlorobutadiene	-		
Hexachloroethane	-		
Indeno(1,2,3-cd)pyrene	-		
Isophorone	-		
n-Nitroso-di-n-propylamine	-		
n-Nitrosodimethylamine	-		
n-Nitrosodiphenylamine	-		
Naphthalene	-		
Nitrobenzene	-		
Pentachlorophenol	-		
Phenanthrene	-		
Phenol	-		
Pyrene	-		
Explosives (mg/kg)			
1,3,5-Trinitrobenzene	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	UJ
2,4,6-Trinitrotoluene	0.075	0.075	UJ
2,4-Dinitrotoluene	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	UJ
2-Nitrotoluene	0.075	0.075	UJ
3-Nitrotoluene	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	0.075	0.075	UJ
4-Nitrotoluene	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	UJ
Nitroglycerin	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)			
Aroclor 1016	-		
Aroclor 1221	-		
Aroclor 1232	-		
Aroclor 1242	-		
Aroclor 1248	-		
Aroclor 1254	-		
Aroclor 1260	-		
Dioxins/Furans (mg/kg)			
Octachlorodibenzofuran (OCDF)	-		
Octachlorodibenzo-p-dioxin (OCDD)	-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	-		

TABLE B-J23
ANALYTICAL RESULTS FOR GRID J23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	J23		
Sample Name	P3IF-SS-IS-SO-J623		
Date Collected	June 15, 2023		
Metals (mg/kg)			
Aluminum	20000	4.0	
Antimony	0.15	0.15	U
Arsenic	0.86	0.30	
Barium	230	0.20	
Beryllium	0.93	0.30	J
Cadmium	0.69	0.080	
Calcium (Ca)	37000	15	
Chromium	14	0.20	
Cobalt	4.5	0.080	
Copper	110	0.20	
Iron (Fe)	12000	8.0	
Lead	10	0.050	
Magnesium (Mg)	7800	5.0	
Manganese (Mn)	600	0.080	
Mercury	0.015	0.042	J
Nickel	12	0.20	
Potassium (K)	2000	8.0	
Selenium	1.0	0.10	
Silver	0.029	0.050	J
Sodium (Na)	68	8.0	
Thallium	0.061	0.050	J
Vanadium	9.1	0.10	
Zinc	25	1.5	
Other Parameters (mg/kg)			
Cyanide (CN-)	-		
Nitrate	-		
Perchlorate	-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-J24
ANALYTICAL RESULTS FOR GRID J24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	J24			J24			J24		
Sample Name	P3IF-BA-GRID-J024			P3IF-SS-IS-SO-J024			P3IF-SS-IS-SO-J524		
Date Collected	June 15, 2023			June 15, 2023			June 15, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)									
1,1,1,2-Tetrachloroethane	0.0019	0.0019	UJ	-			-		
1,1,1-Trichloroethane	0.0019	0.0019	UJ	-			-		
1,1,2,2-Tetrachloroethane	0.0019	0.0019	UJ	-			-		
1,1,2-Trichloroethane	0.0019	0.0019	UJ	-			-		
1,1-Dichloroethane	0.0019	0.0019	UJ	-			-		
1,1-Dichloroethene	0.0019	0.0019	UJ	-			-		
1,1-Dichloropropene	0.0019	0.0019	UJ	-			-		
1,2,3-Trichlorobenzene	0.0019	0.0019	UJ	-			-		
1,2,3-Trichloropropane	0.0048	0.0048	UJ	-			-		
1,2,4-Trichlorobenzene	0.0019	0.0019	UJ	-			-		
1,2,4-Trimethylbenzene	0.0019	0.0019	UJ	-			-		
1,2-Dibromo-3-chloropropane	0.0048	0.0048	UJ	-			-		
1,2-Dibromoethane	0.0019	0.0019	UJ	-			-		
1,2-Dichlorobenzene	0.0019	0.0019	UJ	-			-		
1,2-Dichloroethane	0.0019	0.0019	UJ	-			-		
1,2-Dichloropropane	0.0019	0.0019	UJ	-			-		
1,3,5-Trimethylbenzene	0.0019	0.0019	UJ	-			-		
1,3-Dichlorobenzene	0.0019	0.0019	UJ	-			-		
1,3-Dichloropropane	0.0019	0.0019	UJ	-			-		
1,4-Dichlorobenzene	0.0019	0.0019	UJ	-			-		
2,2-Dichloropropane	0.0019	0.0019	UJ	-			-		
2-Butanone	0.0029	0.0029	UJ	-			-		
2-Chlorotoluene	0.0019	0.0019	UJ	-			-		
2-Hexanone	0.082	0.0019	J	-			-		
4-Chlorotoluene	0.0019	0.0019	UJ	-			-		
4-Methyl-2-pentanone	0.0019	0.0019	UJ	-			-		
Acetone	0.13	0.0048	J	-			-		
Benzene	0.0019	0.0019	UJ	-			-		
Bromobenzene	0.0019	0.0019	UJ	-			-		
Bromochloromethane	0.0019	0.0019	UJ	-			-		
Bromodichloromethane	0.0019	0.0019	UJ	-			-		
Bromoform	0.0019	0.0019	UJ	-			-		
Bromomethane	0.0019	0.0019	UJ	-			-		
Carbon disulfide	0.0019	0.0019	UJ	-			-		
Carbon tetrachloride	0.0019	0.0019	UJ	-			-		
Chlorobenzene	0.0019	0.0019	UJ	-			-		
Chloroethane	0.0019	0.0019	UJ	-			-		
Chloroform	0.0019	0.0019	UJ	-			-		
Chloromethane	0.0048	0.0048	UJ	-			-		
cis-1,2-Dichloroethene	0.0019	0.0019	UJ	-			-		
cis-1,3-Dichloropropene	0.0019	0.0019	UJ	-			-		
Dibromochloromethane	0.0019	0.0019	UJ	-			-		
Dibromomethane	0.0019	0.0019	UJ	-			-		
Dichlorodifluoromethane	0.0019	0.0019	UJ	-			-		
Ethylbenzene	0.0019	0.0019	UJ	-			-		
Hexachlorobutadiene	0.0019	0.0019	UJ	-			-		
Isopropylbenzene	0.0019	0.0019	UJ	-			-		
m+p-Xylene	0.0048	0.0048	UJ	-			-		
Methyl Tertiary Butyl Ether	0.0019	0.0019	UJ	-			-		
Methylene chloride	0.0095	0.0095	UJ	-			-		
n-Butylbenzene	0.0019	0.0019	UJ	-			-		
n-Propylbenzene	0.0019	0.0019	UJ	-			-		
Naphthalene	0.0019	0.0019	UJ	-			-		
o-Xylene	0.0024	0.0024	UJ	-			-		
4-Isopropyltoluene	0.0019	0.0019	UJ	-			-		
sec-Butylbenzene	0.0019	0.0019	UJ	-			-		
Styrene	0.0019	0.0019	UJ	-			-		
tert-Butylbenzene	0.0019	0.0019	UJ	-			-		
Tetrachloroethene	0.0019	0.0019	UJ	-			-		
Toluene	0.0019	0.0019	UJ	-			-		
trans-1,2-Dichloroethene	0.0019	0.0019	UJ	-			-		
trans-1,3-Dichloropropene	0.0019	0.0019	UJ	-			-		
Trichloroethene	0.0019	0.0019	UJ	-			-		
Trichlorofluoromethane	0.0019	0.0019	UJ	-			-		
Vinyl chloride	0.0019	0.0019	UJ	-			-		
Semivolatile Organic Compounds (mg/kg)									
1,2,4-Trichlorobenzene	0.17	0.17	UJ	-			-		
1,2-Dichlorobenzene	0.17	0.17	UJ	-			-		
1,3-Dichlorobenzene	0.17	0.17	UJ	-			-		
1,4-Dichlorobenzene	0.17	0.17	UJ	-			-		
2,4,5-Trichlorophenol	0.17	0.17	UJ	-			-		
2,4,6-Trichlorophenol	0.17	0.17	UJ	-			-		
2,4-Dichlorophenol	0.17	0.17	UJ	-			-		
2,4-Dimethylphenol	0.17	0.17	UJ	-			-		
2,4-Dinitrophenol	0.17	0.17	UJ	-			-		
2,4-Dinitrotoluene	0.17	0.17	UJ	-			-		
2,6-Dinitrotoluene	0.17	0.17	UJ	-			-		
2-Chloronaphthalene	0.17	0.17	UJ	-			-		
2-Chlorophenol	0.17	0.17	UJ	-			-		
2-Methylnaphthalene	0.17	0.17	UJ	-			-		
2-Methylphenol	0.17	0.17	UJ	-			-		
2-Nitroaniline	0.17	0.17	UJ	-			-		
2-Nitrophenol	0.17	0.17	UJ	-			-		
3,3-Dichlorobenzidine	0.17	0.17	UJ	-			-		
3-Nitroaniline	0.17	0.17	UJ	-			-		
4,6-Dinitro-2-methylphenol	0.17	0.17	UJ	-			-		
4-Bromophenyl-phenylether	0.17	0.17	UJ	-			-		
4-Chloro-3-methylphenol	0.17	0.17	UJ	-			-		
4-Chloroaniline	0.17	0.17	UJ	-			-		

TABLE B-J24
ANALYTICAL RESULTS FOR GRID J24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	J24			J24			J24		
Sample Name	P3IF-BA-GRID-J024			P3IF-SS-IS-SO-J024			P3IF-SS-IS-SO-J524		
Date Collected	June 15, 2023			June 15, 2023			June 15, 2023		
Semivolatile Organic Compounds (mg/kg), continued									
4-Chlorophenyl-phenylether	0.17	0.17	UJ	-			-		
4-Nitroaniline	0.17	0.17	UJ	-			-		
4-Nitrophenol	0.17	0.17	UJ	-			-		
Acenaphthene	0.17	0.17	UJ	-			-		
Acenaphthylene	0.17	0.17	UJ	-			-		
Anthracene	0.17	0.17	UJ	-			-		
Benzo(a)anthracene	0.17	0.17	UJ	-			-		
Benzo(a)pyrene	0.13	0.13	UJ	-			-		
Benzo(b)fluoranthene	0.17	0.17	UJ	-			-		
Benzo(g,h,i)perylene	0.17	0.17	UJ	-			-		
Benzo(k)fluoranthene	0.17	0.17	UJ	-			-		
Benzoic acid	0.17	0.17	UJ	-			-		
Benzyl Alcohol	0.17	0.17	UJ	-			-		
Bis(2-chloro-1-methylethyl) ether	0.17	0.17	UJ	-			-		
Bis(2-chloroethoxy)methane	0.17	0.17	UJ	-			-		
Bis(2-chloroethyl)ether	0.17	0.17	UJ	-			-		
Bis(2-ethylhexyl)phthalate	0.17	0.17	UJ	-			-		
Butyl benzyl phthalate	0.17	0.17	UJ	-			-		
Carbazole	0.17	0.17	UJ	-			-		
Chrysene	0.17	0.17	UJ	-			-		
Di-n-butyl phthalate	0.17	0.17	UJ	-			-		
Di-n-octyl phthalate	0.17	0.17	UJ	-			-		
Dibenz(a,h)anthracene	0.13	0.13	UJ	-			-		
Dibenzofuran	0.17	0.17	UJ	-			-		
Diethyl phthalate	0.17	0.17	UJ	-			-		
Dimethyl phthalate	0.17	0.17	UJ	-			-		
Fluoranthene	0.17	0.17	UJ	-			-		
Fluorene	0.17	0.17	UJ	-			-		
Hexachlorobenzene	0.17	0.17	UJ	-			-		
Hexachlorobutadiene	0.17	0.17	UJ	-			-		
Hexachloroethane	0.17	0.17	UJ	-			-		
Indeno(1,2,3-cd)pyrene	0.17	0.17	UJ	-			-		
Isophorone	0.17	0.17	UJ	-			-		
n-Nitrosodimethylamine	0.02	0.02	UJ	-			-		
n-Nitroso-di-n-propylamine	0.17	0.17	UJ	-			-		
n-Nitrosodiphenylamine	0.17	0.17	UJ	-			-		
Naphthalene	0.17	0.17	UJ	-			-		
Nitrobenzene	0.17	0.17	UJ	-			-		
Pentachlorophenol	0.17	0.17	UJ	-			-		
Phenanthrene	0.17	0.17	UJ	-			-		
Phenol	0.17	0.17	UJ	-			-		
Pyrene	0.17	0.17	UJ	-			-		
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
1,3-Dinitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,4,6-Trinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,4-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,6-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
3-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
4-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	-			0.075	0.075	UJ	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	-			0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
Nitroglycerin	-			0.15	0.15	UJ	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	-			0.075	0.075	UJ	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	-			0.25	0.25	UJ	0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)									
Aroclor 1016	0.02	0.02	UJ	-			-		
Aroclor 1221	0.02	0.02	UJ	-			-		
Aroclor 1232	0.01	0.01	UJ	-			-		
Aroclor 1242	0.01	0.01	UJ	-			-		
Aroclor 1248	0.01	0.01	UJ	-			-		
Aroclor 1254	0.01	0.01	UJ	-			-		
Aroclor 1260	0.01	0.01	UJ	-			-		
Dioxins/Furans (mg/kg)									
Octachlorodibenzofuran (OCDF)	0.000025	0.000025	UJ	-			-		
Octachlorodibenzo-p-dioxin (OCDD)	0.000025	0.000025	UJ	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.00000016	0.00000016	UJ	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	0.00000037	0.00000037	UJ	-			-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.000000073	0.000000073	UJ	-			-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000096	0.000000096	UJ	-			-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000062	0.000000062	UJ	-			-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000093	0.000000093	UJ	-			-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000075	0.000000075	UJ	-			-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.00000012	0.00000012	UJ	-			-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000086	0.000000086	UJ	-			-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.000000098	0.000000098	UJ	-			-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.000000086	0.000000086	UJ	-			-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000066	0.000000066	UJ	-			-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.0000001	0.0000001	UJ	-			-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.00000018	0.00000018	UJ	-			-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.0000001	0.0000001	UJ	-			-		

TABLE B-J24
ANALYTICAL RESULTS FOR GRID J24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	J24			J24			J24		
Sample Name	P3IF-BA-GRID-J024			P3IF-SS-IS-SO-J024			P3IF-SS-IS-SO-J524		
Date Collected	June 15, 2023			June 15, 2023			June 15, 2023		
Metals (mg/kg)									
Aluminum	-			14000	4		15000	4	
Antimony	-			0.15	0.15	U	0.11	0.15	J
Arsenic	-			0.72	0.3		1	0.3	
Barium	-			220	0.2		310	0.2	
Beryllium	-			1.3	0.3		0.95	0.3	J
Cadmium	-			0.074	0.08	J	0.36	0.08	
Calcium (Ca)	-			32000	15		43000	15	
Chromium	-			6.8	0.2		8.7	0.2	
Cobalt	-			2.6	0.08		3.6	0.08	
Copper	-			7.5	0.2	J	37	0.2	J
Iron (Fe)	-			11000	8		7700	8	
Lead	-			9.2	0.05		8.5	0.05	
Magnesium (Mg)	-			3600	5		5600	5	
Manganese (Mn)	-			350	0.08	J	640	0.08	J
Mercury	-			0.044	0.044	R	0.015	0.041	J
Nickel	-			6	0.2		8.1	0.2	
Potassium (K)	-			2700	8	J	1500	8	J
Selenium	-			1.1	0.1		1.3	0.1	
Silver	-			0.05	0.05	U	0.022	0.05	J
Sodium (Na)	-			67	8		50	8	
Thallium	-			0.092	0.05	J	0.068	0.05	J
Vanadium	-			4.2	0.1	J	6.6	0.1	
Zinc	-			11	1.5	J	17	1.5	J
Other Parameters (mg/kg)									
Cyanide (CN-)	0.32	0.32	UJ	-			-		
Nitrate	5.9	2.1	J	-			-		
Perchlorate	0.0041	0.0041	UJ	-			-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-J24
ANALYTICAL RESULTS FOR GRID J24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	J24		
Sample Name	P3IF-SS-IS-SO-J624		
Date Collected	June 15, 2023		
	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)			
1,1,1,2-Tetrachloroethane	-		
1,1,1-Trichloroethane	-		
1,1,2,2-Tetrachloroethane	-		
1,1,2-Trichloroethane	-		
1,1-Dichloroethane	-		
1,1-Dichloroethene	-		
1,1-Dichloropropene	-		
1,2,3-Trichlorobenzene	-		
1,2,3-Trichloropropane	-		
1,2,4-Trichlorobenzene	-		
1,2,4-Trimethylbenzene	-		
1,2-Dibromo-3-chloropropane	-		
1,2-Dibromoethane	-		
1,2-Dichlorobenzene	-		
1,2-Dichloroethane	-		
1,2-Dichloropropane	-		
1,3,5-Trimethylbenzene	-		
1,3-Dichlorobenzene	-		
1,3-Dichloropropane	-		
1,4-Dichlorobenzene	-		
2,2-Dichloropropane	-		
2-Butanone	-		
2-Chlorotoluene	-		
2-Hexanone	-		
4-Chlorotoluene	-		
4-Methyl-2-pentanone	-		
Acetone	-		
Benzene	-		
Bromobenzene	-		
Bromochloromethane	-		
Bromodichloromethane	-		
Bromoform	-		
Bromomethane	-		
Carbon disulfide	-		
Carbon tetrachloride	-		
Chlorobenzene	-		
Chloroethane	-		
Chloroform	-		
Chloromethane	-		
cis-1,2-Dichloroethene	-		
cis-1,3-Dichloropropene	-		
Dibromochloromethane	-		
Dibromomethane	-		
Dichlorodifluoromethane	-		
Ethylbenzene	-		
Hexachlorobutadiene	-		
Isopropylbenzene	-		
m+p-Xylene	-		
Methyl Tertiary Butyl Ether	-		
Methylene chloride	-		
n-Butylbenzene	-		
n-Propylbenzene	-		
Naphthalene	-		
o-Xylene	-		
4-Isopropyltoluene	-		
sec-Butylbenzene	-		
Styrene	-		
tert-Butylbenzene	-		
Tetrachloroethene	-		
Toluene	-		
trans-1,2-Dichloroethene	-		
trans-1,3-Dichloropropene	-		
Trichloroethene	-		
Trichlorofluoromethane	-		
Vinyl chloride	-		
Semivolatile Organic Compounds (mg/kg)			
1,2,4-Trichlorobenzene	-		
1,2-Dichlorobenzene	-		
1,3-Dichlorobenzene	-		
1,4-Dichlorobenzene	-		
2,4,5-Trichlorophenol	-		
2,4,6-Trichlorophenol	-		
2,4-Dichlorophenol	-		
2,4-Dimethylphenol	-		
2,4-Dinitrophenol	-		
2,4-Dinitrotoluene	-		
2,6-Dinitrotoluene	-		
2-Chloronaphthalene	-		
2-Chlorophenol	-		
2-Methylnaphthalene	-		
2-Methylphenol	-		
2-Nitroaniline	-		
2-Nitrophenol	-		
3,3-Dichlorobenzidine	-		
3-Nitroaniline	-		
4,6-Dinitro-2-methylphenol	-		
4-Bromophenyl-phenylether	-		
4-Chloro-3-methylphenol	-		
4-Chloroaniline	-		

TABLE B-J24
ANALYTICAL RESULTS FOR GRID J24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	J24		
Sample Name	P3IF-SS-IS-SO-J624		
Date Collected	June 15, 2023		
Semivolatile Organic Compounds (mg/kg), continued			
4-Chlorophenyl-phenylether	-		
4-Nitroaniline	-		
4-Nitrophenol	-		
Acenaphthene	-		
Acenaphthylene	-		
Anthracene	-		
Benzo(a)anthracene	-		
Benzo(a)pyrene	-		
Benzo(b)fluoranthene	-		
Benzo(g,h,i)perylene	-		
Benzo(k)fluoranthene	-		
Benzoic acid	-		
Benzyl Alcohol	-		
Bis(2-chloro-1-methylethyl) ether	-		
Bis(2-chloroethoxy)methane	-		
Bis(2-chloroethyl)ether	-		
Bis(2-ethylhexyl)phthalate	-		
Butyl benzyl phthalate	-		
Carbazole	-		
Chrysene	-		
Di-n-butyl phthalate	-		
Di-n-octyl phthalate	-		
Dibenz(a,h)anthracene	-		
Dibenzofuran	-		
Diethyl phthalate	-		
Dimethyl phthalate	-		
Fluoranthene	-		
Fluorene	-		
Hexachlorobenzene	-		
Hexachlorobutadiene	-		
Hexachloroethane	-		
Indeno(1,2,3-cd)pyrene	-		
Isophorone	-		
n-Nitrosodimethylamine	-		
n-Nitroso-di-n-propylamine	-		
n-Nitrosodiphenylamine	-		
Naphthalene	-		
Nitrobenzene	-		
Pentachlorophenol	-		
Phenanthrene	-		
Phenol	-		
Pyrene	-		
Explosives (mg/kg)			
1,3,5-Trinitrobenzene	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	UJ
2,4,6-Trinitrotoluene	0.075	0.075	UJ
2,4-Dinitrotoluene	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	UJ
2-Nitrotoluene	0.075	0.075	UJ
3-Nitrotoluene	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	0.075	0.075	UJ
4-Nitrotoluene	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	UJ
Nitroglycerin	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)			
Aroclor 1016	-		
Aroclor 1221	-		
Aroclor 1232	-		
Aroclor 1242	-		
Aroclor 1248	-		
Aroclor 1254	-		
Aroclor 1260	-		
Dioxins/Furans (mg/kg)			
Octachlorodibenzofuran (OCDF)	-		
Octachlorodibenzo-p-dioxin (OCDD)	-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	-		

TABLE B-J24
ANALYTICAL RESULTS FOR GRID J24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	J24		
Sample Name	P3IF-SS-IS-SO-J624		
Date Collected	June 15, 2023		
Metals (mg/kg)			
Aluminum	19000	4	
Antimony	0.15	0.15	U
Arsenic	1	0.3	
Barium	310	0.2	
Beryllium	1	0.3	
Cadmium	0.39	0.08	
Calcium (Ca)	41000	15	
Chromium	10	0.2	
Cobalt	4.2	0.08	
Copper	53	0.2	J
Iron (Fe)	9800	8	
Lead	10	0.05	
Magnesium (Mg)	7400	5	
Manganese (Mn)	570	0.08	
Mercury	0.012	0.042	J
Nickel	9.1	0.2	
Potassium (K)	1600	8	J
Selenium	1.2	0.1	
Silver	0.054	0.05	J
Sodium (Na)	72	8	
Thallium	0.068	0.05	J
Vanadium	8.4	0.1	J
Zinc	21	1.5	
Other Parameters (mg/kg)			
Cyanide (CN-)	-		
Nitrate	-		
Perchlorate	-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-J25
ANALYTICAL RESULTS FOR GRID J25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	J25			J25			J25		
Sample Name	P3IF-BA-GRID-J025			P3IF-SS-IS-SO-J025			P3IF-SS-IS-SO-J525		
Date Collected	June 15, 2023			June 15, 2023			June 15, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)									
1,1,1,2-Tetrachloroethane	0.002	0.002	UJ	-			-		
1,1,1-Trichloroethane	0.002	0.002	UJ	-			-		
1,1,2,2-Tetrachloroethane	0.002	0.002	UJ	-			-		
1,1,2-Trichloroethane	0.002	0.002	UJ	-			-		
1,1-Dichloroethane	0.002	0.002	UJ	-			-		
1,1-Dichloroethene	0.002	0.002	UJ	-			-		
1,1-Dichloropropene	0.002	0.002	UJ	-			-		
1,2,3-Trichlorobenzene	0.002	0.002	UJ	-			-		
1,2,3-Trichloropropane	0.0049	0.0049	UJ	-			-		
1,2,4-Trichlorobenzene	0.002	0.002	UJ	-			-		
1,2,4-Trimethylbenzene	0.002	0.002	UJ	-			-		
1,2-Dibromo-3-chloropropane	0.0049	0.0049	UJ	-			-		
1,2-Dibromoethane	0.002	0.002	UJ	-			-		
1,2-Dichlorobenzene	0.002	0.002	UJ	-			-		
1,2-Dichloroethane	0.002	0.002	UJ	-			-		
1,2-Dichloropropane	0.002	0.002	UJ	-			-		
1,3,5-Trimethylbenzene	0.002	0.002	UJ	-			-		
1,3-Dichlorobenzene	0.002	0.002	UJ	-			-		
1,3-Dichloropropane	0.002	0.002	UJ	-			-		
1,4-Dichlorobenzene	0.002	0.002	UJ	-			-		
2,2-Dichloropropane	0.002	0.002	UJ	-			-		
2-Butanone	0.003	0.003	UJ	-			-		
2-Chlorotoluene	0.002	0.002	UJ	-			-		
2-Hexanone	0.002	0.002	UJ	-			-		
4-Chlorotoluene	0.002	0.002	UJ	-			-		
4-Methyl-2-pentanone	0.002	0.002	UJ	-			-		
Acetone	0.068	0.0049	J	-			-		
Benzene	0.002	0.002	UJ	-			-		
Bromobenzene	0.002	0.002	UJ	-			-		
Bromochloromethane	0.002	0.002	UJ	-			-		
Bromodichloromethane	0.002	0.002	UJ	-			-		
Bromoform	0.002	0.002	UJ	-			-		
Bromomethane	0.002	0.002	UJ	-			-		
Carbon disulfide	0.002	0.002	UJ	-			-		
Carbon tetrachloride	0.002	0.002	UJ	-			-		
Chlorobenzene	0.002	0.002	UJ	-			-		
Chloroethane	0.002	0.002	UJ	-			-		
Chloroform	0.002	0.002	UJ	-			-		
Chloromethane	0.0049	0.0049	UJ	-			-		
cis-1,2-Dichloroethene	0.002	0.002	UJ	-			-		
cis-1,3-Dichloropropene	0.002	0.002	UJ	-			-		
Dibromochloromethane	0.002	0.002	UJ	-			-		
Dibromomethane	0.002	0.002	UJ	-			-		
Dichlorodifluoromethane	0.002	0.002	UJ	-			-		
Ethylbenzene	0.002	0.002	UJ	-			-		
Hexachlorobutadiene	0.002	0.002	UJ	-			-		
Isopropylbenzene	0.002	0.002	UJ	-			-		
m+p-Xylene	0.0049	0.0049	UJ	-			-		
Methyl Tertiary Butyl Ether	0.002	0.002	UJ	-			-		
Methylene chloride	0.0099	0.0099	UJ	-			-		
n-Butylbenzene	0.002	0.002	UJ	-			-		
n-Propylbenzene	0.002	0.002	UJ	-			-		
Naphthalene	0.002	0.002	UJ	-			-		
o-Xylene	0.0025	0.0025	UJ	-			-		
4-Isopropyltoluene	0.002	0.002	UJ	-			-		
sec-Butylbenzene	0.002	0.002	UJ	-			-		
Styrene	0.002	0.002	UJ	-			-		
tert-Butylbenzene	0.002	0.002	UJ	-			-		
Tetrachloroethene	0.002	0.002	UJ	-			-		
Toluene	0.002	0.002	UJ	-			-		
trans-1,2-Dichloroethene	0.002	0.002	UJ	-			-		
trans-1,3-Dichloropropene	0.002	0.002	UJ	-			-		
Trichloroethene	0.002	0.002	UJ	-			-		
Trichlorofluoromethane	0.002	0.002	UJ	-			-		
Vinyl chloride	0.002	0.002	UJ	-			-		
Semivolatile Organic Compounds (mg/kg)									
1,2,4-Trichlorobenzene	0.17	0.17	UJ	-			-		
1,2-Dichlorobenzene	0.17	0.17	UJ	-			-		
1,3-Dichlorobenzene	0.17	0.17	UJ	-			-		
1,4-Dichlorobenzene	0.17	0.17	UJ	-			-		
2,4,5-Trichlorophenol	0.17	0.17	UJ	-			-		
2,4,6-Trichlorophenol	0.17	0.17	UJ	-			-		
2,4-Dichlorophenol	0.17	0.17	UJ	-			-		
2,4-Dimethylphenol	0.17	0.17	UJ	-			-		
2,4-Dinitrophenol	0.17	0.17	UJ	-			-		
2,4-Dinitrotoluene	0.17	0.17	UJ	-			-		
2,6-Dinitrotoluene	0.17	0.17	UJ	-			-		
2-Chloronaphthalene	0.17	0.17	UJ	-			-		
2-Chlorophenol	0.17	0.17	UJ	-			-		
2-Methylnaphthalene	0.17	0.17	UJ	-			-		
2-Methylphenol	0.17	0.17	UJ	-			-		
2-Nitroaniline	0.17	0.17	UJ	-			-		
2-Nitrophenol	0.17	0.17	UJ	-			-		
3,3-Dichlorobenzidine	0.17	0.17	UJ	-			-		
3-Nitroaniline	0.17	0.17	UJ	-			-		
4,6-Dinitro-2-methylphenol	0.17	0.17	UJ	-			-		
4-Bromophenyl-phenylether	0.17	0.17	UJ	-			-		
4-Chloro-3-methylphenol	0.17	0.17	UJ	-			-		
4-Chloroaniline	0.17	0.17	UJ	-			-		

TABLE B-J25
ANALYTICAL RESULTS FOR GRID J25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	J25			J25			J25		
Sample Name	P3IF-BA-GRID-J025			P3IF-SS-IS-SO-J025			P3IF-SS-IS-SO-J525		
Date Collected	June 15, 2023			June 15, 2023			June 15, 2023		
Semivolatile Organic Compounds (mg/kg), continued									
4-Chlorophenyl-phenylether	0.17	0.17	UJ	-			-		
4-Nitroaniline	0.17	0.17	UJ	-			-		
4-Nitrophenol	0.17	0.17	UJ	-			-		
Acenaphthene	0.17	0.17	UJ	-			-		
Acenaphthylene	0.17	0.17	UJ	-			-		
Anthracene	0.17	0.17	UJ	-			-		
Benzo(a)anthracene	0.17	0.17	UJ	-			-		
Benzo(a)pyrene	0.13	0.13	UJ	-			-		
Benzo(b)fluoranthene	0.17	0.17	UJ	-			-		
Benzo(g,h,i)perylene	0.17	0.17	UJ	-			-		
Benzo(k)fluoranthene	0.17	0.17	UJ	-			-		
Benzoic acid	0.17	0.17	UJ	-			-		
Benzyl Alcohol	0.17	0.17	UJ	-			-		
Bis(2-chloro-1-methylethyl) ether	0.17	0.17	UJ	-			-		
Bis(2-chloroethoxy)methane	0.17	0.17	UJ	-			-		
Bis(2-chloroethyl)ether	0.17	0.17	UJ	-			-		
Bis(2-ethylhexyl)phthalate	0.17	0.17	UJ	-			-		
Butyl benzyl phthalate	0.17	0.17	UJ	-			-		
Carbazole	0.17	0.17	UJ	-			-		
Chrysene	0.17	0.17	UJ	-			-		
Di-n-butyl phthalate	0.17	0.17	UJ	-			-		
Di-n-octyl phthalate	0.17	0.17	UJ	-			-		
Dibenz(a,h)anthracene	0.13	0.13	UJ	-			-		
Dibenzofuran	0.17	0.17	UJ	-			-		
Diethyl phthalate	0.17	0.17	UJ	-			-		
Dimethyl phthalate	0.17	0.17	UJ	-			-		
Fluoranthene	0.17	0.17	UJ	-			-		
Fluorene	0.17	0.17	UJ	-			-		
Hexachlorobenzene	0.17	0.17	UJ	-			-		
Hexachlorobutadiene	0.17	0.17	UJ	-			-		
Hexachloroethane	0.17	0.17	UJ	-			-		
Indeno(1,2,3-cd)pyrene	0.17	0.17	UJ	-			-		
Isophorone	0.17	0.17	UJ	-			-		
n-Nitrosodimethylamine	0.021	0.021	UJ	-			-		
n-Nitroso-di-n-propylamine	0.17	0.17	UJ	-			-		
n-Nitrosodiphenylamine	0.17	0.17	UJ	-			-		
Naphthalene	0.17	0.17	UJ	-			-		
Nitrobenzene	0.17	0.17	UJ	-			-		
Pentachlorophenol	0.17	0.17	UJ	-			-		
Phenanthrene	0.17	0.17	UJ	-			-		
Phenol	0.17	0.17	UJ	-			-		
Pyrene	0.17	0.17	UJ	-			-		
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
1,3-Dinitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,4,6-Trinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,4-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,6-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
3-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
4-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	-			0.075	0.075	UJ	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	-			0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
Nitroglycerin	-			0.15	0.15	UJ	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	-			0.075	0.075	UJ	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	-			0.25	0.25	UJ	0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)									
Aroclor 1016	0.02	0.02	UJ	-			-		
Aroclor 1221	0.02	0.02	UJ	-			-		
Aroclor 1232	0.01	0.01	UJ	-			-		
Aroclor 1242	0.01	0.01	UJ	-			-		
Aroclor 1248	0.01	0.01	UJ	-			-		
Aroclor 1254	0.01	0.01	UJ	-			-		
Aroclor 1260	0.01	0.01	UJ	-			-		
Dioxins/Furans (mg/kg)									
Octachlorodibenzofuran (OCDF)	0.000000096	0.000000096	UJ	-			-		
Octachlorodibenzo-p-dioxin (OCDD)	0.0000022	0.0000022	UJ	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.000000052	0.000000052	UJ	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	0.000000078	0.000000078	UJ	-			-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.000000066	0.000000066	UJ	-			-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.00000011	0.00000011	UJ	-			-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000011	0.00000011	J	-			-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.00000011	0.00000011	UJ	-			-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000056	0.000000056	UJ	-			-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.00000014	0.00000014	UJ	-			-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000057	0.000000057	UJ	-			-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.000000086	0.000000086	UJ	-			-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.000000098	0.000000098	UJ	-			-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000078	0.000000078	UJ	-			-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.000000089	0.000000089	UJ	-			-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.00000028	0.00000028	UJ	-			-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.000000097	0.000000097	UJ	-			-		

TABLE B-J25
ANALYTICAL RESULTS FOR GRID J25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	J25			J25			J25		
Sample Name	P3IF-BA-GRID-J025			P3IF-SS-IS-SO-J025			P3IF-SS-IS-SO-J525		
Date Collected	June 15, 2023			June 15, 2023			June 15, 2023		
Metals (mg/kg)									
Aluminum	-			20000	4		18000	4	
Antimony	-			0.15	0.15	U	0.15	0.15	U
Arsenic	-			1.9	0.3		1.9	0.3	
Barium	-			350	0.2		320	0.2	
Beryllium	-			0.98	0.3	J	0.88	0.3	J
Cadmium	-			0.57	0.08		0.39	0.08	
Calcium (Ca)	-			29000	15		38000	15	
Chromium	-			14	0.2		12	0.2	
Cobalt	-			4.9	0.08		4.4	0.08	
Copper	-			86	0.2		68	0.2	
Iron (Fe)	-			9900	8		8400	8	
Lead	-			12	0.05		9.8	0.05	
Magnesium (Mg)	-			7300	5		6700	5	
Manganese (Mn)	-			450	0.08		440	0.08	
Mercury	-			0.024	0.044	J	0.022	0.042	J
Nickel	-			12	0.2		11	0.2	
Potassium (K)	-			2300	8		1900	8	
Selenium	-			1.2	0.1		1.2	0.1	
Silver	-			0.092	0.05	J	0.064	0.05	J
Sodium (Na)	-			61	8		60	8	
Thallium	-			0.08	0.05	J	0.074	0.05	J
Vanadium	-			12	0.1		9.1	0.1	
Zinc	-			27	1.5		20	1.5	
Other Parameters (mg/kg)									
Cyanide (CN-)	0.32	0.32	UJ	-			-		
Nitrate	38	2.1	J	-			-		
Perchlorate	0.0041	0.0041	UJ	-			-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-J25
ANALYTICAL RESULTS FOR GRID J25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	J25		
Sample Name	P3IF-SS-IS-SO-J625		
Date Collected	June 15, 2023		
	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)			
1,1,1,2-Tetrachloroethane	-		
1,1,1-Trichloroethane	-		
1,1,2,2-Tetrachloroethane	-		
1,1,2-Trichloroethane	-		
1,1-Dichloroethane	-		
1,1-Dichloroethene	-		
1,1-Dichloropropene	-		
1,2,3-Trichlorobenzene	-		
1,2,3-Trichloropropane	-		
1,2,4-Trichlorobenzene	-		
1,2,4-Trimethylbenzene	-		
1,2-Dibromo-3-chloropropane	-		
1,2-Dibromoethane	-		
1,2-Dichlorobenzene	-		
1,2-Dichloroethane	-		
1,2-Dichloropropane	-		
1,3,5-Trimethylbenzene	-		
1,3-Dichlorobenzene	-		
1,3-Dichloropropane	-		
1,4-Dichlorobenzene	-		
2,2-Dichloropropane	-		
2-Butanone	-		
2-Chlorotoluene	-		
2-Hexanone	-		
4-Chlorotoluene	-		
4-Methyl-2-pentanone	-		
Acetone	-		
Benzene	-		
Bromobenzene	-		
Bromochloromethane	-		
Bromodichloromethane	-		
Bromoform	-		
Bromomethane	-		
Carbon disulfide	-		
Carbon tetrachloride	-		
Chlorobenzene	-		
Chloroethane	-		
Chloroform	-		
Chloromethane	-		
cis-1,2-Dichloroethene	-		
cis-1,3-Dichloropropene	-		
Dibromochloromethane	-		
Dibromomethane	-		
Dichlorodifluoromethane	-		
Ethylbenzene	-		
Hexachlorobutadiene	-		
Isopropylbenzene	-		
m+p-Xylene	-		
Methyl Tertiary Butyl Ether	-		
Methylene chloride	-		
n-Butylbenzene	-		
n-Propylbenzene	-		
Naphthalene	-		
o-Xylene	-		
4-Isopropyltoluene	-		
sec-Butylbenzene	-		
Styrene	-		
tert-Butylbenzene	-		
Tetrachloroethene	-		
Toluene	-		
trans-1,2-Dichloroethene	-		
trans-1,3-Dichloropropene	-		
Trichloroethene	-		
Trichlorofluoromethane	-		
Vinyl chloride	-		
Semivolatile Organic Compounds (mg/kg)			
1,2,4-Trichlorobenzene	-		
1,2-Dichlorobenzene	-		
1,3-Dichlorobenzene	-		
1,4-Dichlorobenzene	-		
2,4,5-Trichlorophenol	-		
2,4,6-Trichlorophenol	-		
2,4-Dichlorophenol	-		
2,4-Dimethylphenol	-		
2,4-Dinitrophenol	-		
2,4-Dinitrotoluene	-		
2,6-Dinitrotoluene	-		
2-Chloronaphthalene	-		
2-Chlorophenol	-		
2-Methylnaphthalene	-		
2-Methylphenol	-		
2-Nitroaniline	-		
2-Nitrophenol	-		
3,3-Dichlorobenzidine	-		
3-Nitroaniline	-		
4,6-Dinitro-2-methylphenol	-		
4-Bromophenyl-phenylether	-		
4-Chloro-3-methylphenol	-		
4-Chloroaniline	-		

TABLE B-J25
ANALYTICAL RESULTS FOR GRID J25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	J25		
Sample Name	P3IF-SS-IS-SO-J625		
Date Collected	June 15, 2023		
Semivolatile Organic Compounds (mg/kg), continued			
4-Chlorophenyl-phenylether	-		
4-Nitroaniline	-		
4-Nitrophenol	-		
Acenaphthene	-		
Acenaphthylene	-		
Anthracene	-		
Benzo(a)anthracene	-		
Benzo(a)pyrene	-		
Benzo(b)fluoranthene	-		
Benzo(g,h,i)perylene	-		
Benzo(k)fluoranthene	-		
Benzoic acid	-		
Benzyl Alcohol	-		
Bis(2-chloro-1-methylethyl) ether	-		
Bis(2-chloroethoxy)methane	-		
Bis(2-chloroethyl)ether	-		
Bis(2-ethylhexyl)phthalate	-		
Butyl benzyl phthalate	-		
Carbazole	-		
Chrysene	-		
Di-n-butyl phthalate	-		
Di-n-octyl phthalate	-		
Dibenz(a,h)anthracene	-		
Dibenzofuran	-		
Diethyl phthalate	-		
Dimethyl phthalate	-		
Fluoranthene	-		
Fluorene	-		
Hexachlorobenzene	-		
Hexachlorobutadiene	-		
Hexachloroethane	-		
Indeno(1,2,3-cd)pyrene	-		
Isophorone	-		
n-Nitrosodimethylamine	-		
n-Nitroso-di-n-propylamine	-		
n-Nitrosodiphenylamine	-		
Naphthalene	-		
Nitrobenzene	-		
Pentachlorophenol	-		
Phenanthrene	-		
Phenol	-		
Pyrene	-		
Explosives (mg/kg)			
1,3,5-Trinitrobenzene	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	UJ
2,4,6-Trinitrotoluene	0.075	0.075	UJ
2,4-Dinitrotoluene	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	UJ
2-Nitrotoluene	0.075	0.075	UJ
3-Nitrotoluene	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	0.075	0.075	UJ
4-Nitrotoluene	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	UJ
Nitroglycerin	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)			
Aroclor 1016	-		
Aroclor 1221	-		
Aroclor 1232	-		
Aroclor 1242	-		
Aroclor 1248	-		
Aroclor 1254	-		
Aroclor 1260	-		
Dioxins/Furans (mg/kg)			
Octachlorodibenzofuran (OCDF)	-		
Octachlorodibenzo-p-dioxin (OCDD)	-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	-		

TABLE B-J25
ANALYTICAL RESULTS FOR GRID J25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	J25		
Sample Name	P3IF-SS-IS-SO-J625		
Date Collected	June 15, 2023		
Metals (mg/kg)			
Aluminum	19000	4	
Antimony	0.15	0.15	U
Arsenic	1.9	0.3	
Barium	310	0.2	
Beryllium	0.92	0.3	J
Cadmium	0.57	0.08	
Calcium (Ca)	30000	15	
Chromium	13	0.2	
Cobalt	4.7	0.08	
Copper	92	0.2	
Iron (Fe)	8900	8	
Lead	11	0.05	
Magnesium (Mg)	6900	5	
Manganese (Mn)	440	0.08	
Mercury	0.02	0.041	J
Nickel	12	0.2	
Potassium (K)	2000	8	
Selenium	0.91	0.1	
Silver	0.094	0.05	J
Sodium (Na)	61	8	
Thallium	0.071	0.05	J
Vanadium	9.9	0.1	
Zinc	24	1.5	
Other Parameters (mg/kg)			
Cyanide (CN-)	-		
Nitrate	-		
Perchlorate	-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-K22
ANALYTICAL RESULTS FOR GRID K22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	K22			K22			K22		
Sample Name	P3IF-BA-GRID-K022			P3IF-SS-IS-SO-K022			P3IF-SS-IS-SO-K522		
Date Collected	June 15, 2023			June 15, 2023			June 15, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)									
1,1,1,2-Tetrachloroethane	0.0023	0.0023	U	-			-		
1,1,1-Trichloroethane	0.0023	0.0023	U	-			-		
1,1,2,2-Tetrachloroethane	0.0023	0.0023	U	-			-		
1,1,2-Trichloroethane	0.0023	0.0023	U	-			-		
1,1-Dichloroethane	0.0023	0.0023	U	-			-		
1,1-Dichloroethene	0.0023	0.0023	U	-			-		
1,1-Dichloropropene	0.0023	0.0023	U	-			-		
1,2,3-Trichlorobenzene	0.0023	0.0023	U	-			-		
1,2,3-Trichloropropane	0.0058	0.0058	U	-			-		
1,2,4-Trichlorobenzene	0.0023	0.0023	U	-			-		
1,2,4-Trimethylbenzene	0.0023	0.0023	U	-			-		
1,2-Dibromo-3-chloropropane	0.0058	0.0058	U	-			-		
1,2-Dibromoethane	0.0023	0.0023	U	-			-		
1,2-Dichlorobenzene	0.0023	0.0023	U	-			-		
1,2-Dichloroethane	0.0023	0.0023	U	-			-		
1,2-Dichloropropane	0.0023	0.0023	U	-			-		
1,3,5-Trimethylbenzene	0.0023	0.0023	U	-			-		
1,3-Dichlorobenzene	0.0023	0.0023	U	-			-		
1,3-Dichloropropane	0.0023	0.0023	U	-			-		
1,4-Dichlorobenzene	0.0023	0.0023	U	-			-		
2,2-Dichloropropane	0.0023	0.0023	U	-			-		
2-Butanone	0.0035	0.0035	U	-			-		
2-Chlorotoluene	0.0023	0.0023	U	-			-		
2-Hexanone	0.0023	0.0023	U	-			-		
4-Chlorotoluene	0.0023	0.0023	U	-			-		
4-Methyl-2-pentanone	0.0023	0.0023	U	-			-		
Acetone	0.16	0.0058		-			-		
Benzene	0.0023	0.0023	U	-			-		
Bromobenzene	0.0023	0.0023	U	-			-		
Bromochloromethane	0.0023	0.0023	U	-			-		
Bromodichloromethane	0.0023	0.0023	U	-			-		
Bromoform	0.0023	0.0023	U	-			-		
Bromomethane	0.0023	0.0023	U	-			-		
Carbon disulfide	0.0023	0.0023	U	-			-		
Carbon tetrachloride	0.0023	0.0023	U	-			-		
Chlorobenzene	0.0023	0.0023	U	-			-		
Chloroethane	0.0023	0.0023	U	-			-		
Chloroform	0.0023	0.0023	U	-			-		
Chloromethane	0.0058	0.0058	U	-			-		
cis-1,2-Dichloroethene	0.0023	0.0023	U	-			-		
cis-1,3-Dichloropropene	0.0023	0.0023	U	-			-		
Dibromochloromethane	0.0023	0.0023	U	-			-		
Dibromomethane	0.0023	0.0023	U	-			-		
Dichlorodifluoromethane	0.0023	0.0023	U	-			-		
Ethylbenzene	0.0023	0.0023	U	-			-		
Hexachlorobutadiene	0.0023	0.0023	U	-			-		
Isopropylbenzene	0.0023	0.0023	U	-			-		
m+p-Xylene	0.0058	0.0058	U	-			-		
Methyl Tertiary Butyl Ether	0.0023	0.0023	U	-			-		
Methylene chloride	0.012	0.012	U	-			-		
n-Butylbenzene	0.0023	0.0023	U	-			-		
n-Propylbenzene	0.0023	0.0023	U	-			-		
Naphthalene	0.0023	0.0023	U	-			-		
o-Xylene	0.0029	0.0029	U	-			-		
4-Isopropyltoluene	0.0023	0.0023	U	-			-		
sec-Butylbenzene	0.0023	0.0023	U	-			-		
Styrene	0.0023	0.0023	U	-			-		
tert-Butylbenzene	0.0023	0.0023	U	-			-		
Tetrachloroethene	0.0023	0.0023	U	-			-		
Toluene	0.0023	0.0023	U	-			-		
trans-1,2-Dichloroethene	0.0023	0.0023	U	-			-		
trans-1,3-Dichloropropene	0.0023	0.0023	U	-			-		
Trichloroethene	0.0023	0.0023	U	-			-		
Trichlorofluoromethane	0.0023	0.0023	U	-			-		
Vinyl chloride	0.0023	0.0023	U	-			-		
Semivolatile Organic Compounds (mg/kg)									
1,2,4-Trichlorobenzene	0.18	0.18	U	-			-		
1,2-Dichlorobenzene	0.18	0.18	U	-			-		
1,3-Dichlorobenzene	0.18	0.18	U	-			-		
1,4-Dichlorobenzene	0.18	0.18	U	-			-		
2,4,5-Trichlorophenol	0.18	0.18	U	-			-		
2,4,6-Trichlorophenol	0.18	0.18	U	-			-		
2,4-Dichlorophenol	0.18	0.18	U	-			-		
2,4-Dimethylphenol	0.18	0.18	U	-			-		
2,4-Dinitrophenol	0.18	0.18	U	-			-		
2,4-Dinitrotoluene	0.18	0.18	U	-			-		
2,6-Dinitrotoluene	0.18	0.18	U	-			-		
2-Chloronaphthalene	0.18	0.18	U	-			-		
2-Chlorophenol	0.18	0.18	U	-			-		
2-Methylnaphthalene	0.18	0.18	U	-			-		
2-Methylphenol	0.18	0.18	U	-			-		
2-Nitroaniline	0.18	0.18	U	-			-		
2-Nitrophenol	0.18	0.18	U	-			-		
3,3-Dichlorobenzidine	0.18	0.18	U	-			-		
3-Nitroaniline	0.18	0.18	U	-			-		
4,6-Dinitro-2-methylphenol	0.18	0.18	U	-			-		
4-Bromophenyl-phenylether	0.18	0.18	U	-			-		
4-Chloro-3-methylphenol	0.18	0.18	U	-			-		
4-Chloroaniline	0.18	0.18	U	-			-		

TABLE B-K22
ANALYTICAL RESULTS FOR GRID K22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	K22			K22			K22		
Sample Name	P3IF-BA-GRID-K022			P3IF-SS-IS-SO-K022			P3IF-SS-IS-SO-K522		
Date Collected	June 15, 2023			June 15, 2023			June 15, 2023		
Semivolatile Organic Compounds (mg/kg), continued									
4-Chlorophenyl-phenylether	0.18	0.18	U	-			-		
4-Nitroaniline	0.18	0.18	U	-			-		
4-Nitrophenol	0.18	0.18	U	-			-		
Acenaphthene	0.18	0.18	U	-			-		
Acenaphthylene	0.18	0.18	U	-			-		
Anthracene	0.18	0.18	U	-			-		
Benzo(a)anthracene	0.18	0.18	U	-			-		
Benzo(a)pyrene	0.14	0.14	U	-			-		
Benzo(b)fluoranthene	0.18	0.18	U	-			-		
Benzo(g,h,i)perylene	0.18	0.18	U	-			-		
Benzo(k)fluoranthene	0.18	0.18	U	-			-		
Benzoic acid	0.18	0.18	U	-			-		
Benzyl Alcohol	0.18	0.18	U	-			-		
Bis(2-chloro-1-methylethyl) ether	0.18	0.18	U	-			-		
Bis(2-chloroethoxy)methane	0.18	0.18	U	-			-		
Bis(2-chloroethyl)ether	0.18	0.18	U	-			-		
Bis(2-ethylhexyl)phthalate	0.18	0.18	U	-			-		
Butyl benzyl phthalate	0.18	0.18	U	-			-		
Carbazole	0.18	0.18	U	-			-		
Chrysene	0.18	0.18	U	-			-		
Di-n-butyl phthalate	0.18	0.18	U	-			-		
Di-n-octyl phthalate	0.18	0.18	U	-			-		
Dibenz(a,h)anthracene	0.14	0.14	U	-			-		
Dibenzofuran	0.18	0.18	U	-			-		
Diethyl phthalate	0.18	0.18	U	-			-		
Dimethyl phthalate	0.18	0.18	U	-			-		
Fluoranthene	0.18	0.18	U	-			-		
Fluorene	0.18	0.18	U	-			-		
Hexachlorobenzene	0.18	0.18	U	-			-		
Hexachlorobutadiene	0.18	0.18	U	-			-		
Hexachloroethane	0.18	0.18	U	-			-		
Indeno(1,2,3-cd)pyrene	0.18	0.18	U	-			-		
Isophorone	0.18	0.18	U	-			-		
n-Nitroso-di-n-propylamine	0.18	0.18	U	-			-		
n-Nitrosodimethylamine	0.021	0.021	UJ	-			-		
n-Nitrosodiphenylamine	0.18	0.18	U	-			-		
Naphthalene	0.18	0.18	U	-			-		
Nitrobenzene	0.18	0.18	U	-			-		
Pentachlorophenol	0.18	0.18	U	-			-		
Phenanthrene	0.18	0.18	U	-			-		
Phenol	0.18	0.18	U	-			-		
Pyrene	0.18	0.18	U	-			-		
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
1,3-Dinitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,4,6-Trinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,4-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,6-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
3-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
4-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	-			0.075	0.075	UJ	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	-			0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
Nitroglycerin	-			0.15	0.15	UJ	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	-			0.075	0.075	UJ	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	-			0.25	0.25	UJ	0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)									
Aroclor 1016	0.021	0.021	U	-			-		
Aroclor 1221	0.021	0.021	U	-			-		
Aroclor 1232	0.011	0.011	U	-			-		
Aroclor 1242	0.011	0.011	U	-			-		
Aroclor 1248	0.011	0.011	U	-			-		
Aroclor 1254	0.011	0.011	U	-			-		
Aroclor 1260	0.011	0.011	U	-			-		
Dioxins/Furans (mg/kg)									
Octachlorodibenzofuran (OCDF)	0.00000048	0.00000048	U	-			-		
Octachlorodibenzo-p-dioxin (OCDD)	0.0000085	0.0000085	U	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.00000013	0.00000013	U	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	0.000001	0.000001	U	-			-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.00000017	0.00000017	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.00000023	0.00000023	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000012	0.00000012	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.00000022	0.00000022	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000012	0.00000012	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.00000028	0.00000028	UJ	-			-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000012	0.00000012	U	-			-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000015	0.00000015	U	-			-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.00000017	0.00000017	U	-			-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.00000029	0.00000029	UJ	-			-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000016	0.00000016	U	-			-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.00000029	0.00000029	U	-			-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.000000098	0.000000098	U	-			-		

TABLE B-K22
ANALYTICAL RESULTS FOR GRID K22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	K22			K22			K22		
Sample Name	P3IF-BA-GRID-K022			P3IF-SS-IS-SO-K022			P3IF-SS-IS-SO-K522		
Date Collected	June 15, 2023			June 15, 2023			June 15, 2023		
Metals (mg/kg)									
Aluminum	-			16000	4	J	17000	4	
Antimony	-			0.085	0.15	J	0.15	0.15	U
Arsenic	-			0.98	0.3		0.99	0.3	
Barium	-			310	0.2	J	260	0.2	
Beryllium	-			0.96	0.3	J	0.92	0.3	J
Cadmium	-			0.66	0.08		0.76	0.08	
Calcium (Ca)	-			35000	15		36000	15	
Chromium	-			11	0.2	J	12	0.2	
Cobalt	-			4	0.08	J	4.2	0.08	
Copper	-			110	0.2		140	0.2	
Iron (Fe)	-			11000	8	J	11000	8	
Lead	-			11	0.05		10	0.05	
Magnesium (Mg)	-			6300	5	J	6800	5	
Manganese (Mn)	-			460	0.08		500	0.08	
Mercury	-			0.015	0.043	J	0.015	0.042	J
Nickel	-			10	0.2	J	11	0.2	
Potassium (K)	-			1400	8		1400	8	
Selenium	-			0.98	0.1		0.76	0.1	
Silver	-			0.035	0.05	J	0.055	0.05	J
Sodium (Na)	-			54	8		58	8	
Thallium	-			0.082	0.05	J	0.066	0.05	J
Vanadium	-			7.5	0.1	J	8.3	0.1	
Zinc	-			26	1.5		24	1.5	
Other Parameters (mg/kg)									
Cyanide (CN-)	0.33	0.33	U	-			-		
Nitrate	7.1	2.1	J	-			-		
Perchlorate	0.0021	0.0021	U	-			-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-K22
ANALYTICAL RESULTS FOR GRID K22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	K22		
Sample Name	P3IF-SS-IS-SO-K622		
Date Collected	June 15, 2023		
	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)			
1,1,1,2-Tetrachloroethane	-		
1,1,1-Trichloroethane	-		
1,1,2,2-Tetrachloroethane	-		
1,1,2-Trichloroethane	-		
1,1-Dichloroethane	-		
1,1-Dichloroethene	-		
1,1-Dichloropropene	-		
1,2,3-Trichlorobenzene	-		
1,2,3-Trichloropropane	-		
1,2,4-Trichlorobenzene	-		
1,2,4-Trimethylbenzene	-		
1,2-Dibromo-3-chloropropane	-		
1,2-Dibromoethane	-		
1,2-Dichlorobenzene	-		
1,2-Dichloroethane	-		
1,2-Dichloropropane	-		
1,3,5-Trimethylbenzene	-		
1,3-Dichlorobenzene	-		
1,3-Dichloropropane	-		
1,4-Dichlorobenzene	-		
2,2-Dichloropropane	-		
2-Butanone	-		
2-Chlorotoluene	-		
2-Hexanone	-		
4-Chlorotoluene	-		
4-Methyl-2-pentanone	-		
Acetone	-		
Benzene	-		
Bromobenzene	-		
Bromochloromethane	-		
Bromodichloromethane	-		
Bromoform	-		
Bromomethane	-		
Carbon disulfide	-		
Carbon tetrachloride	-		
Chlorobenzene	-		
Chloroethane	-		
Chloroform	-		
Chloromethane	-		
cis-1,2-Dichloroethene	-		
cis-1,3-Dichloropropene	-		
Dibromochloromethane	-		
Dibromomethane	-		
Dichlorodifluoromethane	-		
Ethylbenzene	-		
Hexachlorobutadiene	-		
Isopropylbenzene	-		
m+p-Xylene	-		
Methyl Tertiary Butyl Ether	-		
Methylene chloride	-		
n-Butylbenzene	-		
n-Propylbenzene	-		
Naphthalene	-		
o-Xylene	-		
4-Isopropyltoluene	-		
sec-Butylbenzene	-		
Styrene	-		
tert-Butylbenzene	-		
Tetrachloroethene	-		
Toluene	-		
trans-1,2-Dichloroethene	-		
trans-1,3-Dichloropropene	-		
Trichloroethene	-		
Trichlorofluoromethane	-		
Vinyl chloride	-		
Semivolatile Organic Compounds (mg/kg)			
1,2,4-Trichlorobenzene	-		
1,2-Dichlorobenzene	-		
1,3-Dichlorobenzene	-		
1,4-Dichlorobenzene	-		
2,4,5-Trichlorophenol	-		
2,4,6-Trichlorophenol	-		
2,4-Dichlorophenol	-		
2,4-Dimethylphenol	-		
2,4-Dinitrophenol	-		
2,4-Dinitrotoluene	-		
2,6-Dinitrotoluene	-		
2-Chloronaphthalene	-		
2-Chlorophenol	-		
2-Methylnaphthalene	-		
2-Methylphenol	-		
2-Nitroaniline	-		
2-Nitrophenol	-		
3,3-Dichlorobenzidine	-		
3-Nitroaniline	-		
4,6-Dinitro-2-methylphenol	-		
4-Bromophenyl-phenylether	-		
4-Chloro-3-methylphenol	-		
4-Chloroaniline	-		

TABLE B-K22
ANALYTICAL RESULTS FOR GRID K22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	K22		
Sample Name	P3IF-SS-IS-SO-K622		
Date Collected	June 15, 2023		
Semivolatile Organic Compounds (mg/kg), continued			
4-Chlorophenyl-phenylether	-		
4-Nitroaniline	-		
4-Nitrophenol	-		
Acenaphthene	-		
Acenaphthylene	-		
Anthracene	-		
Benzo(a)anthracene	-		
Benzo(a)pyrene	-		
Benzo(b)fluoranthene	-		
Benzo(g,h,i)perylene	-		
Benzo(k)fluoranthene	-		
Benzoic acid	-		
Benzyl Alcohol	-		
Bis(2-chloro-1-methylethyl) ether	-		
Bis(2-chloroethoxy)methane	-		
Bis(2-chloroethyl)ether	-		
Bis(2-ethylhexyl)phthalate	-		
Butyl benzyl phthalate	-		
Carbazole	-		
Chrysene	-		
Di-n-butyl phthalate	-		
Di-n-octyl phthalate	-		
Dibenz(a,h)anthracene	-		
Dibenzofuran	-		
Diethyl phthalate	-		
Dimethyl phthalate	-		
Fluoranthene	-		
Fluorene	-		
Hexachlorobenzene	-		
Hexachlorobutadiene	-		
Hexachloroethane	-		
Indeno(1,2,3-cd)pyrene	-		
Isophorone	-		
n-Nitroso-di-n-propylamine	-		
n-Nitrosodimethylamine	-		
n-Nitrosodiphenylamine	-		
Naphthalene	-		
Nitrobenzene	-		
Pentachlorophenol	-		
Phenanthrene	-		
Phenol	-		
Pyrene	-		
Explosives (mg/kg)			
1,3,5-Trinitrobenzene	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	UJ
2,4,6-Trinitrotoluene	0.075	0.075	UJ
2,4-Dinitrotoluene	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	UJ
2-Nitrotoluene	0.075	0.075	UJ
3-Nitrotoluene	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	0.075	0.075	UJ
4-Nitrotoluene	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	UJ
Nitroglycerin	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)			
Aroclor 1016	-		
Aroclor 1221	-		
Aroclor 1232	-		
Aroclor 1242	-		
Aroclor 1248	-		
Aroclor 1254	-		
Aroclor 1260	-		
Dioxins/Furans (mg/kg)			
Octachlorodibenzofuran (OCDF)	-		
Octachlorodibenzo-p-dioxin (OCDD)	-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	-		

TABLE B-K22
ANALYTICAL RESULTS FOR GRID K22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	K22		
Sample Name	P3IF-SS-IS-SO-K622		
Date Collected	June 15, 2023		
Metals (mg/kg)			
Aluminum	33000	4	J
Antimony	0.18	0.15	J
Arsenic	1.2	0.3	
Barium	740	0.2	J
Beryllium	1.7	0.3	
Cadmium	0.99	0.08	
Calcium (Ca)	29000	15	
Chromium	19	0.2	J
Cobalt	8.2	0.08	J
Copper	140	0.2	
Iron (Fe)	23000	8	J
Lead	18	0.05	
Magnesium (Mg)	16000	5	J
Manganese (Mn)	400	0.08	
Mercury	0.016	0.041	J
Nickel	17	0.2	J
Potassium (K)	1200	8	
Selenium	1.7	0.1	
Silver	0.031	0.05	J
Sodium (Na)	59	8	
Thallium	0.062	0.05	J
Vanadium	22	0.1	J
Zinc	40	1.5	
Other Parameters (mg/kg)			
Cyanide (CN-)	-		
Nitrate	-		
Perchlorate	-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-L22
ANALYTICAL RESULTS FOR GRID L22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	L22			L22			L22		
Sample Name	P3IF-BA-GRID-L022			P3IF-SS-IS-SO-L022			P3IF-SS-IS-SO-L522		
Date Collected	June 15, 2023			June 15, 2023			June 15, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)									
1,1,1,2-Tetrachloroethane	0.0021	0.0021	U	-			-		
1,1,1-Trichloroethane	0.0021	0.0021	U	-			-		
1,1,2,2-Tetrachloroethane	0.0021	0.0021	U	-			-		
1,1,2-Trichloroethane	0.0021	0.0021	U	-			-		
1,1-Dichloroethane	0.0021	0.0021	U	-			-		
1,1-Dichloroethene	0.0021	0.0021	U	-			-		
1,1-Dichloropropene	0.0021	0.0021	U	-			-		
1,2,3-Trichlorobenzene	0.0021	0.0021	U	-			-		
1,2,3-Trichloropropane	0.0051	0.0051	U	-			-		
1,2,4-Trichlorobenzene	0.0021	0.0021	U	-			-		
1,2,4-Trimethylbenzene	0.0021	0.0021	U	-			-		
1,2-Dibromo-3-chloropropane	0.0051	0.0051	U	-			-		
1,2-Dibromoethane	0.0021	0.0021	U	-			-		
1,2-Dichlorobenzene	0.0021	0.0021	U	-			-		
1,2-Dichloroethane	0.0021	0.0021	U	-			-		
1,2-Dichloropropane	0.0021	0.0021	U	-			-		
1,3,5-Trimethylbenzene	0.0021	0.0021	U	-			-		
1,3-Dichlorobenzene	0.0021	0.0021	U	-			-		
1,3-Dichloropropane	0.0021	0.0021	U	-			-		
1,4-Dichlorobenzene	0.0021	0.0021	U	-			-		
2,2-Dichloropropane	0.0021	0.0021	U	-			-		
2-Butanone	0.0031	0.0031	U	-			-		
2-Chlorotoluene	0.0021	0.0021	U	-			-		
2-Hexanone	0.0021	0.0021	U	-			-		
4-Chlorotoluene	0.0021	0.0021	U	-			-		
4-Methyl-2-pentanone	0.0021	0.0021	U	-			-		
Acetone	0.092	0.0051		-			-		
Benzene	0.0021	0.0021	U	-			-		
Bromobenzene	0.0021	0.0021	U	-			-		
Bromochloromethane	0.0021	0.0021	U	-			-		
Bromodichloromethane	0.0021	0.0021	U	-			-		
Bromoform	0.0021	0.0021	U	-			-		
Bromomethane	0.0021	0.0021	U	-			-		
Carbon disulfide	0.0021	0.0021	U	-			-		
Carbon tetrachloride	0.0021	0.0021	U	-			-		
Chlorobenzene	0.0021	0.0021	U	-			-		
Chloroethane	0.0021	0.0021	U	-			-		
Chloroform	0.0021	0.0021	U	-			-		
Chloromethane	0.0051	0.0051	U	-			-		
cis-1,2-Dichloroethene	0.0021	0.0021	U	-			-		
cis-1,3-Dichloropropene	0.0021	0.0021	U	-			-		
Dibromochloromethane	0.0021	0.0021	U	-			-		
Dibromomethane	0.0021	0.0021	U	-			-		
Dichlorodifluoromethane	0.0021	0.0021	U	-			-		
Ethylbenzene	0.0021	0.0021	U	-			-		
Hexachlorobutadiene	0.0021	0.0021	U	-			-		
Isopropylbenzene	0.0021	0.0021	U	-			-		
m+p-Xylene	0.0051	0.0051	U	-			-		
Methyl Tertiary Butyl Ether	0.0021	0.0021	U	-			-		
Methylene chloride	0.01	0.01	U	-			-		
n-Butylbenzene	0.0021	0.0021	U	-			-		
n-Propylbenzene	0.0021	0.0021	U	-			-		
Naphthalene	0.0021	0.0021	U	-			-		
o-Xylene	0.0026	0.0026	U	-			-		
4-Isopropyltoluene	0.017	0.0021		-			-		
sec-Butylbenzene	0.0021	0.0021	U	-			-		
Styrene	0.0021	0.0021	U	-			-		
tert-Butylbenzene	0.0021	0.0021	U	-			-		
Tetrachloroethene	0.0021	0.0021	U	-			-		
Toluene	0.032	0.0021		-			-		
trans-1,2-Dichloroethene	0.0021	0.0021	U	-			-		
trans-1,3-Dichloropropene	0.0021	0.0021	U	-			-		
Trichloroethene	0.0021	0.0021	U	-			-		
Trichlorofluoromethane	0.0021	0.0021	U	-			-		
Vinyl chloride	0.0021	0.0021	U	-			-		
Semivolatile Organic Compounds (mg/kg)									
1,2,4-Trichlorobenzene	0.18	0.18	U	-			-		
1,2-Dichlorobenzene	0.18	0.18	U	-			-		
1,3-Dichlorobenzene	0.18	0.18	U	-			-		
1,4-Dichlorobenzene	0.18	0.18	U	-			-		
2,4,5-Trichlorophenol	0.18	0.18	U	-			-		
2,4,6-Trichlorophenol	0.18	0.18	U	-			-		
2,4-Dichlorophenol	0.18	0.18	U	-			-		
2,4-Dimethylphenol	0.18	0.18	U	-			-		
2,4-Dinitrophenol	0.18	0.18	U	-			-		
2,4-Dinitrotoluene	0.18	0.18	U	-			-		
2,6-Dinitrotoluene	0.18	0.18	U	-			-		
2-Chloronaphthalene	0.18	0.18	U	-			-		
2-Chlorophenol	0.18	0.18	U	-			-		
2-Methylnaphthalene	0.18	0.18	U	-			-		
2-Methylphenol	0.18	0.18	U	-			-		
2-Nitroaniline	0.18	0.18	U	-			-		
2-Nitrophenol	0.18	0.18	U	-			-		
3,3-Dichlorobenzidine	0.18	0.18	U	-			-		
3-Nitroaniline	0.18	0.18	U	-			-		
4,6-Dinitro-2-methylphenol	0.18	0.18	U	-			-		
4-Bromophenyl-phenylether	0.18	0.18	U	-			-		
4-Chloro-3-methylphenol	0.18	0.18	U	-			-		
4-Chloroaniline	0.18	0.18	U	-			-		

TABLE B-L22
ANALYTICAL RESULTS FOR GRID L22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	L22			L22			L22		
Sample Name	P3IF-BA-GRID-L022			P3IF-SS-IS-SO-L022			P3IF-SS-IS-SO-L522		
Date Collected	June 15, 2023			June 15, 2023			June 15, 2023		
Semivolatile Organic Compounds (mg/kg), continued									
4-Chlorophenyl-phenylether	0.18	0.18	U	-			-		
4-Nitroaniline	0.18	0.18	U	-			-		
4-Nitrophenol	0.18	0.18	U	-			-		
Acenaphthene	0.18	0.18	U	-			-		
Acenaphthylene	0.18	0.18	U	-			-		
Anthracene	0.18	0.18	U	-			-		
Benzo(a)anthracene	0.18	0.18	U	-			-		
Benzo(a)pyrene	0.14	0.14	U	-			-		
Benzo(b)fluoranthene	0.18	0.18	U	-			-		
Benzo(g,h,i)perylene	0.18	0.18	U	-			-		
Benzo(k)fluoranthene	0.18	0.18	U	-			-		
Benzoic acid	0.18	0.18	U	-			-		
Benzyl Alcohol	0.18	0.18	U	-			-		
Bis(2-chloro-1-methylethyl) ether	0.18	0.18	U	-			-		
Bis(2-chloroethoxy)methane	0.18	0.18	U	-			-		
Bis(2-chloroethyl)ether	0.18	0.18	U	-			-		
Bis(2-ethylhexyl)phthalate	0.18	0.18	U	-			-		
Butyl benzyl phthalate	0.18	0.18	U	-			-		
Carbazole	0.18	0.18	U	-			-		
Chrysene	0.18	0.18	U	-			-		
Di-n-butyl phthalate	0.18	0.18	U	-			-		
Di-n-octyl phthalate	0.18	0.18	U	-			-		
Dibenz(a,h)anthracene	0.14	0.14	U	-			-		
Dibenzofuran	0.18	0.18	U	-			-		
Diethyl phthalate	0.18	0.18	U	-			-		
Dimethyl phthalate	0.18	0.18	U	-			-		
Fluoranthene	0.18	0.18	U	-			-		
Fluorene	0.18	0.18	U	-			-		
Hexachlorobenzene	0.18	0.18	U	-			-		
Hexachlorobutadiene	0.18	0.18	U	-			-		
Hexachloroethane	0.18	0.18	U	-			-		
Indeno(1,2,3-cd)pyrene	0.18	0.18	U	-			-		
Isophorone	0.18	0.18	U	-			-		
n-Nitroso-di-n-propylamine	0.18	0.18	U	-			-		
n-Nitrosodimethylamine	0.021	0.021	U	-			-		
n-Nitrosodiphenylamine	0.18	0.18	U	-			-		
Naphthalene	0.18	0.18	U	-			-		
Nitrobenzene	0.18	0.18	U	-			-		
Pentachlorophenol	0.18	0.18	U	-			-		
Phenanthrene	0.18	0.18	U	-			-		
Phenol	0.18	0.18	U	-			-		
Pyrene	0.18	0.18	U	-			-		
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
1,3-Dinitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,4,6-Trinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,4-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,6-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
3-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
4-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	-			0.07	0.075	J	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	-			0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
Nitroglycerin	-			0.15	0.15	UJ	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	-			0.075	0.075	UJ	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	-			0.25	0.25	UJ	0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)									
Aroclor 1016	0.021	0.021	U	-			-		
Aroclor 1221	0.021	0.021	U	-			-		
Aroclor 1232	0.011	0.011	U	-			-		
Aroclor 1242	0.011	0.011	U	-			-		
Aroclor 1248	0.011	0.011	U	-			-		
Aroclor 1254	0.011	0.011	U	-			-		
Aroclor 1260	0.011	0.011	U	-			-		
Dioxins/Furans (mg/kg)									
Octachlorodibenzofuran (OCDF)	0.00000023	0.00000023	U	-			-		
Octachlorodibenzo-p-dioxin (OCDD)	0.0000024	0.0000024	U	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.00000012	0.00000012	U	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	0.00000079	0.00000079	J	-			-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.00000015	0.00000015	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000068	0.000000068	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000055	0.000000055	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000093	0.000000093	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000056	0.000000056	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.00000012	0.00000012	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000072	0.000000072	U	-			-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.000000096	0.000000096	U	-			-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.00000011	0.00000011	U	-			-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.00000013	0.00000013	U	-			-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.000000088	0.000000088	U	-			-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.00000015	0.00000015	U	-			-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.000000099	0.000000099	U	-			-		

TABLE B-L22
ANALYTICAL RESULTS FOR GRID L22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	L22			L22			L22		
Sample Name	P3IF-BA-GRID-L022			P3IF-SS-IS-SO-L022			P3IF-SS-IS-SO-L522		
Date Collected	June 15, 2023			June 15, 2023			June 15, 2023		
Metals (mg/kg)									
Aluminum	-			17000	4		17000	4	
Antimony	-			0.16	0.15	J	0.13	0.15	J
Arsenic	-			0.78	0.3		0.78	0.3	
Barium	-			280	0.2		290	0.2	
Beryllium	-			1	0.3		0.99	0.3	J
Cadmium	-			0.31	0.08		0.36	0.08	
Calcium (Ca)	-			41000	15		48000	15	
Chromium	-			9.5	0.2		9.5	0.2	
Cobalt	-			4.1	0.08		4	0.08	
Copper	-			57	0.2		62	0.2	
Iron (Fe)	-			9500	8		8800	8	
Lead	-			8.8	0.05		9	0.05	
Magnesium (Mg)	-			6800	5		6600	5	
Manganese (Mn)	-			580	0.08		680	0.08	
Mercury	-			0.011	0.042	J	0.012	0.042	J
Nickel	-			9.4	0.2		9.8	0.2	
Potassium (K)	-			1300	8		1400	8	
Selenium	-			1.3	0.1		0.91	0.1	
Silver	-			0.039	0.05	J	0.038	0.05	J
Sodium (Na)	-			65	8		70	8	
Thallium	-			0.061	0.05	J	0.059	0.05	J
Vanadium	-			8.6	0.1		8.4	0.1	
Zinc	-			20	1.5		18	1.5	
Other Parameters (mg/kg)									
Cyanide (CN-)	0.34	0.34	U	-			-		
Nitrate	2.1	2.1	J	-			-		
Perchlorate	0.0043	0.0043	U	-			-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-L22
ANALYTICAL RESULTS FOR GRID L22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	L22		
Sample Name	P3IF-SS-IS-SO-L622		
Date Collected	June 15, 2023		
	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)			
1,1,1,2-Tetrachloroethane	-		
1,1,1-Trichloroethane	-		
1,1,2,2-Tetrachloroethane	-		
1,1,2-Trichloroethane	-		
1,1-Dichloroethane	-		
1,1-Dichloroethene	-		
1,1-Dichloropropene	-		
1,2,3-Trichlorobenzene	-		
1,2,3-Trichloropropane	-		
1,2,4-Trichlorobenzene	-		
1,2,4-Trimethylbenzene	-		
1,2-Dibromo-3-chloropropane	-		
1,2-Dibromoethane	-		
1,2-Dichlorobenzene	-		
1,2-Dichloroethane	-		
1,2-Dichloropropane	-		
1,3,5-Trimethylbenzene	-		
1,3-Dichlorobenzene	-		
1,3-Dichloropropane	-		
1,4-Dichlorobenzene	-		
2,2-Dichloropropane	-		
2-Butanone	-		
2-Chlorotoluene	-		
2-Hexanone	-		
4-Chlorotoluene	-		
4-Methyl-2-pentanone	-		
Acetone	-		
Benzene	-		
Bromobenzene	-		
Bromochloromethane	-		
Bromodichloromethane	-		
Bromoform	-		
Bromomethane	-		
Carbon disulfide	-		
Carbon tetrachloride	-		
Chlorobenzene	-		
Chloroethane	-		
Chloroform	-		
Chloromethane	-		
cis-1,2-Dichloroethene	-		
cis-1,3-Dichloropropene	-		
Dibromochloromethane	-		
Dibromomethane	-		
Dichlorodifluoromethane	-		
Ethylbenzene	-		
Hexachlorobutadiene	-		
Isopropylbenzene	-		
m+p-Xylene	-		
Methyl Tertiary Butyl Ether	-		
Methylene chloride	-		
n-Butylbenzene	-		
n-Propylbenzene	-		
Naphthalene	-		
o-Xylene	-		
4-Isopropyltoluene	-		
sec-Butylbenzene	-		
Styrene	-		
tert-Butylbenzene	-		
Tetrachloroethene	-		
Toluene	-		
trans-1,2-Dichloroethene	-		
trans-1,3-Dichloropropene	-		
Trichloroethene	-		
Trichlorofluoromethane	-		
Vinyl chloride	-		
Semivolatile Organic Compounds (mg/kg)			
1,2,4-Trichlorobenzene	-		
1,2-Dichlorobenzene	-		
1,3-Dichlorobenzene	-		
1,4-Dichlorobenzene	-		
2,4,5-Trichlorophenol	-		
2,4,6-Trichlorophenol	-		
2,4-Dichlorophenol	-		
2,4-Dimethylphenol	-		
2,4-Dinitrophenol	-		
2,4-Dinitrotoluene	-		
2,6-Dinitrotoluene	-		
2-Chloronaphthalene	-		
2-Chlorophenol	-		
2-Methylnaphthalene	-		
2-Methylphenol	-		
2-Nitroaniline	-		
2-Nitrophenol	-		
3,3-Dichlorobenzidine	-		
3-Nitroaniline	-		
4,6-Dinitro-2-methylphenol	-		
4-Bromophenyl-phenylether	-		
4-Chloro-3-methylphenol	-		
4-Chloroaniline	-		

TABLE B-L22
ANALYTICAL RESULTS FOR GRID L22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	L22		
Sample Name	P3IF-SS-IS-SO-L622		
Date Collected	June 15, 2023		
Semivolatile Organic Compounds (mg/kg), continued			
4-Chlorophenyl-phenylether	-		
4-Nitroaniline	-		
4-Nitrophenol	-		
Acenaphthene	-		
Acenaphthylene	-		
Anthracene	-		
Benzo(a)anthracene	-		
Benzo(a)pyrene	-		
Benzo(b)fluoranthene	-		
Benzo(g,h,i)perylene	-		
Benzo(k)fluoranthene	-		
Benzoic acid	-		
Benzyl Alcohol	-		
Bis(2-chloro-1-methylethyl) ether	-		
Bis(2-chloroethoxy)methane	-		
Bis(2-chloroethyl)ether	-		
Bis(2-ethylhexyl)phthalate	-		
Butyl benzyl phthalate	-		
Carbazole	-		
Chrysene	-		
Di-n-butyl phthalate	-		
Di-n-octyl phthalate	-		
Dibenz(a,h)anthracene	-		
Dibenzofuran	-		
Diethyl phthalate	-		
Dimethyl phthalate	-		
Fluoranthene	-		
Fluorene	-		
Hexachlorobenzene	-		
Hexachlorobutadiene	-		
Hexachloroethane	-		
Indeno(1,2,3-cd)pyrene	-		
Isophorone	-		
n-Nitroso-di-n-propylamine	-		
n-Nitrosodimethylamine	-		
n-Nitrosodiphenylamine	-		
Naphthalene	-		
Nitrobenzene	-		
Pentachlorophenol	-		
Phenanthrene	-		
Phenol	-		
Pyrene	-		
Explosives (mg/kg)			
1,3,5-Trinitrobenzene	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	UJ
2,4,6-Trinitrotoluene	0.075	0.075	UJ
2,4-Dinitrotoluene	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	UJ
2-Nitrotoluene	0.075	0.075	UJ
3-Nitrotoluene	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	0.075	0.075	UJ
4-Nitrotoluene	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	UJ
Nitroglycerin	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)			
Aroclor 1016	-		
Aroclor 1221	-		
Aroclor 1232	-		
Aroclor 1242	-		
Aroclor 1248	-		
Aroclor 1254	-		
Aroclor 1260	-		
Dioxins/Furans (mg/kg)			
Octachlorodibenzofuran (OCDF)	-		
Octachlorodibenzo-p-dioxin (OCDD)	-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	-		

TABLE B-L22
ANALYTICAL RESULTS FOR GRID L22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	L22		
Sample Name	P3IF-SS-IS-SO-L622		
Date Collected	June 15, 2023		
Metals (mg/kg)			
Aluminum	21000	4	
Antimony	0.1	0.15	J
Arsenic	0.8	0.3	
Barium	330	0.2	
Beryllium	1	0.3	
Cadmium	0.46	0.08	
Calcium (Ca)	43000	15	
Chromium	13	0.2	
Cobalt	4.3	0.08	
Copper	50	0.2	
Iron (Fe)	11000	8	
Lead	9.2	0.05	
Magnesium (Mg)	7600	5	
Manganese (Mn)	610	0.08	
Mercury	0.015	0.042	J
Nickel	11	0.2	
Potassium (K)	1900	8	
Selenium	1.3	0.1	
Silver	0.049	0.05	J
Sodium (Na)	76	8	
Thallium	0.069	0.05	J
Vanadium	11	0.1	
Zinc	26	1.5	
Other Parameters (mg/kg)			
Cyanide (CN-)	-		
Nitrate	-		
Perchlorate	-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-M22
ANALYTICAL RESULTS FOR GRID M22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	M22			M22			M22		
Sample Name	P3IF-BA-GRID-M022			P3IF-SS-IS-SO-M022			P3IF-SS-IS-SO-M522		
Date Collected	June 15, 2023			June 15, 2023			June 15, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)									
1,1,1,2-Tetrachloroethane	0.0022	0.0022	U	-			-		
1,1,1-Trichloroethane	0.0022	0.0022	U	-			-		
1,1,2,2-Tetrachloroethane	0.0022	0.0022	U	-			-		
1,1,2-Trichloroethane	0.0022	0.0022	U	-			-		
1,1-Dichloroethane	0.0022	0.0022	U	-			-		
1,1-Dichloroethene	0.0022	0.0022	U	-			-		
1,1-Dichloropropene	0.0022	0.0022	U	-			-		
1,2,3-Trichlorobenzene	0.0022	0.0022	U	-			-		
1,2,3-Trichloropropane	0.0055	0.0055	U	-			-		
1,2,4-Trichlorobenzene	0.0022	0.0022	U	-			-		
1,2,4-Trimethylbenzene	0.0022	0.0022	U	-			-		
1,2-Dibromo-3-chloropropane	0.0055	0.0055	U	-			-		
1,2-Dibromoethane	0.0022	0.0022	U	-			-		
1,2-Dichlorobenzene	0.0022	0.0022	U	-			-		
1,2-Dichloroethane	0.0022	0.0022	U	-			-		
1,2-Dichloropropane	0.0022	0.0022	U	-			-		
1,3,5-Trimethylbenzene	0.0022	0.0022	U	-			-		
1,3-Dichlorobenzene	0.0022	0.0022	U	-			-		
1,3-Dichloropropane	0.0022	0.0022	U	-			-		
1,4-Dichlorobenzene	0.0022	0.0022	U	-			-		
2,2-Dichloropropane	0.0022	0.0022	U	-			-		
2-Butanone	0.081	0.0033		-			-		
2-Chlorotoluene	0.0022	0.0022	U	-			-		
2-Hexanone	0.0022	0.0022	U	-			-		
4-Chlorotoluene	0.0022	0.0022	U	-			-		
4-Methyl-2-pentanone	0.0022	0.0022	U	-			-		
Acetone	1.2	0.0055		-			-		
Benzene	0.0022	0.0022	U	-			-		
Bromobenzene	0.0022	0.0022	U	-			-		
Bromochloromethane	0.0022	0.0022	U	-			-		
Bromodichloromethane	0.0022	0.0022	U	-			-		
Bromoform	0.0022	0.0022	U	-			-		
Bromomethane	0.0022	0.0022	U	-			-		
Carbon disulfide	0.0022	0.0022	U	-			-		
Carbon tetrachloride	0.0022	0.0022	U	-			-		
Chlorobenzene	0.0022	0.0022	U	-			-		
Chloroethane	0.0022	0.0022	U	-			-		
Chloroform	0.0022	0.0022	U	-			-		
Chloromethane	0.0055	0.0055	U	-			-		
cis-1,2-Dichloroethene	0.0022	0.0022	U	-			-		
cis-1,3-Dichloropropene	0.0022	0.0022	U	-			-		
Dibromochloromethane	0.0022	0.0022	U	-			-		
Dibromomethane	0.0022	0.0022	U	-			-		
Dichlorodifluoromethane	0.0022	0.0022	U	-			-		
Ethylbenzene	0.0022	0.0022	U	-			-		
Hexachlorobutadiene	0.0022	0.0022	U	-			-		
Isopropylbenzene	0.0022	0.0022	U	-			-		
m+p-Xylene	0.0055	0.0055	U	-			-		
Methyl Tertiary Butyl Ether	0.0022	0.0022	U	-			-		
Methylene chloride	0.011	0.011	U	-			-		
n-Butylbenzene	0.0022	0.0022	U	-			-		
n-Propylbenzene	0.0022	0.0022	U	-			-		
Naphthalene	0.0022	0.0022	U	-			-		
o-Xylene	0.0028	0.0028	U	-			-		
4-Isopropyltoluene	0.0022	0.0022	U	-			-		
sec-Butylbenzene	0.0022	0.0022	U	-			-		
Styrene	0.0022	0.0022	U	-			-		
tert-Butylbenzene	0.0022	0.0022	U	-			-		
Tetrachloroethene	0.0022	0.0022	U	-			-		
Toluene	0.0022	0.0022	U	-			-		
trans-1,2-Dichloroethene	0.0022	0.0022	U	-			-		
trans-1,3-Dichloropropene	0.0022	0.0022	U	-			-		
Trichloroethene	0.0022	0.0022	U	-			-		
Trichlorofluoromethane	0.0022	0.0022	U	-			-		
Vinyl chloride	0.0022	0.0022	U	-			-		
Semivolatile Organic Compounds (mg/kg)									
1,2,4-Trichlorobenzene	0.18	0.18	U	-			-		
1,2-Dichlorobenzene	0.18	0.18	U	-			-		
1,3-Dichlorobenzene	0.18	0.18	U	-			-		
1,4-Dichlorobenzene	0.18	0.18	U	-			-		
2,4,5-Trichlorophenol	0.18	0.18	U	-			-		
2,4,6-Trichlorophenol	0.18	0.18	U	-			-		
2,4-Dichlorophenol	0.18	0.18	U	-			-		
2,4-Dimethylphenol	0.18	0.18	U	-			-		
2,4-Dinitrophenol	0.18	0.18	U	-			-		
2,4-Dinitrotoluene	0.18	0.18	U	-			-		
2,6-Dinitrotoluene	0.18	0.18	U	-			-		
2-Chloronaphthalene	0.18	0.18	U	-			-		
2-Chlorophenol	0.18	0.18	U	-			-		
2-Methylnaphthalene	0.18	0.18	U	-			-		
2-Methylphenol	0.18	0.18	U	-			-		
2-Nitroaniline	0.18	0.18	U	-			-		
2-Nitrophenol	0.18	0.18	U	-			-		
3,3-Dichlorobenzidine	0.18	0.18	U	-			-		
3-Nitroaniline	0.18	0.18	U	-			-		
4,6-Dinitro-2-methylphenol	0.18	0.18	U	-			-		
4-Bromophenyl-phenylether	0.18	0.18	U	-			-		
4-Chloro-3-methylphenol	0.18	0.18	U	-			-		
4-Chloroaniline	0.18	0.18	U	-			-		

TABLE B-M22
ANALYTICAL RESULTS FOR GRID M22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	M22			M22			M22		
Sample Name	P3IF-BA-GRID-M022			P3IF-SS-IS-SO-M022			P3IF-SS-IS-SO-M522		
Date Collected	June 15, 2023			June 15, 2023			June 15, 2023		
Semivolatile Organic Compounds (mg/kg), continued									
4-Chlorophenyl-phenylether	0.18	0.18	U	-			-		
4-Nitroaniline	0.18	0.18	U	-			-		
4-Nitrophenol	0.18	0.18	U	-			-		
Acenaphthene	0.18	0.18	U	-			-		
Acenaphthylene	0.18	0.18	U	-			-		
Anthracene	0.18	0.18	U	-			-		
Benzo(a)anthracene	0.18	0.18	U	-			-		
Benzo(a)pyrene	0.14	0.14	U	-			-		
Benzo(b)fluoranthene	0.18	0.18	U	-			-		
Benzo(g,h,i)perylene	0.18	0.18	U	-			-		
Benzo(k)fluoranthene	0.18	0.18	U	-			-		
Benzoic acid	0.18	0.18	U	-			-		
Benzyl Alcohol	0.18	0.18	U	-			-		
Bis(2-chloro-1-methylethyl) ether	0.18	0.18	U	-			-		
Bis(2-chloroethoxy)methane	0.18	0.18	U	-			-		
Bis(2-chloroethyl)ether	0.18	0.18	U	-			-		
Bis(2-ethylhexyl)phthalate	0.18	0.18	U	-			-		
Butyl benzyl phthalate	0.18	0.18	U	-			-		
Carbazole	0.18	0.18	U	-			-		
Chrysene	0.18	0.18	U	-			-		
Di-n-butyl phthalate	0.18	0.18	U	-			-		
Di-n-octyl phthalate	0.18	0.18	U	-			-		
Dibenz(a,h)anthracene	0.14	0.14	U	-			-		
Dibenzofuran	0.18	0.18	U	-			-		
Diethyl phthalate	0.18	0.18	U	-			-		
Dimethyl phthalate	0.18	0.18	U	-			-		
Fluoranthene	0.18	0.18	U	-			-		
Fluorene	0.18	0.18	U	-			-		
Hexachlorobenzene	0.18	0.18	U	-			-		
Hexachlorobutadiene	0.18	0.18	U	-			-		
Hexachloroethane	0.18	0.18	U	-			-		
Indeno(1,2,3-cd)pyrene	0.18	0.18	U	-			-		
Isophorone	0.18	0.18	U	-			-		
n-Nitroso-di-n-propylamine	0.18	0.18	U	-			-		
n-Nitrosodimethylamine	0.022	0.022	UJ	-			-		
n-Nitrosodiphenylamine	0.18	0.18	U	-			-		
Naphthalene	0.18	0.18	U	-			-		
Nitrobenzene	0.18	0.18	U	-			-		
Pentachlorophenol	0.18	0.18	U	-			-		
Phenanthrene	0.18	0.18	U	-			-		
Phenol	0.18	0.18	U	-			-		
Pyrene	0.18	0.18	U	-			-		
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
1,3-Dinitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,4,6-Trinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,4-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,6-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
3-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
4-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	-			0.075	0.075	UJ	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	-			0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
Nitroglycerin	-			0.15	0.15	UJ	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	-			0.075	0.075	UJ	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	-			0.25	0.25	UJ	0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)									
Aroclor 1016	0.022	0.022	U	-			-		
Aroclor 1221	0.022	0.022	U	-			-		
Aroclor 1232	0.011	0.011	U	-			-		
Aroclor 1242	0.011	0.011	U	-			-		
Aroclor 1248	0.011	0.011	U	-			-		
Aroclor 1254	0.011	0.011	U	-			-		
Aroclor 1260	0.011	0.011	U	-			-		
Dioxins/Furans (mg/kg)									
Octachlorodibenzofuran (OCDF)	0.0000011	0.0000011	U	-			-		
Octachlorodibenzo-p-dioxin (OCDD)	0.000012	0.000012	J	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.00000095	0.00000095	J	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	0.0000019	0.0000019	J	-			-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.00000024	0.00000024	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.00000038	0.00000038	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000023	0.00000023	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.00000021	0.00000021	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000021	0.00000021	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.00000021	0.00000021	UJ	-			-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000022	0.00000022	U	-			-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000057	0.00000057	U	-			-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.00000018	0.00000018	U	-			-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.00000024	0.00000024	UJ	-			-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000041	0.00000041	U	-			-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.00000039	0.00000039	U	-			-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.00000022	0.00000022	U	-			-		

TABLE B-M22
ANALYTICAL RESULTS FOR GRID M22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	M22			M22			M22		
Sample Name	P3IF-BA-GRID-M022			P3IF-SS-IS-SO-M022			P3IF-SS-IS-SO-M522		
Date Collected	June 15, 2023			June 15, 2023			June 15, 2023		
Metals (mg/kg)									
Aluminum	-			21000	4		22000	4	
Antimony	-			0.28	0.15		0.19	0.15	J
Arsenic	-			1.4	0.3		1.1	0.3	
Barium	-			360	0.2		340	0.2	
Beryllium	-			0.81	0.3	J	0.77	0.3	J
Cadmium	-			0.64	0.08		0.73	0.08	
Calcium (Ca)	-			42000	15		39000	15	
Chromium	-			15	0.2		16	0.2	
Cobalt	-			4.9	0.08		4.8	0.08	
Copper	-			110	0.2		150	0.2	
Iron (Fe)	-			15000	8		12000	8	
Lead	-			12	0.05		11	0.05	
Magnesium (Mg)	-			8200	5		8700	5	
Manganese (Mn)	-			740	0.08		650	0.08	
Mercury	-			0.018	0.041	J	0.016	0.042	J
Nickel	-			12	0.2		13	0.2	
Potassium (K)	-			2000	8		2000	8	
Selenium	-			1.1	0.1		0.78	0.1	
Silver	-			0.055	0.05	J	0.045	0.05	J
Sodium (Na)	-			62	8		65	8	
Thallium	-			0.063	0.05	J	0.061	0.05	J
Vanadium	-			11	0.1		12	0.1	
Zinc	-			28	1.5		28	1.5	
Other Parameters (mg/kg)									
Cyanide (CN-)	0.34	0.34	U	-			-		
Nitrate	22	2.2		-			-		
Perchlorate	0.001	0.0021	J	-			-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-M22
ANALYTICAL RESULTS FOR GRID M22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	M22		
Sample Name	P3IF-SS-IS-SO-M622		
Date Collected	June 15, 2023		
	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)			
1,1,1,2-Tetrachloroethane	-		
1,1,1-Trichloroethane	-		
1,1,2,2-Tetrachloroethane	-		
1,1,2-Trichloroethane	-		
1,1-Dichloroethane	-		
1,1-Dichloroethene	-		
1,1-Dichloropropene	-		
1,2,3-Trichlorobenzene	-		
1,2,3-Trichloropropane	-		
1,2,4-Trichlorobenzene	-		
1,2,4-Trimethylbenzene	-		
1,2-Dibromo-3-chloropropane	-		
1,2-Dibromoethane	-		
1,2-Dichlorobenzene	-		
1,2-Dichloroethane	-		
1,2-Dichloropropane	-		
1,3,5-Trimethylbenzene	-		
1,3-Dichlorobenzene	-		
1,3-Dichloropropane	-		
1,4-Dichlorobenzene	-		
2,2-Dichloropropane	-		
2-Butanone	-		
2-Chlorotoluene	-		
2-Hexanone	-		
4-Chlorotoluene	-		
4-Methyl-2-pentanone	-		
Acetone	-		
Benzene	-		
Bromobenzene	-		
Bromochloromethane	-		
Bromodichloromethane	-		
Bromoform	-		
Bromomethane	-		
Carbon disulfide	-		
Carbon tetrachloride	-		
Chlorobenzene	-		
Chloroethane	-		
Chloroform	-		
Chloromethane	-		
cis-1,2-Dichloroethene	-		
cis-1,3-Dichloropropene	-		
Dibromochloromethane	-		
Dibromomethane	-		
Dichlorodifluoromethane	-		
Ethylbenzene	-		
Hexachlorobutadiene	-		
Isopropylbenzene	-		
m+p-Xylene	-		
Methyl Tertiary Butyl Ether	-		
Methylene chloride	-		
n-Butylbenzene	-		
n-Propylbenzene	-		
Naphthalene	-		
o-Xylene	-		
4-Isopropyltoluene	-		
sec-Butylbenzene	-		
Styrene	-		
tert-Butylbenzene	-		
Tetrachloroethene	-		
Toluene	-		
trans-1,2-Dichloroethene	-		
trans-1,3-Dichloropropene	-		
Trichloroethene	-		
Trichlorofluoromethane	-		
Vinyl chloride	-		
Semivolatile Organic Compounds (mg/kg)			
1,2,4-Trichlorobenzene	-		
1,2-Dichlorobenzene	-		
1,3-Dichlorobenzene	-		
1,4-Dichlorobenzene	-		
2,4,5-Trichlorophenol	-		
2,4,6-Trichlorophenol	-		
2,4-Dichlorophenol	-		
2,4-Dimethylphenol	-		
2,4-Dinitrophenol	-		
2,4-Dinitrotoluene	-		
2,6-Dinitrotoluene	-		
2-Chloronaphthalene	-		
2-Chlorophenol	-		
2-Methylnaphthalene	-		
2-Methylphenol	-		
2-Nitroaniline	-		
2-Nitrophenol	-		
3,3-Dichlorobenzidine	-		
3-Nitroaniline	-		
4,6-Dinitro-2-methylphenol	-		
4-Bromophenyl-phenylether	-		
4-Chloro-3-methylphenol	-		
4-Chloroaniline	-		

TABLE B-M22
ANALYTICAL RESULTS FOR GRID M22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	M22		
Sample Name	P3IF-SS-IS-SO-M622		
Date Collected	June 15, 2023		
Semivolatile Organic Compounds (mg/kg), continued			
4-Chlorophenyl-phenylether	-		
4-Nitroaniline	-		
4-Nitrophenol	-		
Acenaphthene	-		
Acenaphthylene	-		
Anthracene	-		
Benzo(a)anthracene	-		
Benzo(a)pyrene	-		
Benzo(b)fluoranthene	-		
Benzo(g,h,i)perylene	-		
Benzo(k)fluoranthene	-		
Benzoic acid	-		
Benzyl Alcohol	-		
Bis(2-chloro-1-methylethyl) ether	-		
Bis(2-chloroethoxy)methane	-		
Bis(2-chloroethyl)ether	-		
Bis(2-ethylhexyl)phthalate	-		
Butyl benzyl phthalate	-		
Carbazole	-		
Chrysene	-		
Di-n-butyl phthalate	-		
Di-n-octyl phthalate	-		
Dibenz(a,h)anthracene	-		
Dibenzofuran	-		
Diethyl phthalate	-		
Dimethyl phthalate	-		
Fluoranthene	-		
Fluorene	-		
Hexachlorobenzene	-		
Hexachlorobutadiene	-		
Hexachloroethane	-		
Indeno(1,2,3-cd)pyrene	-		
Isophorone	-		
n-Nitroso-di-n-propylamine	-		
n-Nitrosodimethylamine	-		
n-Nitrosodiphenylamine	-		
Naphthalene	-		
Nitrobenzene	-		
Pentachlorophenol	-		
Phenanthrene	-		
Phenol	-		
Pyrene	-		
Explosives (mg/kg)			
1,3,5-Trinitrobenzene	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	UJ
2,4,6-Trinitrotoluene	0.075	0.075	UJ
2,4-Dinitrotoluene	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	UJ
2-Nitrotoluene	0.075	0.075	UJ
3-Nitrotoluene	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	0.075	0.075	UJ
4-Nitrotoluene	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	UJ
Nitroglycerin	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)			
Aroclor 1016	-		
Aroclor 1221	-		
Aroclor 1232	-		
Aroclor 1242	-		
Aroclor 1248	-		
Aroclor 1254	-		
Aroclor 1260	-		
Dioxins/Furans (mg/kg)			
Octachlorodibenzofuran (OCDF)	-		
Octachlorodibenzo-p-dioxin (OCDD)	-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	-		

TABLE B-M22
ANALYTICAL RESULTS FOR GRID M22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	M22		
Sample Name	P3IF-SS-IS-SO-M622		
Date Collected	June 15, 2023		
Metals (mg/kg)			
Aluminum	15000	4	
Antimony	0.099	0.15	J
Arsenic	0.92	0.3	
Barium	330	0.2	
Beryllium	0.75	0.3	J
Cadmium	0.57	0.08	
Calcium (Ca)	41000	15	
Chromium	12	0.2	
Cobalt	3.7	0.08	
Copper	120	0.2	
Iron (Fe)	10000	8	
Lead	9.8	0.05	J
Magnesium (Mg)	6100	5	J
Manganese (Mn)	640	0.08	
Mercury	0.025	0.041	J
Nickel	10	0.2	
Potassium (K)	1400	8	J
Selenium	0.93	0.1	J
Silver	0.025	0.05	J
Sodium (Na)	55	8	
Thallium	0.052	0.05	J
Vanadium	7.9	0.1	
Zinc	22	1.5	
Other Parameters (mg/kg)			
Cyanide (CN-)	-		
Nitrate	-		
Perchlorate	-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-N22
ANALYTICAL RESULTS FOR GRID N22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	N22			N22			N22		
Sample Name	P3IF-BA-GRID-N022			P3IF-SS-IS-SO-N022			P3IF-SS-IS-SO-N522		
Date Collected	June 15, 2023			June 15, 2023			June 15, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)									
1,1,1,2-Tetrachloroethane	0.0019	0.0019	U	-			-		
1,1,1-Trichloroethane	0.0019	0.0019	U	-			-		
1,1,2,2-Tetrachloroethane	0.0019	0.0019	U	-			-		
1,1,2-Trichloroethane	0.0019	0.0019	U	-			-		
1,1-Dichloroethane	0.0019	0.0019	U	-			-		
1,1-Dichloroethene	0.0019	0.0019	U	-			-		
1,1-Dichloropropene	0.0019	0.0019	U	-			-		
1,2,3-Trichlorobenzene	0.0019	0.0019	U	-			-		
1,2,3-Trichloropropane	0.0048	0.0048	U	-			-		
1,2,4-Trichlorobenzene	0.0019	0.0019	U	-			-		
1,2,4-Trimethylbenzene	0.0019	0.0019	U	-			-		
1,2-Dibromo-3-chloropropane	0.0048	0.0048	U	-			-		
1,2-Dibromoethane	0.0019	0.0019	U	-			-		
1,2-Dichlorobenzene	0.0019	0.0019	U	-			-		
1,2-Dichloroethane	0.0019	0.0019	U	-			-		
1,2-Dichloropropane	0.0019	0.0019	U	-			-		
1,3,5-Trimethylbenzene	0.0019	0.0019	U	-			-		
1,3-Dichlorobenzene	0.0019	0.0019	U	-			-		
1,3-Dichloropropane	0.0019	0.0019	U	-			-		
1,4-Dichlorobenzene	0.0019	0.0019	U	-			-		
2,2-Dichloropropane	0.0019	0.0019	U	-			-		
2-Butanone	0.0029	0.0029	U	-			-		
2-Chlorotoluene	0.0019	0.0019	U	-			-		
2-Hexanone	0.0019	0.0019	U	-			-		
4-Chlorotoluene	0.0019	0.0019	U	-			-		
4-Methyl-2-pentanone	0.0019	0.0019	U	-			-		
Acetone	0.081	0.0048		-			-		
Benzene	0.0019	0.0019	U	-			-		
Bromobenzene	0.0019	0.0019	U	-			-		
Bromochloromethane	0.0019	0.0019	U	-			-		
Bromodichloromethane	0.0019	0.0019	U	-			-		
Bromoform	0.0019	0.0019	U	-			-		
Bromomethane	0.0019	0.0019	U	-			-		
Carbon disulfide	0.0019	0.0019	U	-			-		
Carbon tetrachloride	0.0019	0.0019	U	-			-		
Chlorobenzene	0.0019	0.0019	U	-			-		
Chloroethane	0.0019	0.0019	U	-			-		
Chloroform	0.0019	0.0019	U	-			-		
Chloromethane	0.0048	0.0048	U	-			-		
cis-1,2-Dichloroethene	0.0019	0.0019	U	-			-		
cis-1,3-Dichloropropene	0.0019	0.0019	U	-			-		
Dibromochloromethane	0.0019	0.0019	U	-			-		
Dibromomethane	0.0019	0.0019	U	-			-		
Dichlorodifluoromethane	0.0019	0.0019	U	-			-		
Ethylbenzene	0.0019	0.0019	U	-			-		
Hexachlorobutadiene	0.0019	0.0019	U	-			-		
Isopropylbenzene	0.0019	0.0019	U	-			-		
m+p-Xylene	0.0048	0.0048	U	-			-		
Methyl Tertiary Butyl Ether	0.0019	0.0019	U	-			-		
Methylene chloride	0.0096	0.0096	U	-			-		
n-Butylbenzene	0.0019	0.0019	U	-			-		
n-Propylbenzene	0.0019	0.0019	U	-			-		
Naphthalene	0.0019	0.0019	U	-			-		
o-Xylene	0.0024	0.0024	U	-			-		
4-Isopropyltoluene	0.0019	0.0019	U	-			-		
sec-Butylbenzene	0.0019	0.0019	U	-			-		
Styrene	0.0019	0.0019	U	-			-		
tert-Butylbenzene	0.0019	0.0019	U	-			-		
Tetrachloroethene	0.0019	0.0019	U	-			-		
Toluene	0.0019	0.0019	U	-			-		
trans-1,2-Dichloroethene	0.0019	0.0019	U	-			-		
trans-1,3-Dichloropropene	0.0019	0.0019	U	-			-		
Trichloroethene	0.0019	0.0019	U	-			-		
Trichlorofluoromethane	0.0019	0.0019	U	-			-		
Vinyl chloride	0.0019	0.0019	U	-			-		
Semivolatile Organic Compounds (mg/kg)									
1,2,4-Trichlorobenzene	0.18	0.18	U	-			-		
1,2-Dichlorobenzene	0.18	0.18	U	-			-		
1,3-Dichlorobenzene	0.18	0.18	U	-			-		
1,4-Dichlorobenzene	0.18	0.18	U	-			-		
2,4,5-Trichlorophenol	0.18	0.18	U	-			-		
2,4,6-Trichlorophenol	0.18	0.18	U	-			-		
2,4-Dichlorophenol	0.18	0.18	U	-			-		
2,4-Dimethylphenol	0.18	0.18	U	-			-		
2,4-Dinitrophenol	0.18	0.18	U	-			-		
2,4-Dinitrotoluene	0.18	0.18	U	-			-		
2,6-Dinitrotoluene	0.18	0.18	U	-			-		
2-Chloronaphthalene	0.18	0.18	U	-			-		
2-Chlorophenol	0.18	0.18	U	-			-		
2-Methylnaphthalene	0.18	0.18	U	-			-		
2-Methylphenol	0.18	0.18	U	-			-		
2-Nitroaniline	0.18	0.18	U	-			-		
2-Nitrophenol	0.18	0.18	U	-			-		
3,3-Dichlorobenzidine	0.18	0.18	U	-			-		
3-Nitroaniline	0.18	0.18	U	-			-		
4,6-Dinitro-2-methylphenol	0.18	0.18	U	-			-		
4-Bromophenyl-phenylether	0.18	0.18	U	-			-		
4-Chloro-3-methylphenol	0.18	0.18	U	-			-		
4-Chloroaniline	0.18	0.18	U	-			-		

TABLE B-N22
ANALYTICAL RESULTS FOR GRID N22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	N22			N22			N22		
Sample Name	P3IF-BA-GRID-N022			P3IF-SS-IS-SO-N022			P3IF-SS-IS-SO-N522		
Date Collected	June 15, 2023			June 15, 2023			June 15, 2023		
Semivolatile Organic Compounds (mg/kg), continued									
4-Chlorophenyl-phenylether	0.18	0.18	U	-			-		
4-Nitroaniline	0.18	0.18	U	-			-		
4-Nitrophenol	0.18	0.18	U	-			-		
Acenaphthene	0.18	0.18	U	-			-		
Acenaphthylene	0.18	0.18	U	-			-		
Anthracene	0.18	0.18	U	-			-		
Benzo(a)anthracene	0.18	0.18	U	-			-		
Benzo(a)pyrene	0.14	0.14	U	-			-		
Benzo(b)fluoranthene	0.18	0.18	U	-			-		
Benzo(g,h,i)perylene	0.18	0.18	U	-			-		
Benzo(k)fluoranthene	0.18	0.18	U	-			-		
Benzoic acid	0.18	0.18	U	-			-		
Benzyl Alcohol	0.18	0.18	U	-			-		
Bis(2-chloro-1-methylethyl) ether	0.18	0.18	U	-			-		
Bis(2-chloroethoxy)methane	0.18	0.18	U	-			-		
Bis(2-chloroethyl)ether	0.18	0.18	U	-			-		
Bis(2-ethylhexyl)phthalate	0.18	0.18	U	-			-		
Butyl benzyl phthalate	0.18	0.18	U	-			-		
Carbazole	0.18	0.18	U	-			-		
Chrysene	0.18	0.18	U	-			-		
Di-n-butyl phthalate	0.18	0.18	U	-			-		
Di-n-octyl phthalate	0.18	0.18	U	-			-		
Dibenz(a,h)anthracene	0.14	0.14	U	-			-		
Dibenzofuran	0.18	0.18	U	-			-		
Diethyl phthalate	0.18	0.18	U	-			-		
Dimethyl phthalate	0.18	0.18	U	-			-		
Fluoranthene	0.18	0.18	U	-			-		
Fluorene	0.18	0.18	U	-			-		
Hexachlorobenzene	0.18	0.18	U	-			-		
Hexachlorobutadiene	0.18	0.18	U	-			-		
Hexachloroethane	0.18	0.18	U	-			-		
Indeno(1,2,3-cd)pyrene	0.18	0.18	U	-			-		
Isophorone	0.18	0.18	U	-			-		
n-Nitroso-di-n-propylamine	0.18	0.18	U	-			-		
n-Nitrosodimethylamine	0.021	0.021	UJ	-			-		
n-Nitrosodiphenylamine	0.18	0.18	U	-			-		
Naphthalene	0.18	0.18	U	-			-		
Nitrobenzene	0.18	0.18	U	-			-		
Pentachlorophenol	0.18	0.18	U	-			-		
Phenanthrene	0.18	0.18	U	-			-		
Phenol	0.18	0.18	U	-			-		
Pyrene	0.18	0.18	U	-			-		
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
1,3-Dinitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,4,6-Trinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,4-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,6-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
3-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
4-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	-			0.075	0.075	UJ	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	-			0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
Nitroglycerin	-			0.15	0.15	UJ	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	-			0.075	0.075	UJ	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	-			0.25	0.25	UJ	0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)									
Aroclor 1016	0.021	0.021	U	-			-		
Aroclor 1221	0.021	0.021	U	-			-		
Aroclor 1232	0.011	0.011	U	-			-		
Aroclor 1242	0.011	0.011	U	-			-		
Aroclor 1248	0.011	0.011	U	-			-		
Aroclor 1254	0.011	0.011	U	-			-		
Aroclor 1260	0.011	0.011	U	-			-		
Dioxins/Furans (mg/kg)									
Octachlorodibenzofuran (OCDF)	0.00000069	0.00000069	J	-			-		
Octachlorodibenzo-p-dioxin (OCDD)	0.000012	0.000012	J	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.00000013	0.00000013	U	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	0.0000018	0.0000018	U	-			-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.00000016	0.00000016	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.00000014	0.00000014	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000069	0.000000069	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.00000013	0.00000013	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000007	0.00000007	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.00000013	0.00000013	UJ	-			-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000013	0.00000013	U	-			-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000016	0.00000016	U	-			-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.00000011	0.00000011	U	-			-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.0000001	0.0000001	J	-			-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000016	0.00000016	U	-			-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.00000034	0.00000034	U	-			-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.00000011	0.00000011	U	-			-		

TABLE B-N22
ANALYTICAL RESULTS FOR GRID N22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	N22			N22			N22		
Sample Name	P3IF-BA-GRID-N022			P3IF-SS-IS-SO-N022			P3IF-SS-IS-SO-N522		
Date Collected	June 15, 2023			June 15, 2023			June 15, 2023		
Metals (mg/kg)									
Aluminum	-			18000	4		22000	4	
Antimony	-			0.079	0.15	J	0.15	0.15	U
Arsenic	-			0.8	0.3		0.89	0.3	
Barium	-			350	0.2		480	0.2	
Beryllium	-			1	0.3		1.5	0.3	
Cadmium	-			0.64	0.08		0.53	0.08	
Calcium (Ca)	-			45000	15		50000	15	
Chromium	-			12	0.2		14	0.2	
Cobalt	-			4.1	0.08		4.8	0.08	
Copper	-			96	0.2		98	0.2	
Iron (Fe)	-			12000	8		15000	8	
Lead	-			11	0.05		13	0.05	
Magnesium (Mg)	-			6300	5		7700	5	
Manganese (Mn)	-			690	0.08		740	0.08	
Mercury	-			0.017	0.041	J	0.017	0.042	J
Nickel	-			11	0.2		12	0.2	
Potassium (K)	-			2100	8		2400	8	
Selenium	-			1.1	0.1		1.2	0.1	
Silver	-			0.027	0.05	J	0.038	0.05	J
Sodium (Na)	-			63	8		76	8	
Thallium	-			0.075	0.05	J	0.094	0.05	J
Vanadium	-			7.8	0.1		9.9	0.1	
Zinc	-			22	1.5		25	1.5	
Other Parameters (mg/kg)									
Cyanide (CN-)	0.32	0.32	U	-			-		
Nitrate	4	2.1	J	-			-		
Perchlorate	0.0021	0.0021	U	-			-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-N22
ANALYTICAL RESULTS FOR GRID N22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	N22		
Sample Name	P3IF-SS-IS-SO-N622		
Date Collected	June 15, 2023		
	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)			
1,1,1,2-Tetrachloroethane	-		
1,1,1-Trichloroethane	-		
1,1,2,2-Tetrachloroethane	-		
1,1,2-Trichloroethane	-		
1,1-Dichloroethane	-		
1,1-Dichloroethene	-		
1,1-Dichloropropene	-		
1,2,3-Trichlorobenzene	-		
1,2,3-Trichloropropane	-		
1,2,4-Trichlorobenzene	-		
1,2,4-Trimethylbenzene	-		
1,2-Dibromo-3-chloropropane	-		
1,2-Dibromoethane	-		
1,2-Dichlorobenzene	-		
1,2-Dichloroethane	-		
1,2-Dichloropropane	-		
1,3,5-Trimethylbenzene	-		
1,3-Dichlorobenzene	-		
1,3-Dichloropropane	-		
1,4-Dichlorobenzene	-		
2,2-Dichloropropane	-		
2-Butanone	-		
2-Chlorotoluene	-		
2-Hexanone	-		
4-Chlorotoluene	-		
4-Methyl-2-pentanone	-		
Acetone	-		
Benzene	-		
Bromobenzene	-		
Bromochloromethane	-		
Bromodichloromethane	-		
Bromoform	-		
Bromomethane	-		
Carbon disulfide	-		
Carbon tetrachloride	-		
Chlorobenzene	-		
Chloroethane	-		
Chloroform	-		
Chloromethane	-		
cis-1,2-Dichloroethene	-		
cis-1,3-Dichloropropene	-		
Dibromochloromethane	-		
Dibromomethane	-		
Dichlorodifluoromethane	-		
Ethylbenzene	-		
Hexachlorobutadiene	-		
Isopropylbenzene	-		
m+p-Xylene	-		
Methyl Tertiary Butyl Ether	-		
Methylene chloride	-		
n-Butylbenzene	-		
n-Propylbenzene	-		
Naphthalene	-		
o-Xylene	-		
4-Isopropyltoluene	-		
sec-Butylbenzene	-		
Styrene	-		
tert-Butylbenzene	-		
Tetrachloroethene	-		
Toluene	-		
trans-1,2-Dichloroethene	-		
trans-1,3-Dichloropropene	-		
Trichloroethene	-		
Trichlorofluoromethane	-		
Vinyl chloride	-		
Semivolatile Organic Compounds (mg/kg)			
1,2,4-Trichlorobenzene	-		
1,2-Dichlorobenzene	-		
1,3-Dichlorobenzene	-		
1,4-Dichlorobenzene	-		
2,4,5-Trichlorophenol	-		
2,4,6-Trichlorophenol	-		
2,4-Dichlorophenol	-		
2,4-Dimethylphenol	-		
2,4-Dinitrophenol	-		
2,4-Dinitrotoluene	-		
2,6-Dinitrotoluene	-		
2-Chloronaphthalene	-		
2-Chlorophenol	-		
2-Methylnaphthalene	-		
2-Methylphenol	-		
2-Nitroaniline	-		
2-Nitrophenol	-		
3,3-Dichlorobenzidine	-		
3-Nitroaniline	-		
4,6-Dinitro-2-methylphenol	-		
4-Bromophenyl-phenylether	-		
4-Chloro-3-methylphenol	-		
4-Chloroaniline	-		

TABLE B-N22
ANALYTICAL RESULTS FOR GRID N22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	N22		
Sample Name	P3IF-SS-IS-SO-N622		
Date Collected	June 15, 2023		
Semivolatile Organic Compounds (mg/kg), continued			
4-Chlorophenyl-phenylether	-		
4-Nitroaniline	-		
4-Nitrophenol	-		
Acenaphthene	-		
Acenaphthylene	-		
Anthracene	-		
Benzo(a)anthracene	-		
Benzo(a)pyrene	-		
Benzo(b)fluoranthene	-		
Benzo(g,h,i)perylene	-		
Benzo(k)fluoranthene	-		
Benzoic acid	-		
Benzyl Alcohol	-		
Bis(2-chloro-1-methylethyl) ether	-		
Bis(2-chloroethoxy)methane	-		
Bis(2-chloroethyl)ether	-		
Bis(2-ethylhexyl)phthalate	-		
Butyl benzyl phthalate	-		
Carbazole	-		
Chrysene	-		
Di-n-butyl phthalate	-		
Di-n-octyl phthalate	-		
Dibenz(a,h)anthracene	-		
Dibenzofuran	-		
Diethyl phthalate	-		
Dimethyl phthalate	-		
Fluoranthene	-		
Fluorene	-		
Hexachlorobenzene	-		
Hexachlorobutadiene	-		
Hexachloroethane	-		
Indeno(1,2,3-cd)pyrene	-		
Isophorone	-		
n-Nitroso-di-n-propylamine	-		
n-Nitrosodimethylamine	-		
n-Nitrosodiphenylamine	-		
Naphthalene	-		
Nitrobenzene	-		
Pentachlorophenol	-		
Phenanthrene	-		
Phenol	-		
Pyrene	-		
Explosives (mg/kg)			
1,3,5-Trinitrobenzene	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	UJ
2,4,6-Trinitrotoluene	0.075	0.075	UJ
2,4-Dinitrotoluene	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	UJ
2-Nitrotoluene	0.075	0.075	UJ
3-Nitrotoluene	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	0.075	0.075	UJ
4-Nitrotoluene	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	UJ
Nitroglycerin	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)			
Aroclor 1016	-		
Aroclor 1221	-		
Aroclor 1232	-		
Aroclor 1242	-		
Aroclor 1248	-		
Aroclor 1254	-		
Aroclor 1260	-		
Dioxins/Furans (mg/kg)			
Octachlorodibenzofuran (OCDF)	-		
Octachlorodibenzo-p-dioxin (OCDD)	-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	-		

TABLE B-N22
ANALYTICAL RESULTS FOR GRID N22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	N22		
Sample Name	P3IF-SS-IS-SO-N622		
Date Collected	June 15, 2023		
Metals (mg/kg)			
Aluminum	19000	4	
Antimony	0.15	0.15	U
Arsenic	0.78	0.3	
Barium	480	0.2	
Beryllium	1.3	0.3	
Cadmium	0.46	0.08	
Calcium (Ca)	39000	15	
Chromium	11	0.2	
Cobalt	4.2	0.08	
Copper	76	0.2	
Iron (Fe)	13000	8	
Lead	12	0.05	
Magnesium (Mg)	6400	5	
Manganese (Mn)	620	0.08	
Mercury	0.019	0.042	J
Nickel	10	0.2	
Potassium (K)	1900	8	
Selenium	0.91	0.1	
Silver	0.022	0.05	J
Sodium (Na)	63	8	
Thallium	0.08	0.05	J
Vanadium	8	0.1	
Zinc	21	1.5	
Other Parameters (mg/kg)			
Cyanide (CN-)	-		
Nitrate	-		
Perchlorate	-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-O22
ANALYTICAL RESULTS FOR GRID O22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	O22			O22			O22		
Sample Name	P3IF-BA-GRID-O022			P3IF-SS-IS-SO-O022			P3IF-SS-IS-SO-O522		
Date Collected	June 16, 2023			June 16, 2023			June 16, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)									
1,1,1,2-Tetrachloroethane	0.0019	0.0019	U	-			-		
1,1,1-Trichloroethane	0.0019	0.0019	U	-			-		
1,1,2,2-Tetrachloroethane	0.0019	0.0019	U	-			-		
1,1,2-Trichloroethane	0.0019	0.0019	U	-			-		
1,1-Dichloroethane	0.0019	0.0019	U	-			-		
1,1-Dichloroethene	0.0019	0.0019	U	-			-		
1,1-Dichloropropene	0.0019	0.0019	U	-			-		
1,2,3-Trichlorobenzene	0.0019	0.0019	U	-			-		
1,2,3-Trichloropropane	0.0048	0.0048	U	-			-		
1,2,4-Trichlorobenzene	0.0019	0.0019	U	-			-		
1,2,4-Trimethylbenzene	0.0019	0.0019	U	-			-		
1,2-Dibromo-3-chloropropane	0.0048	0.0048	U	-			-		
1,2-Dibromoethane	0.0019	0.0019	U	-			-		
1,2-Dichlorobenzene	0.0019	0.0019	U	-			-		
1,2-Dichloroethane	0.0019	0.0019	U	-			-		
1,2-Dichloropropane	0.0019	0.0019	U	-			-		
1,3,5-Trimethylbenzene	0.0019	0.0019	U	-			-		
1,3-Dichlorobenzene	0.0019	0.0019	U	-			-		
1,3-Dichloropropane	0.0019	0.0019	U	-			-		
1,4-Dichlorobenzene	0.0019	0.0019	U	-			-		
2,2-Dichloropropane	0.0019	0.0019	U	-			-		
2-Butanone	0.0029	0.0029	U	-			-		
2-Chlorotoluene	0.0019	0.0019	U	-			-		
2-Hexanone	0.0019	0.0019	U	-			-		
4-Chlorotoluene	0.0019	0.0019	U	-			-		
4-Methyl-2-pentanone	0.0019	0.0019	U	-			-		
Acetone	0.11	0.0048		-			-		
Benzene	0.0024	0.0019	J	-			-		
Bromobenzene	0.0019	0.0019	U	-			-		
Bromochloromethane	0.0019	0.0019	U	-			-		
Bromodichloromethane	0.0019	0.0019	U	-			-		
Bromoform	0.0019	0.0019	U	-			-		
Bromomethane	0.0019	0.0019	U	-			-		
Carbon disulfide	0.0019	0.0019	U	-			-		
Carbon tetrachloride	0.0019	0.0019	U	-			-		
Chlorobenzene	0.0019	0.0019	U	-			-		
Chloroethane	0.0019	0.0019	U	-			-		
Chloroform	0.0019	0.0019	U	-			-		
Chloromethane	0.0048	0.0048	U	-			-		
cis-1,2-Dichloroethene	0.0019	0.0019	U	-			-		
cis-1,3-Dichloropropene	0.0019	0.0019	U	-			-		
Dibromochloromethane	0.0019	0.0019	U	-			-		
Dibromomethane	0.0019	0.0019	U	-			-		
Dichlorodifluoromethane	0.0019	0.0019	U	-			-		
Ethylbenzene	0.0019	0.0019	U	-			-		
Hexachlorobutadiene	0.0019	0.0019	U	-			-		
Isopropylbenzene	0.0019	0.0019	U	-			-		
m+p-Xylene	0.0048	0.0048	U	-			-		
Methyl Tertiary Butyl Ether	0.0019	0.0019	U	-			-		
Methylene chloride	0.0097	0.0097	U	-			-		
n-Butylbenzene	0.0019	0.0019	U	-			-		
n-Propylbenzene	0.0019	0.0019	U	-			-		
Naphthalene	0.0019	0.0019	U	-			-		
o-Xylene	0.0024	0.0024	U	-			-		
4-Isopropyltoluene	0.0019	0.0019	U	-			-		
sec-Butylbenzene	0.0019	0.0019	U	-			-		
Styrene	0.0019	0.0019	U	-			-		
tert-Butylbenzene	0.0019	0.0019	U	-			-		
Tetrachloroethene	0.0019	0.0019	U	-			-		
Toluene	0.0019	0.0019	U	-			-		
trans-1,2-Dichloroethene	0.0019	0.0019	U	-			-		
trans-1,3-Dichloropropene	0.0019	0.0019	U	-			-		
Trichloroethene	0.0019	0.0019	U	-			-		
Trichlorofluoromethane	0.0019	0.0019	U	-			-		
Vinyl chloride	0.0019	0.0019	U	-			-		
Semivolatile Organic Compounds (mg/kg)									
1,2,4-Trichlorobenzene	0.17	0.17	U	-			-		
1,2-Dichlorobenzene	0.17	0.17	U	-			-		
1,3-Dichlorobenzene	0.17	0.17	U	-			-		
1,4-Dichlorobenzene	0.17	0.17	U	-			-		
2,4,5-Trichlorophenol	0.17	0.17	U	-			-		
2,4,6-Trichlorophenol	0.17	0.17	U	-			-		
2,4-Dichlorophenol	0.17	0.17	U	-			-		
2,4-Dimethylphenol	0.17	0.17	U	-			-		
2,4-Dinitrophenol	0.17	0.17	U	-			-		
2,4-Dinitrotoluene	0.17	0.17	U	-			-		
2,6-Dinitrotoluene	0.17	0.17	U	-			-		
2-Chloronaphthalene	0.17	0.17	U	-			-		
2-Chlorophenol	0.17	0.17	U	-			-		
2-Methylnaphthalene	0.17	0.17	U	-			-		
2-Methylphenol	0.17	0.17	U	-			-		
2-Nitroaniline	0.17	0.17	U	-			-		
2-Nitrophenol	0.17	0.17	U	-			-		
3,3-Dichlorobenzidine	0.17	0.17	U	-			-		
3-Nitroaniline	0.17	0.17	U	-			-		
4,6-Dinitro-2-methylphenol	0.17	0.17	U	-			-		
4-Bromophenyl-phenylether	0.17	0.17	U	-			-		
4-Chloro-3-methylphenol	0.17	0.17	U	-			-		
4-Chloroaniline	0.17	0.17	U	-			-		

TABLE B-O22
ANALYTICAL RESULTS FOR GRID O22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	O22			O22			O22		
Sample Name	P3IF-BA-GRID-O022			P3IF-SS-IS-SO-O022			P3IF-SS-IS-SO-O522		
Date Collected	June 16, 2023			June 16, 2023			June 16, 2023		
Semivolatile Organic Compounds (mg/kg), continued									
4-Chlorophenyl-phenylether	0.17	0.17	U	-			-		
4-Nitroaniline	0.17	0.17	U	-			-		
4-Nitrophenol	0.17	0.17	U	-			-		
Acenaphthene	0.17	0.17	U	-			-		
Acenaphthylene	0.17	0.17	U	-			-		
Anthracene	0.17	0.17	U	-			-		
Benzo(a)anthracene	0.17	0.17	U	-			-		
Benzo(a)pyrene	0.13	0.13	U	-			-		
Benzo(b)fluoranthene	0.17	0.17	U	-			-		
Benzo(g,h,i)perylene	0.17	0.17	U	-			-		
Benzo(k)fluoranthene	0.17	0.17	U	-			-		
Benzoic acid	0.17	0.17	U	-			-		
Benzyl Alcohol	0.17	0.17	U	-			-		
Bis(2-chloro-1-methylethyl) ether	0.17	0.17	U	-			-		
Bis(2-chloroethoxy)methane	0.17	0.17	U	-			-		
Bis(2-chloroethyl)ether	0.17	0.17	U	-			-		
Bis(2-ethylhexyl)phthalate	0.17	0.17	U	-			-		
Butyl benzyl phthalate	0.17	0.17	U	-			-		
Carbazole	0.17	0.17	U	-			-		
Chrysene	0.17	0.17	U	-			-		
Di-n-butyl phthalate	0.17	0.17	U	-			-		
Di-n-octyl phthalate	0.17	0.17	U	-			-		
Dibenz(a,h)anthracene	0.13	0.13	U	-			-		
Dibenzofuran	0.17	0.17	U	-			-		
Diethyl phthalate	0.17	0.17	U	-			-		
Dimethyl phthalate	0.17	0.17	U	-			-		
Fluoranthene	0.17	0.17	U	-			-		
Fluorene	0.17	0.17	U	-			-		
Hexachlorobenzene	0.17	0.17	U	-			-		
Hexachlorobutadiene	0.17	0.17	U	-			-		
Hexachloroethane	0.17	0.17	U	-			-		
Indeno(1,2,3-cd)pyrene	0.17	0.17	U	-			-		
Isophorone	0.17	0.17	U	-			-		
n-Nitroso-di-n-propylamine	0.17	0.17	U	-			-		
n-Nitrosodimethylamine	0.021	0.021	UJ	-			-		
n-Nitrosodiphenylamine	0.17	0.17	U	-			-		
Naphthalene	0.17	0.17	U	-			-		
Nitrobenzene	0.17	0.17	U	-			-		
Pentachlorophenol	0.17	0.17	U	-			-		
Phenanthrene	0.17	0.17	U	-			-		
Phenol	0.17	0.17	U	-			-		
Pyrene	0.17	0.17	U	-			-		
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
1,3-Dinitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,4,6-Trinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,4-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,6-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
3-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
4-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	-			0.075	0.075	UJ	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	-			0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
Nitroglycerin	-			0.15	0.15	UJ	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	-			0.075	0.075	UJ	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	-			0.25	0.25	UJ	0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)									
Aroclor 1016	0.021	0.021	U	-			-		
Aroclor 1221	0.021	0.021	U	-			-		
Aroclor 1232	0.01	0.01	U	-			-		
Aroclor 1242	0.01	0.01	U	-			-		
Aroclor 1248	0.01	0.01	U	-			-		
Aroclor 1254	0.01	0.01	U	-			-		
Aroclor 1260	0.01	0.01	U	-			-		
Dioxins/Furans (mg/kg)									
Octachlorodibenzofuran (OCDF)	0.00000012	0.00000012	U	-			-		
Octachlorodibenzo-p-dioxin (OCDD)	0.0000027	0.0000027	U	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.000000024	0.000000024	U	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	0.000000062	0.000000062	U	-			-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.000000031	0.000000031	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000022	0.000000022	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000054	0.000000054	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000031	0.000000031	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000049	0.000000049	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.000000046	0.000000046	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000083	0.000000083	U	-			-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.000000079	0.000000079	U	-			-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.000000071	0.000000071	U	-			-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000034	0.000000034	U	-			-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.000000081	0.000000081	U	-			-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.00000019	0.00000019	U	-			-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.000000058	0.000000058	U	-			-		

TABLE B-O22
ANALYTICAL RESULTS FOR GRID O22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	O22			O22			O22		
Sample Name	P3IF-BA-GRID-O022			P3IF-SS-IS-SO-O022			P3IF-SS-IS-SO-O522		
Date Collected	June 16, 2023			June 16, 2023			June 16, 2023		
Metals (mg/kg)									
Aluminum	-			17000	4		17000	4	
Antimony	-			0.28	0.15		0.23	0.15	
Arsenic	-			1.5	0.3		1.4	0.3	
Barium	-			290	0.2		310	0.2	
Beryllium	-			0.81	0.3	J	0.81	0.3	J
Cadmium	-			1.8	0.08		1.5	0.08	
Calcium (Ca)	-			19000	15		12000	15	
Chromium	-			23	0.2		21	0.2	
Cobalt	-			4.7	0.08		4.6	0.08	
Copper	-			320	0.2		310	0.2	
Iron (Fe)	-			11000	8		11000	8	
Lead	-			15	0.05		15	0.05	
Magnesium (Mg)	-			5500	5		5300	5	
Manganese (Mn)	-			480	0.08		460	0.08	
Mercury	-			0.019	0.042	J	0.016	0.042	J
Nickel	-			16	0.2		15	0.2	
Potassium (K)	-			1800	8		1900	8	
Selenium	-			1.4	0.1		0.98	0.1	
Silver	-			0.18	0.05		0.19	0.05	
Sodium (Na)	-			63	8		60	8	
Thallium	-			0.07	0.05	J	0.068	0.05	J
Vanadium	-			15	0.1		15	0.1	
Zinc	-			33	1.5		32	1.5	
Other Parameters (mg/kg)									
Cyanide (CN-)	0.32	0.32	U	-			-		
Nitrate	3.3	2.1	J	-			-		
Perchlorate	0.0021	0.0021	U	-			-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-O22
ANALYTICAL RESULTS FOR GRID O22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	O22		
Sample Name	P3IF-SS-IS-SO-O622		
Date Collected	June 16, 2023		
	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)			
1,1,1,2-Tetrachloroethane	-		
1,1,1-Trichloroethane	-		
1,1,2,2-Tetrachloroethane	-		
1,1,2-Trichloroethane	-		
1,1-Dichloroethane	-		
1,1-Dichloroethene	-		
1,1-Dichloropropene	-		
1,2,3-Trichlorobenzene	-		
1,2,3-Trichloropropane	-		
1,2,4-Trichlorobenzene	-		
1,2,4-Trimethylbenzene	-		
1,2-Dibromo-3-chloropropane	-		
1,2-Dibromoethane	-		
1,2-Dichlorobenzene	-		
1,2-Dichloroethane	-		
1,2-Dichloropropane	-		
1,3,5-Trimethylbenzene	-		
1,3-Dichlorobenzene	-		
1,3-Dichloropropane	-		
1,4-Dichlorobenzene	-		
2,2-Dichloropropane	-		
2-Butanone	-		
2-Chlorotoluene	-		
2-Hexanone	-		
4-Chlorotoluene	-		
4-Methyl-2-pentanone	-		
Acetone	-		
Benzene	-		
Bromobenzene	-		
Bromochloromethane	-		
Bromodichloromethane	-		
Bromoform	-		
Bromomethane	-		
Carbon disulfide	-		
Carbon tetrachloride	-		
Chlorobenzene	-		
Chloroethane	-		
Chloroform	-		
Chloromethane	-		
cis-1,2-Dichloroethene	-		
cis-1,3-Dichloropropene	-		
Dibromochloromethane	-		
Dibromomethane	-		
Dichlorodifluoromethane	-		
Ethylbenzene	-		
Hexachlorobutadiene	-		
Isopropylbenzene	-		
m+p-Xylene	-		
Methyl Tertiary Butyl Ether	-		
Methylene chloride	-		
n-Butylbenzene	-		
n-Propylbenzene	-		
Naphthalene	-		
o-Xylene	-		
4-Isopropyltoluene	-		
sec-Butylbenzene	-		
Styrene	-		
tert-Butylbenzene	-		
Tetrachloroethene	-		
Toluene	-		
trans-1,2-Dichloroethene	-		
trans-1,3-Dichloropropene	-		
Trichloroethene	-		
Trichlorofluoromethane	-		
Vinyl chloride	-		
Semivolatile Organic Compounds (mg/kg)			
1,2,4-Trichlorobenzene	-		
1,2-Dichlorobenzene	-		
1,3-Dichlorobenzene	-		
1,4-Dichlorobenzene	-		
2,4,5-Trichlorophenol	-		
2,4,6-Trichlorophenol	-		
2,4-Dichlorophenol	-		
2,4-Dimethylphenol	-		
2,4-Dinitrophenol	-		
2,4-Dinitrotoluene	-		
2,6-Dinitrotoluene	-		
2-Chloronaphthalene	-		
2-Chlorophenol	-		
2-Methylnaphthalene	-		
2-Methylphenol	-		
2-Nitroaniline	-		
2-Nitrophenol	-		
3,3-Dichlorobenzidine	-		
3-Nitroaniline	-		
4,6-Dinitro-2-methylphenol	-		
4-Bromophenyl-phenylether	-		
4-Chloro-3-methylphenol	-		
4-Chloroaniline	-		

TABLE B-O22
ANALYTICAL RESULTS FOR GRID O22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	O22		
Sample Name	P3IF-SS-IS-SO-O622		
Date Collected	June 16, 2023		
Semivolatile Organic Compounds (mg/kg), continued			
4-Chlorophenyl-phenylether	-		
4-Nitroaniline	-		
4-Nitrophenol	-		
Acenaphthene	-		
Acenaphthylene	-		
Anthracene	-		
Benzo(a)anthracene	-		
Benzo(a)pyrene	-		
Benzo(b)fluoranthene	-		
Benzo(g,h,i)perylene	-		
Benzo(k)fluoranthene	-		
Benzoic acid	-		
Benzyl Alcohol	-		
Bis(2-chloro-1-methylethyl) ether	-		
Bis(2-chloroethoxy)methane	-		
Bis(2-chloroethyl)ether	-		
Bis(2-ethylhexyl)phthalate	-		
Butyl benzyl phthalate	-		
Carbazole	-		
Chrysene	-		
Di-n-butyl phthalate	-		
Di-n-octyl phthalate	-		
Dibenz(a,h)anthracene	-		
Dibenzofuran	-		
Diethyl phthalate	-		
Dimethyl phthalate	-		
Fluoranthene	-		
Fluorene	-		
Hexachlorobenzene	-		
Hexachlorobutadiene	-		
Hexachloroethane	-		
Indeno(1,2,3-cd)pyrene	-		
Isophorone	-		
n-Nitroso-di-n-propylamine	-		
n-Nitrosodimethylamine	-		
n-Nitrosodiphenylamine	-		
Naphthalene	-		
Nitrobenzene	-		
Pentachlorophenol	-		
Phenanthrene	-		
Phenol	-		
Pyrene	-		
Explosives (mg/kg)			
1,3,5-Trinitrobenzene	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	UJ
2,4,6-Trinitrotoluene	0.075	0.075	UJ
2,4-Dinitrotoluene	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	UJ
2-Nitrotoluene	0.075	0.075	UJ
3-Nitrotoluene	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	0.075	0.075	UJ
4-Nitrotoluene	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	UJ
Nitroglycerin	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)			
Aroclor 1016	-		
Aroclor 1221	-		
Aroclor 1232	-		
Aroclor 1242	-		
Aroclor 1248	-		
Aroclor 1254	-		
Aroclor 1260	-		
Dioxins/Furans (mg/kg)			
Octachlorodibenzofuran (OCDF)	-		
Octachlorodibenzo-p-dioxin (OCDD)	-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	-		

TABLE B-O22
ANALYTICAL RESULTS FOR GRID O22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	O22		
Sample Name	P3IF-SS-IS-SO-O622		
Date Collected	June 16, 2023		
Metals (mg/kg)			
Aluminum	15000	4	
Antimony	0.58	0.15	
Arsenic	1.5	0.3	
Barium	290	0.2	
Beryllium	0.76	0.3	J
Cadmium	1.5	0.08	
Calcium (Ca)	18000	15	
Chromium	20	0.2	
Cobalt	4.4	0.08	
Copper	310	0.2	
Iron (Fe)	11000	8	
Lead	16	0.05	
Magnesium (Mg)	5000	5	
Manganese (Mn)	480	0.08	
Mercury	0.02	0.042	J
Nickel	15	0.2	
Potassium (K)	1600	8	
Selenium	0.98	0.1	
Silver	0.2	0.05	
Sodium (Na)	63	8	
Thallium	0.07	0.05	J
Vanadium	13	0.1	
Zinc	34	1.5	
Other Parameters (mg/kg)			
Cyanide (CN-)	-		
Nitrate	-		
Perchlorate	-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-P22
ANALYTICAL RESULTS FOR GRID P22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	P22			P22			P22		
Sample Name	P3IF-BA-GRID-P022			P3IF-BA-GRID-P522			P3IF-SS-IS-P022		
Date Collected	June 16, 2023			June 16, 2023			June 16, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)									
1,1,1,2-Tetrachloroethane	0.002	0.002	U	0.002	0.002	U	-		
1,1,1-Trichloroethane	0.002	0.002	U	0.002	0.002	U	-		
1,1,2,2-Tetrachloroethane	0.002	0.002	U	0.002	0.002	U	-		
1,1,2-Trichloroethane	0.002	0.002	U	0.002	0.002	U	-		
1,1-Dichloroethane	0.002	0.002	U	0.002	0.002	U	-		
1,1-Dichloroethene	0.002	0.002	U	0.002	0.002	U	-		
1,1-Dichloropropene	0.002	0.002	U	0.002	0.002	U	-		
1,2,3-Trichlorobenzene	0.002	0.002	U	0.002	0.002	U	-		
1,2,3-Trichloropropane	0.0049	0.0049	U	0.0049	0.0049	U	-		
1,2,4-Trichlorobenzene	0.002	0.002	U	0.002	0.002	U	-		
1,2,4-Trimethylbenzene	0.002	0.002	U	0.002	0.002	U	-		
1,2-Dibromo-3-chloropropane	0.0049	0.0049	U	0.0049	0.0049	U	-		
1,2-Dibromoethane	0.002	0.002	U	0.002	0.002	U	-		
1,2-Dichlorobenzene	0.002	0.002	U	0.002	0.002	U	-		
1,2-Dichloroethane	0.002	0.002	U	0.002	0.002	U	-		
1,2-Dichloropropane	0.002	0.002	U	0.002	0.002	U	-		
1,3,5-Trimethylbenzene	0.002	0.002	U	0.002	0.002	U	-		
1,3-Dichlorobenzene	0.002	0.002	U	0.002	0.002	U	-		
1,3-Dichloropropane	0.002	0.002	U	0.002	0.002	U	-		
1,4-Dichlorobenzene	0.002	0.002	U	0.002	0.002	U	-		
2,2-Dichloropropane	0.002	0.002	U	0.002	0.002	U	-		
2-Butanone	0.0029	0.0029	U	0.0029	0.0029	U	-		
2-Chlorotoluene	0.002	0.002	U	0.002	0.002	U	-		
2-Hexanone	0.002	0.002	U	0.002	0.002	U	-		
4-Chlorotoluene	0.002	0.002	U	0.002	0.002	U	-		
4-Methyl-2-pentanone	0.002	0.002	U	0.002	0.002	U	-		
Acetone	0.2	0.0049		0.16	0.0049		-		
Benzene	0.002	0.002	U	0.002	0.002	U	-		
Bromobenzene	0.002	0.002	U	0.002	0.002	U	-		
Bromochloromethane	0.002	0.002	U	0.002	0.002	U	-		
Bromodichloromethane	0.002	0.002	U	0.002	0.002	U	-		
Bromoform	0.002	0.002	U	0.002	0.002	U	-		
Bromomethane	0.002	0.002	U	0.002	0.002	U	-		
Carbon disulfide	0.002	0.002	U	0.002	0.002	U	-		
Carbon tetrachloride	0.002	0.002	U	0.002	0.002	U	-		
Chlorobenzene	0.002	0.002	U	0.002	0.002	U	-		
Chloroethane	0.002	0.002	U	0.002	0.002	U	-		
Chloroform	0.002	0.002	U	0.002	0.002	U	-		
Chloromethane	0.0049	0.0049	U	0.0049	0.0049	U	-		
cis-1,2-Dichloroethene	0.002	0.002	U	0.002	0.002	U	-		
cis-1,3-Dichloropropene	0.002	0.002	U	0.002	0.002	U	-		
Dibromochloromethane	0.002	0.002	U	0.002	0.002	U	-		
Dibromomethane	0.002	0.002	U	0.002	0.002	U	-		
Dichlorodifluoromethane	0.002	0.002	U	0.002	0.002	U	-		
Ethylbenzene	0.002	0.002	U	0.002	0.002	U	-		
Hexachlorobutadiene	0.002	0.002	U	0.002	0.002	U	-		
Isopropylbenzene	0.002	0.002	U	0.002	0.002	U	-		
m+p-Xylene	0.0049	0.0049	U	0.0049	0.0049	U	-		
Methyl Tertiary Butyl Ether	0.002	0.002	U	0.002	0.002	U	-		
Methylene chloride	0.0098	0.0098	U	0.0098	0.0098	U	-		
n-Butylbenzene	0.002	0.002	U	0.002	0.002	U	-		
n-Propylbenzene	0.002	0.002	U	0.002	0.002	U	-		
Naphthalene	0.002	0.002	U	0.002	0.002	U	-		
o-Xylene	0.0024	0.0024	U	0.0024	0.0024	U	-		
4-Isopropyltoluene	0.002	0.002	U	0.002	0.002	U	-		
sec-Butylbenzene	0.002	0.002	U	0.002	0.002	U	-		
Styrene	0.002	0.002	U	0.002	0.002	U	-		
tert-Butylbenzene	0.002	0.002	U	0.002	0.002	U	-		
Tetrachloroethene	0.002	0.002	U	0.002	0.002	U	-		
Toluene	0.002	0.002	U	0.002	0.002	U	-		
trans-1,2-Dichloroethene	0.002	0.002	U	0.002	0.002	U	-		
trans-1,3-Dichloropropene	0.002	0.002	U	0.002	0.002	U	-		
Trichloroethene	0.002	0.002	U	0.002	0.002	U	-		
Trichlorofluoromethane	0.002	0.002	U	0.002	0.002	U	-		
Vinyl chloride	0.002	0.002	U	0.002	0.002	U	-		
Semivolatile Organic Compounds (mg/kg)									
1,2,4-Trichlorobenzene	0.17	0.17	U	0.19	0.19	U	-		
1,2-Dichlorobenzene	0.17	0.17	U	0.19	0.19	U	-		
1,3-Dichlorobenzene	0.17	0.17	U	0.19	0.19	U	-		
1,4-Dichlorobenzene	0.17	0.17	U	0.19	0.19	U	-		
2,4,5-Trichlorophenol	0.17	0.17	U	0.19	0.19	U	-		
2,4,6-Trichlorophenol	0.17	0.17	U	0.19	0.19	U	-		
2,4-Dichlorophenol	0.17	0.17	U	0.19	0.19	U	-		
2,4-Dimethylphenol	0.17	0.17	U	0.19	0.19	U	-		
2,4-Dinitrophenol	0.17	0.17	U	0.19	0.19	U	-		
2,4-Dinitrotoluene	0.17	0.17	U	0.19	0.19	U	-		
2,6-Dinitrotoluene	0.17	0.17	U	0.19	0.19	U	-		
2-Chloronaphthalene	0.17	0.17	U	0.19	0.19	U	-		
2-Chlorophenol	0.17	0.17	U	0.19	0.19	U	-		
2-Methylnaphthalene	0.17	0.17	U	0.19	0.19	U	-		
2-Methylphenol	0.17	0.17	U	0.19	0.19	U	-		
2-Nitroaniline	0.17	0.17	U	0.19	0.19	U	-		
2-Nitrophenol	0.17	0.17	U	0.19	0.19	U	-		
3,3-Dichlorobenzidine	0.17	0.17	U	0.19	0.19	U	-		
3-Nitroaniline	0.17	0.17	U	0.19	0.19	U	-		
4,6-Dinitro-2-methylphenol	0.17	0.17	U	0.19	0.19	U	-		
4-Bromophenyl-phenylether	0.17	0.17	U	0.19	0.19	U	-		
4-Chloro-3-methylphenol	0.17	0.17	U	0.19	0.19	U	-		
4-Chloroaniline	0.17	0.17	U	0.19	0.19	U	-		

TABLE B-P22
ANALYTICAL RESULTS FOR GRID P22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	P22			P22			P22		
Sample Name	P3IF-BA-GRID-P022			P3IF-BA-GRID-P522			P3IF-SS-IS-P022		
Date Collected	June 16, 2023			June 16, 2023			June 16, 2023		
Semivolatile Organic Compounds (mg/kg), continued									
4-Chlorophenyl-phenylether	0.17	0.17	U	0.19	0.19	U	-		
4-Nitroaniline	0.17	0.17	U	0.19	0.19	U	-		
4-Nitrophenol	0.17	0.17	U	0.19	0.19	U	-		
Acenaphthene	0.17	0.17	U	0.19	0.19	U	-		
Acenaphthylene	0.17	0.17	U	0.19	0.19	U	-		
Anthracene	0.17	0.17	U	0.19	0.19	U	-		
Benzo(a)anthracene	0.17	0.17	U	0.19	0.19	U	-		
Benzo(a)pyrene	0.14	0.14	U	0.15	0.15	U	-		
Benzo(b)fluoranthene	0.17	0.17	U	0.19	0.19	U	-		
Benzo(g,h,i)perylene	0.17	0.17	U	0.19	0.19	U	-		
Benzo(k)fluoranthene	0.17	0.17	U	0.19	0.19	U	-		
Benzoic acid	0.17	0.17	U	0.19	0.19	U	-		
Benzyl Alcohol	0.17	0.17	U	0.19	0.19	U	-		
Bis(2-chloro-1-methylethyl) ether	0.17	0.17	U	0.19	0.19	U	-		
Bis(2-chloroethoxy)methane	0.17	0.17	U	0.19	0.19	U	-		
Bis(2-chloroethyl)ether	0.17	0.17	U	0.19	0.19	U	-		
Bis(2-ethylhexyl)phthalate	0.17	0.17	U	0.19	0.19	U	-		
Butyl benzyl phthalate	0.17	0.17	U	0.19	0.19	U	-		
Carbazole	0.17	0.17	U	0.19	0.19	U	-		
Chrysene	0.17	0.17	U	0.19	0.19	U	-		
Di-n-butyl phthalate	0.17	0.17	U	0.19	0.19	U	-		
Di-n-octyl phthalate	0.17	0.17	U	0.19	0.19	U	-		
Dibenz(a,h)anthracene	0.14	0.14	U	0.15	0.15	U	-		
Dibenzofuran	0.17	0.17	U	0.19	0.19	U	-		
Diethyl phthalate	0.17	0.17	U	0.19	0.19	U	-		
Dimethyl phthalate	0.17	0.17	U	0.19	0.19	U	-		
Fluoranthene	0.17	0.17	U	0.19	0.19	U	-		
Fluorene	0.17	0.17	U	0.19	0.19	U	-		
Hexachlorobenzene	0.17	0.17	U	0.19	0.19	U	-		
Hexachlorobutadiene	0.17	0.17	U	0.19	0.19	U	-		
Hexachloroethane	0.17	0.17	U	0.19	0.19	U	-		
Indeno(1,2,3-cd)pyrene	0.17	0.17	U	0.19	0.19	U	-		
Isophorone	0.17	0.17	U	0.19	0.19	U	-		
n-Nitroso-di-n-propylamine	0.17	0.17	U	0.19	0.19	U	-		
n-Nitrosodimethylamine	0.021	0.021	UJ	0.023	0.023	UJ	-		
n-Nitrosodiphenylamine	0.17	0.17	U	0.19	0.19	U	-		
Naphthalene	0.17	0.17	U	0.19	0.19	U	-		
Nitrobenzene	0.17	0.17	U	0.19	0.19	U	-		
Pentachlorophenol	0.17	0.17	U	0.19	0.19	U	-		
Phenanthrene	0.17	0.17	U	0.19	0.19	U	-		
Phenol	0.17	0.17	U	0.19	0.19	U	-		
Pyrene	0.17	0.17	U	0.19	0.19	U	-		
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	-			-			0.075	0.075	UJ
1,3-Dinitrobenzene	-			-			0.075	0.075	UJ
2,4,6-Trinitrotoluene	-			-			0.075	0.075	UJ
2,4-Dinitrotoluene	-			-			0.075	0.075	UJ
2,6-Dinitrotoluene	-			-			0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	-			-			0.075	0.075	UJ
2-Nitrotoluene	-			-			0.075	0.075	UJ
3-Nitrotoluene	-			-			0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	-			-			0.075	0.075	UJ
4-Nitrotoluene	-			-			0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	-			-			0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	-			-			0.075	0.075	UJ
Nitrobenzene	-			-			0.075	0.075	UJ
Nitroglycerin	-			-			0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	-			-			0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	-			-			0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)									
Aroclor 1016	0.021	0.021	U	0.023	0.023	U	-		
Aroclor 1221	0.021	0.021	U	0.023	0.023	U	-		
Aroclor 1232	0.01	0.01	U	0.011	0.011	U	-		
Aroclor 1242	0.01	0.01	U	0.011	0.011	U	-		
Aroclor 1248	0.01	0.01	U	0.011	0.011	U	-		
Aroclor 1254	0.01	0.01	U	0.011	0.011	U	-		
Aroclor 1260	0.01	0.01	U	0.011	0.011	U	-		
Dioxins/Furans (mg/kg)									
Octachlorodibenzofuran (OCDF)	0.00000059	0.00000059	U	0.00000022	0.00000022	U	-		
Octachlorodibenzo-p-dioxin (OCDD)	0.000011	0.000011	J	0.00001	0.00001	J	-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.00000036	0.00000036	U	0.00000059	0.00000059	U	-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	0.00000016	0.00000016	U	0.00000029	0.00000029	U	-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.00000036	0.00000036	U	0.00000075	0.00000075	U	-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.00000014	0.00000014	U	0.00000022	0.00000022	U	-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000013	0.00000013	U	0.00000013	0.00000013	U	-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.00000013	0.00000013	U	0.0000002	0.0000002	U	-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000013	0.00000013	U	0.00000013	0.00000013	U	-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.00000017	0.00000017	UJ	0.00000025	0.00000025	UJ	-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000014	0.00000014	U	0.00000013	0.00000013	U	-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000011	0.00000011	U	0.00000016	0.00000016	U	-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.00000011	0.00000011	U	0.00000022	0.00000022	J	-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.00000014	0.00000014	UJ	0.00000021	0.00000021	UJ	-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.000000095	0.000000095	U	0.00000016	0.00000016	U	-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.00000021	0.00000021	U	0.00000042	0.00000042	U	-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.000000081	0.000000081	U	0.00000016	0.00000016	U	-		

TABLE B-P22
ANALYTICAL RESULTS FOR GRID P22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	P22			P22			P22		
Sample Name	P3IF-BA-GRID-P022			P3IF-BA-GRID-P522			P3IF-SS-IS-P022		
Date Collected	June 16, 2023			June 16, 2023			June 16, 2023		
Metals (mg/kg)									
Aluminum	-			-			38000	4	
Antimony	-			-			0.15	0.15	U
Arsenic	-			-			0.62	0.3	
Barium	-			-			210	0.2	
Beryllium	-			-			1.7	0.3	
Cadmium	-			-			0.3	0.08	
Calcium (Ca)	-			-			15000	15	
Chromium	-			-			14	0.2	
Cobalt	-			-			6.4	0.08	
Copper	-			-			62	0.2	
Iron (Fe)	-			-			18000	8	
Lead	-			-			9.6	0.05	
Magnesium (Mg)	-			-			17000	5	
Manganese (Mn)	-			-			360	0.08	
Mercury	-			-			0.044	0.044	U
Nickel	-			-			12	0.2	
Potassium (K)	-			-			1200	8	
Selenium	-			-			1.5	0.1	
Silver	-			-			0.04	0.05	J
Sodium (Na)	-			-			51	8	
Thallium	-			-			0.055	0.05	J
Vanadium	-			-			24	0.1	
Zinc	-			-			34	1.5	
Other Parameters (mg/kg)									
Cyanide (CN-)	0.32	0.32	U	0.35	0.35	U	-		
Nitrate	6.6	2.1	J	5.9	2.4	J	-		
Perchlorate	0.0021	0.0021	U	0.0023	0.0023	U	-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-P22
ANALYTICAL RESULTS FOR GRID P22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	P22			P22		
Sample Name	P3IF-SS-IS-P522			P3IF-SS-IS-P622		
Date Collected	June 16, 2023			June 16, 2023		
	Result	LOD	Qual	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)						
1,1,1,2-Tetrachloroethane	-			-		
1,1,1-Trichloroethane	-			-		
1,1,2,2-Tetrachloroethane	-			-		
1,1,2-Trichloroethane	-			-		
1,1-Dichloroethane	-			-		
1,1-Dichloroethene	-			-		
1,1-Dichloropropene	-			-		
1,2,3-Trichlorobenzene	-			-		
1,2,3-Trichloropropane	-			-		
1,2,4-Trichlorobenzene	-			-		
1,2,4-Trimethylbenzene	-			-		
1,2-Dibromo-3-chloropropane	-			-		
1,2-Dibromoethane	-			-		
1,2-Dichlorobenzene	-			-		
1,2-Dichloroethane	-			-		
1,2-Dichloropropane	-			-		
1,3,5-Trimethylbenzene	-			-		
1,3-Dichlorobenzene	-			-		
1,3-Dichloropropane	-			-		
1,4-Dichlorobenzene	-			-		
2,2-Dichloropropane	-			-		
2-Butanone	-			-		
2-Chlorotoluene	-			-		
2-Hexanone	-			-		
4-Chlorotoluene	-			-		
4-Methyl-2-pentanone	-			-		
Acetone	-			-		
Benzene	-			-		
Bromobenzene	-			-		
Bromochloromethane	-			-		
Bromodichloromethane	-			-		
Bromoform	-			-		
Bromomethane	-			-		
Carbon disulfide	-			-		
Carbon tetrachloride	-			-		
Chlorobenzene	-			-		
Chloroethane	-			-		
Chloroform	-			-		
Chloromethane	-			-		
cis-1,2-Dichloroethene	-			-		
cis-1,3-Dichloropropene	-			-		
Dibromochloromethane	-			-		
Dibromomethane	-			-		
Dichlorodifluoromethane	-			-		
Ethylbenzene	-			-		
Hexachlorobutadiene	-			-		
Isopropylbenzene	-			-		
m+p-Xylene	-			-		
Methyl Tertiary Butyl Ether	-			-		
Methylene chloride	-			-		
n-Butylbenzene	-			-		
n-Propylbenzene	-			-		
Naphthalene	-			-		
o-Xylene	-			-		
4-Isopropyltoluene	-			-		
sec-Butylbenzene	-			-		
Styrene	-			-		
tert-Butylbenzene	-			-		
Tetrachloroethene	-			-		
Toluene	-			-		
trans-1,2-Dichloroethene	-			-		
trans-1,3-Dichloropropene	-			-		
Trichloroethene	-			-		
Trichlorofluoromethane	-			-		
Vinyl chloride	-			-		
Semivolatile Organic Compounds (mg/kg)						
1,2,4-Trichlorobenzene	-			-		
1,2-Dichlorobenzene	-			-		
1,3-Dichlorobenzene	-			-		
1,4-Dichlorobenzene	-			-		
2,4,5-Trichlorophenol	-			-		
2,4,6-Trichlorophenol	-			-		
2,4-Dichlorophenol	-			-		
2,4-Dimethylphenol	-			-		
2,4-Dinitrophenol	-			-		
2,4-Dinitrotoluene	-			-		
2,6-Dinitrotoluene	-			-		
2-Chloronaphthalene	-			-		
2-Chlorophenol	-			-		
2-Methylnaphthalene	-			-		
2-Methylphenol	-			-		
2-Nitroaniline	-			-		
2-Nitrophenol	-			-		
3,3-Dichlorobenzidine	-			-		
3-Nitroaniline	-			-		
4,6-Dinitro-2-methylphenol	-			-		
4-Bromophenyl-phenylether	-			-		
4-Chloro-3-methylphenol	-			-		
4-Chloroaniline	-			-		

TABLE B-P22
ANALYTICAL RESULTS FOR GRID P22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	P22			P22		
Sample Name	P3IF-SS-IS-P522			P3IF-SS-IS-P622		
Date Collected	June 16, 2023			June 16, 2023		
Semivolatile Organic Compounds (mg/kg), continued						
4-Chlorophenyl-phenylether	-			-		
4-Nitroaniline	-			-		
4-Nitrophenol	-			-		
Acenaphthene	-			-		
Acenaphthylene	-			-		
Anthracene	-			-		
Benzo(a)anthracene	-			-		
Benzo(a)pyrene	-			-		
Benzo(b)fluoranthene	-			-		
Benzo(g,h,i)perylene	-			-		
Benzo(k)fluoranthene	-			-		
Benzoic acid	-			-		
Benzyl Alcohol	-			-		
Bis(2-chloro-1-methylethyl) ether	-			-		
Bis(2-chloroethoxy)methane	-			-		
Bis(2-chloroethyl)ether	-			-		
Bis(2-ethylhexyl)phthalate	-			-		
Butyl benzyl phthalate	-			-		
Carbazole	-			-		
Chrysene	-			-		
Di-n-butyl phthalate	-			-		
Di-n-octyl phthalate	-			-		
Dibenz(a,h)anthracene	-			-		
Dibenzofuran	-			-		
Diethyl phthalate	-			-		
Dimethyl phthalate	-			-		
Fluoranthene	-			-		
Fluorene	-			-		
Hexachlorobenzene	-			-		
Hexachlorobutadiene	-			-		
Hexachloroethane	-			-		
Indeno(1,2,3-cd)pyrene	-			-		
Isophorone	-			-		
n-Nitroso-di-n-propylamine	-			-		
n-Nitrosodimethylamine	-			-		
n-Nitrosodiphenylamine	-			-		
Naphthalene	-			-		
Nitrobenzene	-			-		
Pentachlorophenol	-			-		
Phenanthrene	-			-		
Phenol	-			-		
Pyrene	-			-		
Explosives (mg/kg)						
1,3,5-Trinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ
2,4,6-Trinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ
2,4-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ
2-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ
3-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ
4-Nitrotoluene	0.075	0.075	UJ	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	UJ	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	UJ	0.075	0.075	UJ
Nitroglycerin	0.15	0.15	UJ	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	UJ	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.25	0.25	UJ	0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)						
Aroclor 1016	-			-		
Aroclor 1221	-			-		
Aroclor 1232	-			-		
Aroclor 1242	-			-		
Aroclor 1248	-			-		
Aroclor 1254	-			-		
Aroclor 1260	-			-		
Dioxins/Furans (mg/kg)						
Octachlorodibenzofuran (OCDF)	-			-		
Octachlorodibenzo-p-dioxin (OCDD)	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	-			-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	-			-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	-			-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-			-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	-			-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-			-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	-			-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	-			-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	-			-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	-			-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	-			-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	-			-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	-			-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	-			-		

TABLE B-P22
ANALYTICAL RESULTS FOR GRID P22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	P22			P22		
Sample Name	P3IF-SS-IS-P522			P3IF-SS-IS-P622		
Date Collected	June 16, 2023			June 16, 2023		
Metals (mg/kg)						
Aluminum	35000	4		38000	4	
Antimony	0.17	0.15	J	0.15	0.15	U
Arsenic	0.63	0.3		0.67	0.3	
Barium	250	0.2		260	0.2	
Beryllium	1.8	0.3		1.7	0.3	
Cadmium	0.29	0.08		0.32	0.08	
Calcium (Ca)	19000	15		19000	15	
Chromium	13	0.2		14	0.2	
Cobalt	6.2	0.08		6.5	0.08	
Copper	55	0.2		72	0.2	
Iron (Fe)	17000	8		19000	8	
Lead	9.1	0.05		10	0.05	
Magnesium (Mg)	16000	5		17000	5	
Manganese (Mn)	400	0.08		430	0.08	
Mercury	0.012	0.042	J	0.012	0.045	J
Nickel	11	0.2		12	0.2	
Potassium (K)	1100	8		1300	8	
Selenium	1	0.1		1.3	0.1	
Silver	0.055	0.05	J	0.057	0.05	J
Sodium (Na)	49	8		68	8	
Thallium	0.059	0.05	J	0.062	0.05	J
Vanadium	22	0.1		24	0.1	
Zinc	29	1.5		39	1.5	
Other Parameters (mg/kg)						
Cyanide (CN-)	-			-		
Nitrate	-			-		
Perchlorate	-			-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-Q22
ANALYTICAL RESULTS FOR GRID Q22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	Q22			Q22			Q22		
Sample Name	P3IF-BA-GRID-Q022			P3IF-SS-IS-SO-Q022			P3IF-SS-IS-SO-Q522		
Date Collected	June 16, 2023			June 16, 2023			June 16, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)									
1,1,1,2-Tetrachloroethane	0.0022	0.0022	U	-			-		
1,1,1-Trichloroethane	0.0022	0.0022	U	-			-		
1,1,2,2-Tetrachloroethane	0.0022	0.0022	U	-			-		
1,1,2-Trichloroethane	0.0022	0.0022	U	-			-		
1,1-Dichloroethane	0.0022	0.0022	U	-			-		
1,1-Dichloroethene	0.0022	0.0022	U	-			-		
1,1-Dichloropropene	0.0022	0.0022	U	-			-		
1,2,3-Trichlorobenzene	0.0022	0.0022	U	-			-		
1,2,3-Trichloropropane	0.0056	0.0056	U	-			-		
1,2,4-Trichlorobenzene	0.0022	0.0022	U	-			-		
1,2,4-Trimethylbenzene	0.0022	0.0022	U	-			-		
1,2-Dibromo-3-chloropropane	0.0056	0.0056	U	-			-		
1,2-Dibromoethane	0.0022	0.0022	U	-			-		
1,2-Dichlorobenzene	0.0022	0.0022	U	-			-		
1,2-Dichloroethane	0.0022	0.0022	U	-			-		
1,2-Dichloropropane	0.0022	0.0022	U	-			-		
1,3,5-Trimethylbenzene	0.0022	0.0022	U	-			-		
1,3-Dichlorobenzene	0.0022	0.0022	U	-			-		
1,3-Dichloropropane	0.0022	0.0022	U	-			-		
1,4-Dichlorobenzene	0.0022	0.0022	U	-			-		
2,2-Dichloropropane	0.0022	0.0022	U	-			-		
2-Butanone	0.0034	0.0034	U	-			-		
2-Chlorotoluene	0.0022	0.0022	U	-			-		
2-Hexanone	0.0022	0.0022	U	-			-		
4-Chlorotoluene	0.0022	0.0022	U	-			-		
4-Methyl-2-pentanone	0.0022	0.0022	U	-			-		
Acetone	0.17	0.0056		-			-		
Benzene	0.0022	0.0022	U	-			-		
Bromobenzene	0.0022	0.0022	U	-			-		
Bromochloromethane	0.0022	0.0022	U	-			-		
Bromodichloromethane	0.0022	0.0022	U	-			-		
Bromoform	0.0022	0.0022	U	-			-		
Bromomethane	0.0022	0.0022	U	-			-		
Carbon disulfide	0.0022	0.0022	U	-			-		
Carbon tetrachloride	0.0022	0.0022	U	-			-		
Chlorobenzene	0.0022	0.0022	U	-			-		
Chloroethane	0.0022	0.0022	U	-			-		
Chloroform	0.0022	0.0022	U	-			-		
Chloromethane	0.0056	0.0056	U	-			-		
cis-1,2-Dichloroethene	0.0022	0.0022	U	-			-		
cis-1,3-Dichloropropene	0.0022	0.0022	U	-			-		
Dibromochloromethane	0.0022	0.0022	U	-			-		
Dibromomethane	0.0022	0.0022	U	-			-		
Dichlorodifluoromethane	0.0022	0.0022	U	-			-		
Ethylbenzene	0.0022	0.0022	U	-			-		
Hexachlorobutadiene	0.0022	0.0022	U	-			-		
Isopropylbenzene	0.0022	0.0022	U	-			-		
m+p-Xylene	0.0056	0.0056	U	-			-		
Methyl Tertiary Butyl Ether	0.0022	0.0022	U	-			-		
Methylene chloride	0.011	0.011	U	-			-		
n-Butylbenzene	0.0022	0.0022	U	-			-		
n-Propylbenzene	0.0022	0.0022	U	-			-		
Naphthalene	0.0022	0.0022	U	-			-		
o-Xylene	0.0028	0.0028	U	-			-		
4-Isopropyltoluene	0.0022	0.0022	U	-			-		
sec-Butylbenzene	0.0022	0.0022	U	-			-		
Styrene	0.0022	0.0022	U	-			-		
tert-Butylbenzene	0.0022	0.0022	U	-			-		
Tetrachloroethene	0.0022	0.0022	U	-			-		
Toluene	0.0022	0.0022	U	-			-		
trans-1,2-Dichloroethene	0.0022	0.0022	U	-			-		
trans-1,3-Dichloropropene	0.0022	0.0022	U	-			-		
Trichloroethene	0.0022	0.0022	U	-			-		
Trichlorofluoromethane	0.0022	0.0022	U	-			-		
Vinyl chloride	0.0022	0.0022	U	-			-		
Semivolatile Organic Compounds (mg/kg)									
1,2,4-Trichlorobenzene	0.18	0.18	U	-			-		
1,2-Dichlorobenzene	0.18	0.18	U	-			-		
1,3-Dichlorobenzene	0.18	0.18	U	-			-		
1,4-Dichlorobenzene	0.18	0.18	U	-			-		
2,4,5-Trichlorophenol	0.18	0.18	U	-			-		
2,4,6-Trichlorophenol	0.18	0.18	U	-			-		
2,4-Dichlorophenol	0.18	0.18	U	-			-		
2,4-Dimethylphenol	0.18	0.18	U	-			-		
2,4-Dinitrophenol	0.18	0.18	U	-			-		
2,4-Dinitrotoluene	0.18	0.18	U	-			-		
2,6-Dinitrotoluene	0.18	0.18	U	-			-		
2-Chloronaphthalene	0.18	0.18	U	-			-		
2-Chlorophenol	0.18	0.18	U	-			-		
2-Methylnaphthalene	0.18	0.18	U	-			-		
2-Methylphenol	0.18	0.18	U	-			-		
2-Nitroaniline	0.18	0.18	U	-			-		
2-Nitrophenol	0.18	0.18	U	-			-		
3,3-Dichlorobenzidine	0.18	0.18	U	-			-		
3-Nitroaniline	0.18	0.18	U	-			-		
4,6-Dinitro-2-methylphenol	0.18	0.18	U	-			-		
4-Bromophenyl-phenylether	0.18	0.18	U	-			-		
4-Chloro-3-methylphenol	0.18	0.18	U	-			-		
4-Chloroaniline	0.18	0.18	U	-			-		

TABLE B-Q22
ANALYTICAL RESULTS FOR GRID Q22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	Q22			Q22			Q22		
Sample Name	P3IF-BA-GRID-Q022			P3IF-SS-IS-SO-Q022			P3IF-SS-IS-SO-Q522		
Date Collected	June 16, 2023			June 16, 2023			June 16, 2023		
Semivolatile Organic Compounds (mg/kg), continued									
4-Chlorophenyl-phenylether	0.18	0.18	U	-			-		
4-Nitroaniline	0.18	0.18	U	-			-		
4-Nitrophenol	0.18	0.18	U	-			-		
Acenaphthene	0.18	0.18	U	-			-		
Acenaphthylene	0.18	0.18	U	-			-		
Anthracene	0.18	0.18	U	-			-		
Benzo(a)anthracene	0.18	0.18	U	-			-		
Benzo(a)pyrene	0.14	0.14	U	-			-		
Benzo(b)fluoranthene	0.18	0.18	U	-			-		
Benzo(g,h,i)perylene	0.18	0.18	U	-			-		
Benzo(k)fluoranthene	0.18	0.18	U	-			-		
Benzoic acid	0.18	0.18	U	-			-		
Benzyl Alcohol	0.18	0.18	U	-			-		
Bis(2-chloro-1-methylethyl) ether	0.18	0.18	U	-			-		
Bis(2-chloroethoxy)methane	0.18	0.18	U	-			-		
Bis(2-chloroethyl)ether	0.18	0.18	U	-			-		
Bis(2-ethylhexyl)phthalate	0.18	0.18	U	-			-		
Butyl benzyl phthalate	0.18	0.18	U	-			-		
Carbazole	0.18	0.18	U	-			-		
Chrysene	0.18	0.18	U	-			-		
Di-n-butyl phthalate	0.18	0.18	U	-			-		
Di-n-octyl phthalate	0.18	0.18	U	-			-		
Dibenz(a,h)anthracene	0.14	0.14	U	-			-		
Dibenzofuran	0.18	0.18	U	-			-		
Diethyl phthalate	0.18	0.18	U	-			-		
Dimethyl phthalate	0.18	0.18	U	-			-		
Fluoranthene	0.18	0.18	U	-			-		
Fluorene	0.18	0.18	U	-			-		
Hexachlorobenzene	0.18	0.18	U	-			-		
Hexachlorobutadiene	0.18	0.18	U	-			-		
Hexachloroethane	0.18	0.18	U	-			-		
Indeno(1,2,3-cd)pyrene	0.18	0.18	U	-			-		
Isophorone	0.18	0.18	U	-			-		
n-Nitroso-di-n-propylamine	0.18	0.18	U	-			-		
n-Nitrosodimethylamine	0.021	0.021	UJ	-			-		
n-Nitrosodiphenylamine	0.18	0.18	U	-			-		
Naphthalene	0.18	0.18	U	-			-		
Nitrobenzene	0.18	0.18	U	-			-		
Pentachlorophenol	0.18	0.18	U	-			-		
Phenanthrene	0.18	0.18	U	-			-		
Phenol	0.18	0.18	U	-			-		
Pyrene	0.18	0.18	U	-			-		
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
1,3-Dinitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,4,6-Trinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,4-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,6-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
3-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
4-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	-			0.075	0.075	UJ	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	-			0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
Nitroglycerin	-			0.15	0.15	UJ	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	-			0.075	0.075	UJ	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	-			0.25	0.25	UJ	0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)									
Aroclor 1016	0.021	0.021	U	-			-		
Aroclor 1221	0.021	0.021	U	-			-		
Aroclor 1232	0.011	0.011	U	-			-		
Aroclor 1242	0.011	0.011	U	-			-		
Aroclor 1248	0.011	0.011	U	-			-		
Aroclor 1254	0.011	0.011	U	-			-		
Aroclor 1260	0.011	0.011	U	-			-		
Dioxins/Furans (mg/kg)									
Octachlorodibenzofuran (OCDF)	0.00000013	0.00000013	U	-			-		
Octachlorodibenzo-p-dioxin (OCDD)	0.000004	0.000004	U	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.000000084	0.000000084	U	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	0.00000066	0.00000066	U	-			-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.00000011	0.00000011	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000063	0.000000063	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000053	0.000000053	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000059	0.000000059	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000087	0.000000087	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.000000077	0.000000077	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000037	0.000000037	U	-			-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.000000075	0.000000075	U	-			-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.000000047	0.000000047	U	-			-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000083	0.000000083	U	-			-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.000000078	0.000000078	U	-			-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.00000018	0.00000018	U	-			-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.000000037	0.000000037	U	-			-		

TABLE B-Q22
ANALYTICAL RESULTS FOR GRID Q22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	Q22			Q22			Q22		
Sample Name	P3IF-BA-GRID-Q022			P3IF-SS-IS-SO-Q022			P3IF-SS-IS-SO-Q522		
Date Collected	June 16, 2023			June 16, 2023			June 16, 2023		
Metals (mg/kg)									
Aluminum	-			16000	4		17000	4	
Antimony	-			0.087	0.15	J	0.14	0.15	J
Arsenic	-			0.58	0.3		0.62	0.3	
Barium	-			550	0.2		510	0.2	
Beryllium	-			1.1	0.3		1.1	0.3	
Cadmium	-			0.44	0.08		0.36	0.08	
Calcium (Ca)	-			43000	15		43000	15	
Chromium	-			23	0.2		17	0.2	
Cobalt	-			3.4	0.08		3.6	0.08	
Copper	-			110	0.2		85	0.2	
Iron (Fe)	-			8500	8		9100	8	
Lead	-			12	0.05		9.6	0.05	
Magnesium (Mg)	-			5500	5		5900	5	
Manganese (Mn)	-			760	0.08		750	0.08	
Mercury	-			0.013	0.042	J	0.013	0.042	J
Nickel	-			8.8	0.2		8.6	0.2	
Potassium (K)	-			2200	8		2200	8	
Selenium	-			0.94	0.1		1	0.1	
Silver	-			0.14	0.05		0.066	0.05	J
Sodium (Na)	-			55	8		54	8	
Thallium	-			0.093	0.05	J	0.078	0.05	J
Vanadium	-			5.6	0.1		5.7	0.1	
Zinc	-			19	1.5		19	1.5	
Other Parameters (mg/kg)									
Cyanide (CN-)	0.33	0.33	U	-			-		
Nitrate	13	2		-			-		
Perchlorate	0.0021	0.0021	U	-			-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-Q22
ANALYTICAL RESULTS FOR GRID Q22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	Q22		
Sample Name	P3IF-SS-IS-SO-Q622		
Date Collected	June 16, 2023		
	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)			
1,1,1,2-Tetrachloroethane	-		
1,1,1-Trichloroethane	-		
1,1,2,2-Tetrachloroethane	-		
1,1,2-Trichloroethane	-		
1,1-Dichloroethane	-		
1,1-Dichloroethene	-		
1,1-Dichloropropene	-		
1,2,3-Trichlorobenzene	-		
1,2,3-Trichloropropane	-		
1,2,4-Trichlorobenzene	-		
1,2,4-Trimethylbenzene	-		
1,2-Dibromo-3-chloropropane	-		
1,2-Dibromoethane	-		
1,2-Dichlorobenzene	-		
1,2-Dichloroethane	-		
1,2-Dichloropropane	-		
1,3,5-Trimethylbenzene	-		
1,3-Dichlorobenzene	-		
1,3-Dichloropropane	-		
1,4-Dichlorobenzene	-		
2,2-Dichloropropane	-		
2-Butanone	-		
2-Chlorotoluene	-		
2-Hexanone	-		
4-Chlorotoluene	-		
4-Methyl-2-pentanone	-		
Acetone	-		
Benzene	-		
Bromobenzene	-		
Bromochloromethane	-		
Bromodichloromethane	-		
Bromoform	-		
Bromomethane	-		
Carbon disulfide	-		
Carbon tetrachloride	-		
Chlorobenzene	-		
Chloroethane	-		
Chloroform	-		
Chloromethane	-		
cis-1,2-Dichloroethene	-		
cis-1,3-Dichloropropene	-		
Dibromochloromethane	-		
Dibromomethane	-		
Dichlorodifluoromethane	-		
Ethylbenzene	-		
Hexachlorobutadiene	-		
Isopropylbenzene	-		
m+p-Xylene	-		
Methyl Tertiary Butyl Ether	-		
Methylene chloride	-		
n-Butylbenzene	-		
n-Propylbenzene	-		
Naphthalene	-		
o-Xylene	-		
4-Isopropyltoluene	-		
sec-Butylbenzene	-		
Styrene	-		
tert-Butylbenzene	-		
Tetrachloroethene	-		
Toluene	-		
trans-1,2-Dichloroethene	-		
trans-1,3-Dichloropropene	-		
Trichloroethene	-		
Trichlorofluoromethane	-		
Vinyl chloride	-		
Semivolatile Organic Compounds (mg/kg)			
1,2,4-Trichlorobenzene	-		
1,2-Dichlorobenzene	-		
1,3-Dichlorobenzene	-		
1,4-Dichlorobenzene	-		
2,4,5-Trichlorophenol	-		
2,4,6-Trichlorophenol	-		
2,4-Dichlorophenol	-		
2,4-Dimethylphenol	-		
2,4-Dinitrophenol	-		
2,4-Dinitrotoluene	-		
2,6-Dinitrotoluene	-		
2-Chloronaphthalene	-		
2-Chlorophenol	-		
2-Methylnaphthalene	-		
2-Methylphenol	-		
2-Nitroaniline	-		
2-Nitrophenol	-		
3,3-Dichlorobenzidine	-		
3-Nitroaniline	-		
4,6-Dinitro-2-methylphenol	-		
4-Bromophenyl-phenylether	-		
4-Chloro-3-methylphenol	-		
4-Chloroaniline	-		

TABLE B-Q22
ANALYTICAL RESULTS FOR GRID Q22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	Q22		
Sample Name	P3IF-SS-IS-SO-Q622		
Date Collected	June 16, 2023		
Semivolatile Organic Compounds (mg/kg), continued			
4-Chlorophenyl-phenylether	-		
4-Nitroaniline	-		
4-Nitrophenol	-		
Acenaphthene	-		
Acenaphthylene	-		
Anthracene	-		
Benzo(a)anthracene	-		
Benzo(a)pyrene	-		
Benzo(b)fluoranthene	-		
Benzo(g,h,i)perylene	-		
Benzo(k)fluoranthene	-		
Benzoic acid	-		
Benzyl Alcohol	-		
Bis(2-chloro-1-methylethyl) ether	-		
Bis(2-chloroethoxy)methane	-		
Bis(2-chloroethyl)ether	-		
Bis(2-ethylhexyl)phthalate	-		
Butyl benzyl phthalate	-		
Carbazole	-		
Chrysene	-		
Di-n-butyl phthalate	-		
Di-n-octyl phthalate	-		
Dibenz(a,h)anthracene	-		
Dibenzofuran	-		
Diethyl phthalate	-		
Dimethyl phthalate	-		
Fluoranthene	-		
Fluorene	-		
Hexachlorobenzene	-		
Hexachlorobutadiene	-		
Hexachloroethane	-		
Indeno(1,2,3-cd)pyrene	-		
Isophorone	-		
n-Nitroso-di-n-propylamine	-		
n-Nitrosodimethylamine	-		
n-Nitrosodiphenylamine	-		
Naphthalene	-		
Nitrobenzene	-		
Pentachlorophenol	-		
Phenanthrene	-		
Phenol	-		
Pyrene	-		
Explosives (mg/kg)			
1,3,5-Trinitrobenzene	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	UJ
2,4,6-Trinitrotoluene	0.075	0.075	UJ
2,4-Dinitrotoluene	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	UJ
2-Nitrotoluene	0.075	0.075	UJ
3-Nitrotoluene	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	0.075	0.075	UJ
4-Nitrotoluene	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	UJ
Nitroglycerin	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)			
Aroclor 1016	-		
Aroclor 1221	-		
Aroclor 1232	-		
Aroclor 1242	-		
Aroclor 1248	-		
Aroclor 1254	-		
Aroclor 1260	-		
Dioxins/Furans (mg/kg)			
Octachlorodibenzofuran (OCDF)	-		
Octachlorodibenzo-p-dioxin (OCDD)	-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	-		

TABLE B-Q22
ANALYTICAL RESULTS FOR GRID Q22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	Q22		
Sample Name	P3IF-SS-IS-SO-Q622		
Date Collected	June 16, 2023		
Metals (mg/kg)			
Aluminum	14000	4	
Antimony	0.1	0.15	J
Arsenic	0.67	0.3	
Barium	490	0.2	
Beryllium	1.1	0.3	
Cadmium	0.58	0.08	
Calcium (Ca)	42000	15	
Chromium	17	0.2	
Cobalt	3.3	0.08	
Copper	110	0.2	
Iron (Fe)	8300	8	
Lead	10	0.05	
Magnesium (Mg)	5100	5	
Manganese (Mn)	690	0.08	
Mercury	0.016	0.043	J
Nickel	8.4	0.2	
Potassium (K)	2000	8	
Selenium	0.8	0.1	
Silver	0.1	0.05	
Sodium (Na)	51	8	
Thallium	0.072	0.05	J
Vanadium	4.8	0.1	
Zinc	19	1.5	
Other Parameters (mg/kg)			
Cyanide (CN-)	-		
Nitrate	-		
Perchlorate	-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-R22
ANALYTICAL RESULTS FOR GRID R22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	R22			R22			R22		
Sample Name	P3IF-BA-GRID-R022			P3IF-SS-IS-SO-R022			P3IF-SS-IS-SO-R522		
Date Collected	June 16, 2023			June 16, 2023			June 16, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)									
1,1,1,2-Tetrachloroethane	0.002	0.002	U	-			-		
1,1,1-Trichloroethane	0.002	0.002	U	-			-		
1,1,2,2-Tetrachloroethane	0.002	0.002	U	-			-		
1,1,2-Trichloroethane	0.002	0.002	U	-			-		
1,1-Dichloroethane	0.002	0.002	U	-			-		
1,1-Dichloroethene	0.002	0.002	U	-			-		
1,1-Dichloropropene	0.002	0.002	U	-			-		
1,2,3-Trichlorobenzene	0.002	0.002	U	-			-		
1,2,3-Trichloropropane	0.0051	0.0051	U	-			-		
1,2,4-Trichlorobenzene	0.002	0.002	U	-			-		
1,2,4-Trimethylbenzene	0.002	0.002	U	-			-		
1,2-Dibromo-3-chloropropane	0.0051	0.0051	U	-			-		
1,2-Dibromoethane	0.002	0.002	U	-			-		
1,2-Dichlorobenzene	0.002	0.002	U	-			-		
1,2-Dichloroethane	0.002	0.002	U	-			-		
1,2-Dichloropropane	0.002	0.002	U	-			-		
1,3,5-Trimethylbenzene	0.002	0.002	U	-			-		
1,3-Dichlorobenzene	0.002	0.002	U	-			-		
1,3-Dichloropropane	0.002	0.002	U	-			-		
1,4-Dichlorobenzene	0.002	0.002	U	-			-		
2,2-Dichloropropane	0.002	0.002	U	-			-		
2-Butanone	0.0031	0.0031	U	-			-		
2-Chlorotoluene	0.002	0.002	U	-			-		
2-Hexanone	0.002	0.002	U	-			-		
4-Chlorotoluene	0.002	0.002	U	-			-		
4-Methyl-2-pentanone	0.002	0.002	U	-			-		
Acetone	0.3	0.0051		-			-		
Benzene	0.002	0.002	U	-			-		
Bromobenzene	0.002	0.002	U	-			-		
Bromochloromethane	0.002	0.002	U	-			-		
Bromodichloromethane	0.002	0.002	U	-			-		
Bromoform	0.002	0.002	U	-			-		
Bromomethane	0.0079	0.002		-			-		
Carbon disulfide	0.002	0.002	U	-			-		
Carbon tetrachloride	0.002	0.002	U	-			-		
Chlorobenzene	0.002	0.002	U	-			-		
Chloroethane	0.002	0.002	U	-			-		
Chloroform	0.002	0.002	U	-			-		
Chloromethane	0.0051	0.0051	U	-			-		
cis-1,2-Dichloroethene	0.002	0.002	U	-			-		
cis-1,3-Dichloropropene	0.002	0.002	U	-			-		
Dibromochloromethane	0.002	0.002	U	-			-		
Dibromomethane	0.002	0.002	U	-			-		
Dichlorodifluoromethane	0.002	0.002	U	-			-		
Ethylbenzene	0.002	0.002	U	-			-		
Hexachlorobutadiene	0.002	0.002	U	-			-		
Isopropylbenzene	0.002	0.002	U	-			-		
m+p-Xylene	0.0051	0.0051	U	-			-		
Methyl Tertiary Butyl Ether	0.002	0.002	U	-			-		
Methylene chloride	0.01	0.01	U	-			-		
n-Butylbenzene	0.002	0.002	U	-			-		
n-Propylbenzene	0.002	0.002	U	-			-		
Naphthalene	0.002	0.002	U	-			-		
o-Xylene	0.0025	0.0025	U	-			-		
4-Isopropyltoluene	0.002	0.002	U	-			-		
sec-Butylbenzene	0.002	0.002	U	-			-		
Styrene	0.002	0.002	U	-			-		
tert-Butylbenzene	0.002	0.002	U	-			-		
Tetrachloroethene	0.002	0.002	U	-			-		
Toluene	0.002	0.002	U	-			-		
trans-1,2-Dichloroethene	0.002	0.002	U	-			-		
trans-1,3-Dichloropropene	0.002	0.002	U	-			-		
Trichloroethene	0.002	0.002	U	-			-		
Trichlorofluoromethane	0.002	0.002	U	-			-		
Vinyl chloride	0.002	0.002	U	-			-		
Semivolatile Organic Compounds (mg/kg)									
1,2,4-Trichlorobenzene	0.18	0.18	U	-			-		
1,2-Dichlorobenzene	0.18	0.18	U	-			-		
1,3-Dichlorobenzene	0.18	0.18	U	-			-		
1,4-Dichlorobenzene	0.18	0.18	U	-			-		
2,4,5-Trichlorophenol	0.18	0.18	U	-			-		
2,4,6-Trichlorophenol	0.18	0.18	U	-			-		
2,4-Dichlorophenol	0.18	0.18	U	-			-		
2,4-Dimethylphenol	0.18	0.18	U	-			-		
2,4-Dinitrophenol	0.18	0.18	U	-			-		
2,4-Dinitrotoluene	0.18	0.18	U	-			-		
2,6-Dinitrotoluene	0.18	0.18	U	-			-		
2-Chloronaphthalene	0.18	0.18	U	-			-		
2-Chlorophenol	0.18	0.18	U	-			-		
2-Methylnaphthalene	0.18	0.18	U	-			-		
2-Methylphenol	0.18	0.18	U	-			-		
2-Nitroaniline	0.18	0.18	U	-			-		
2-Nitrophenol	0.18	0.18	U	-			-		
3,3-Dichlorobenzidine	0.18	0.18	U	-			-		
3-Nitroaniline	0.18	0.18	U	-			-		
4,6-Dinitro-2-methylphenol	0.18	0.18	U	-			-		
4-Bromophenyl-phenylether	0.18	0.18	U	-			-		
4-Chloro-3-methylphenol	0.18	0.18	U	-			-		
4-Chloroaniline	0.18	0.18	U	-			-		

TABLE B-R22
ANALYTICAL RESULTS FOR GRID R22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	R22			R22			R22		
Sample Name	P3IF-BA-GRID-R022			P3IF-SS-IS-SO-R022			P3IF-SS-IS-SO-R522		
Date Collected	June 16, 2023			June 16, 2023			June 16, 2023		
Semivolatile Organic Compounds (mg/kg), continued									
4-Chlorophenyl-phenylether	0.18	0.18	U	-			-		
4-Nitroaniline	0.18	0.18	U	-			-		
4-Nitrophenol	0.18	0.18	U	-			-		
Acenaphthene	0.18	0.18	U	-			-		
Acenaphthylene	0.18	0.18	U	-			-		
Anthracene	0.18	0.18	U	-			-		
Benzo(a)anthracene	0.18	0.18	U	-			-		
Benzo(a)pyrene	0.14	0.14	U	-			-		
Benzo(b)fluoranthene	0.18	0.18	U	-			-		
Benzo(g,h,i)perylene	0.18	0.18	U	-			-		
Benzo(k)fluoranthene	0.18	0.18	U	-			-		
Benzoic acid	0.18	0.18	U	-			-		
Benzyl Alcohol	0.18	0.18	U	-			-		
Bis(2-chloro-1-methylethyl) ether	0.18	0.18	U	-			-		
Bis(2-chloroethoxy)methane	0.18	0.18	U	-			-		
Bis(2-chloroethyl)ether	0.18	0.18	U	-			-		
Bis(2-ethylhexyl)phthalate	0.18	0.18	U	-			-		
Butyl benzyl phthalate	0.18	0.18	U	-			-		
Carbazole	0.18	0.18	U	-			-		
Chrysene	0.18	0.18	U	-			-		
Di-n-butyl phthalate	0.18	0.18	U	-			-		
Di-n-octyl phthalate	0.18	0.18	U	-			-		
Dibenz(a,h)anthracene	0.14	0.14	U	-			-		
Dibenzofuran	0.18	0.18	U	-			-		
Diethyl phthalate	0.18	0.18	U	-			-		
Dimethyl phthalate	0.18	0.18	U	-			-		
Fluoranthene	0.18	0.18	U	-			-		
Fluorene	0.18	0.18	U	-			-		
Hexachlorobenzene	0.18	0.18	U	-			-		
Hexachlorobutadiene	0.18	0.18	U	-			-		
Hexachloroethane	0.18	0.18	U	-			-		
Indeno(1,2,3-cd)pyrene	0.18	0.18	U	-			-		
Isophorone	0.18	0.18	U	-			-		
n-Nitroso-di-n-propylamine	0.18	0.18	U	-			-		
n-Nitrosodimethylamine	0.021	0.021	UJ	-			-		
n-Nitrosodiphenylamine	0.18	0.18	U	-			-		
Naphthalene	0.18	0.18	U	-			-		
Nitrobenzene	0.18	0.18	U	-			-		
Pentachlorophenol	0.18	0.18	U	-			-		
Phenanthrene	0.18	0.18	U	-			-		
Phenol	0.18	0.18	U	-			-		
Pyrene	0.18	0.18	U	-			-		
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
1,3-Dinitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,4,6-Trinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,4-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,6-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
3-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
4-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	-			0.075	0.075	UJ	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	-			0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
Nitroglycerin	-			0.15	0.15	UJ	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	-			0.075	0.075	UJ	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	-			0.25	0.25	UJ	0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)									
Aroclor 1016	0.021	0.021	U	-			-		
Aroclor 1221	0.021	0.021	U	-			-		
Aroclor 1232	0.011	0.011	U	-			-		
Aroclor 1242	0.011	0.011	U	-			-		
Aroclor 1248	0.011	0.011	U	-			-		
Aroclor 1254	0.011	0.011	U	-			-		
Aroclor 1260	0.011	0.011	U	-			-		
Dioxins/Furans (mg/kg)									
Octachlorodibenzofuran (OCDF)	0.00000011	0.00000011	U	-			-		
Octachlorodibenzo-p-dioxin (OCDD)	0.0000062	0.0000062	J	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.00000018	0.00000018	U	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	0.00000097	0.00000097	U	-			-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.000000057	0.000000057	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000083	0.000000083	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000079	0.000000079	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000077	0.000000077	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000072	0.000000072	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.0000001	0.0000001	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.0000001	0.0000001	U	-			-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.000000084	0.000000084	U	-			-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.000000046	0.000000046	U	-			-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000039	0.000000039	U	-			-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.000000087	0.000000087	U	-			-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.00000017	0.00000017	U	-			-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.000000063	0.000000063	U	-			-		

TABLE B-R22
ANALYTICAL RESULTS FOR GRID R22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	R22			R22			R22		
Sample Name	P3IF-BA-GRID-R022			P3IF-SS-IS-SO-R022			P3IF-SS-IS-SO-R522		
Date Collected	June 16, 2023			June 16, 2023			June 16, 2023		
Metals (mg/kg)									
Aluminum	-			22000	4		23000	4	
Antimony	-			0.19	0.15	J	0.15	0.15	U
Arsenic	-			1.4	0.3		1.7	0.3	
Barium	-			320	0.2		360	0.2	
Beryllium	-			0.92	0.3	J	1.1	0.3	
Cadmium	-			1.9	0.08	J	0.56	0.08	J
Calcium (Ca)	-			11000	15		16000	15	
Chromium	-			32	0.2	J	17	0.2	J
Cobalt	-			5.2	0.08		5.2	0.08	
Copper	-			670	0.2	J	160	0.2	J
Iron (Fe)	-			11000	8		12000	8	
Lead	-			18	0.05		12	0.05	
Magnesium (Mg)	-			7900	5		8000	5	
Manganese (Mn)	-			430	0.08		400	0.08	
Mercury	-			0.018	0.043	J	0.02	0.043	J
Nickel	-			21	0.2	J	13	0.2	
Potassium (K)	-			1800	8		2100	8	
Selenium	-			1.3	0.1		1.2	0.1	
Silver	-			0.48	0.05	J	0.13	0.05	J
Sodium (Na)	-			77	8		55	8	
Thallium	-			0.067	0.05	J	0.081	0.05	J
Vanadium	-			17	0.1		18	0.1	
Zinc	-			47	1.5	J	30	1.5	
Other Parameters (mg/kg)									
Cyanide (CN-)	0.33	0.33	U	-			-		
Nitrate	21	2.1		-			-		
Perchlorate	0.0021	0.0021	U	-			-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-R22
ANALYTICAL RESULTS FOR GRID R22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	R22		
Sample Name	P3IF-SS-IS-SO-R622		
Date Collected	June 16, 2023		
	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)			
1,1,1,2-Tetrachloroethane	-		
1,1,1-Trichloroethane	-		
1,1,2,2-Tetrachloroethane	-		
1,1,2-Trichloroethane	-		
1,1-Dichloroethane	-		
1,1-Dichloroethene	-		
1,1-Dichloropropene	-		
1,2,3-Trichlorobenzene	-		
1,2,3-Trichloropropane	-		
1,2,4-Trichlorobenzene	-		
1,2,4-Trimethylbenzene	-		
1,2-Dibromo-3-chloropropane	-		
1,2-Dibromoethane	-		
1,2-Dichlorobenzene	-		
1,2-Dichloroethane	-		
1,2-Dichloropropane	-		
1,3,5-Trimethylbenzene	-		
1,3-Dichlorobenzene	-		
1,3-Dichloropropane	-		
1,4-Dichlorobenzene	-		
2,2-Dichloropropane	-		
2-Butanone	-		
2-Chlorotoluene	-		
2-Hexanone	-		
4-Chlorotoluene	-		
4-Methyl-2-pentanone	-		
Acetone	-		
Benzene	-		
Bromobenzene	-		
Bromochloromethane	-		
Bromodichloromethane	-		
Bromoform	-		
Bromomethane	-		
Carbon disulfide	-		
Carbon tetrachloride	-		
Chlorobenzene	-		
Chloroethane	-		
Chloroform	-		
Chloromethane	-		
cis-1,2-Dichloroethene	-		
cis-1,3-Dichloropropene	-		
Dibromochloromethane	-		
Dibromomethane	-		
Dichlorodifluoromethane	-		
Ethylbenzene	-		
Hexachlorobutadiene	-		
Isopropylbenzene	-		
m+p-Xylene	-		
Methyl Tertiary Butyl Ether	-		
Methylene chloride	-		
n-Butylbenzene	-		
n-Propylbenzene	-		
Naphthalene	-		
o-Xylene	-		
4-Isopropyltoluene	-		
sec-Butylbenzene	-		
Styrene	-		
tert-Butylbenzene	-		
Tetrachloroethene	-		
Toluene	-		
trans-1,2-Dichloroethene	-		
trans-1,3-Dichloropropene	-		
Trichloroethene	-		
Trichlorofluoromethane	-		
Vinyl chloride	-		
Semivolatile Organic Compounds (mg/kg)			
1,2,4-Trichlorobenzene	-		
1,2-Dichlorobenzene	-		
1,3-Dichlorobenzene	-		
1,4-Dichlorobenzene	-		
2,4,5-Trichlorophenol	-		
2,4,6-Trichlorophenol	-		
2,4-Dichlorophenol	-		
2,4-Dimethylphenol	-		
2,4-Dinitrophenol	-		
2,4-Dinitrotoluene	-		
2,6-Dinitrotoluene	-		
2-Chloronaphthalene	-		
2-Chlorophenol	-		
2-Methylnaphthalene	-		
2-Methylphenol	-		
2-Nitroaniline	-		
2-Nitrophenol	-		
3,3-Dichlorobenzidine	-		
3-Nitroaniline	-		
4,6-Dinitro-2-methylphenol	-		
4-Bromophenyl-phenylether	-		
4-Chloro-3-methylphenol	-		
4-Chloroaniline	-		

TABLE B-R22
ANALYTICAL RESULTS FOR GRID R22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	R22		
Sample Name	P3IF-SS-IS-SO-R622		
Date Collected	June 16, 2023		
Semivolatile Organic Compounds (mg/kg), continued			
4-Chlorophenyl-phenylether	-		
4-Nitroaniline	-		
4-Nitrophenol	-		
Acenaphthene	-		
Acenaphthylene	-		
Anthracene	-		
Benzo(a)anthracene	-		
Benzo(a)pyrene	-		
Benzo(b)fluoranthene	-		
Benzo(g,h,i)perylene	-		
Benzo(k)fluoranthene	-		
Benzoic acid	-		
Benzyl Alcohol	-		
Bis(2-chloro-1-methylethyl) ether	-		
Bis(2-chloroethoxy)methane	-		
Bis(2-chloroethyl)ether	-		
Bis(2-ethylhexyl)phthalate	-		
Butyl benzyl phthalate	-		
Carbazole	-		
Chrysene	-		
Di-n-butyl phthalate	-		
Di-n-octyl phthalate	-		
Dibenz(a,h)anthracene	-		
Dibenzofuran	-		
Diethyl phthalate	-		
Dimethyl phthalate	-		
Fluoranthene	-		
Fluorene	-		
Hexachlorobenzene	-		
Hexachlorobutadiene	-		
Hexachloroethane	-		
Indeno(1,2,3-cd)pyrene	-		
Isophorone	-		
n-Nitroso-di-n-propylamine	-		
n-Nitrosodimethylamine	-		
n-Nitrosodiphenylamine	-		
Naphthalene	-		
Nitrobenzene	-		
Pentachlorophenol	-		
Phenanthrene	-		
Phenol	-		
Pyrene	-		
Explosives (mg/kg)			
1,3,5-Trinitrobenzene	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	UJ
2,4,6-Trinitrotoluene	0.075	0.075	UJ
2,4-Dinitrotoluene	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	UJ
2-Nitrotoluene	0.075	0.075	UJ
3-Nitrotoluene	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	0.075	0.075	UJ
4-Nitrotoluene	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	UJ
Nitroglycerin	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)			
Aroclor 1016	-		
Aroclor 1221	-		
Aroclor 1232	-		
Aroclor 1242	-		
Aroclor 1248	-		
Aroclor 1254	-		
Aroclor 1260	-		
Dioxins/Furans (mg/kg)			
Octachlorodibenzofuran (OCDF)	-		
Octachlorodibenzo-p-dioxin (OCDD)	-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	-		

TABLE B-R22
ANALYTICAL RESULTS FOR GRID R22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	R22		
Sample Name	P3IF-SS-IS-SO-R622		
Date Collected	June 16, 2023		
Metals (mg/kg)			
Aluminum	23000	4	
Antimony	0.15	0.15	U
Arsenic	1.6	0.3	
Barium	340	0.2	
Beryllium	1.1	0.3	
Cadmium	0.45	0.08	J
Calcium (Ca)	18000	15	
Chromium	15	0.2	J
Cobalt	5.2	0.08	
Copper	120	0.2	J
Iron (Fe)	12000	8	
Lead	11	0.05	
Magnesium (Mg)	8100	5	
Manganese (Mn)	430	0.08	
Mercury	0.027	0.043	J
Nickel	12	0.2	J
Potassium (K)	2200	8	
Selenium	1.4	0.1	
Silver	0.22	0.05	
Sodium (Na)	56	8	
Thallium	0.079	0.05	J
Vanadium	18	0.1	
Zinc	28	1.5	J
Other Parameters (mg/kg)			
Cyanide (CN-)	-		
Nitrate	-		
Perchlorate	-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-S22
ANALYTICAL RESULTS FOR GRID S22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	S22			S22			S22		
Sample Name	P3IF-BA-GRID-S022			P3IF-SS-IS-SO-S022			P3IF-SS-IS-SO-S522		
Date Collected	June 16, 2023			June 16, 2023			June 16, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)									
1,1,1,2-Tetrachloroethane	0.0024	0.0024	U	-			-		
1,1,1-Trichloroethane	0.0024	0.0024	U	-			-		
1,1,2,2-Tetrachloroethane	0.0024	0.0024	U	-			-		
1,1,2-Trichloroethane	0.0024	0.0024	U	-			-		
1,1-Dichloroethane	0.0024	0.0024	U	-			-		
1,1-Dichloroethene	0.0024	0.0024	U	-			-		
1,1-Dichloropropene	0.0024	0.0024	U	-			-		
1,2,3-Trichlorobenzene	0.0024	0.0024	U	-			-		
1,2,3-Trichloropropane	0.006	0.006	U	-			-		
1,2,4-Trichlorobenzene	0.0024	0.0024	U	-			-		
1,2,4-Trimethylbenzene	0.0024	0.0024	U	-			-		
1,2-Dibromo-3-chloropropane	0.006	0.006	U	-			-		
1,2-Dibromoethane	0.0024	0.0024	U	-			-		
1,2-Dichlorobenzene	0.0024	0.0024	U	-			-		
1,2-Dichloroethane	0.0024	0.0024	U	-			-		
1,2-Dichloropropane	0.0024	0.0024	U	-			-		
1,3,5-Trimethylbenzene	0.0024	0.0024	U	-			-		
1,3-Dichlorobenzene	0.0024	0.0024	U	-			-		
1,3-Dichloropropane	0.0024	0.0024	U	-			-		
1,4-Dichlorobenzene	0.0024	0.0024	U	-			-		
2,2-Dichloropropane	0.0024	0.0024	U	-			-		
2-Butanone	0.0036	0.0036	U	-			-		
2-Chlorotoluene	0.0024	0.0024	U	-			-		
2-Hexanone	0.0024	0.0024	U	-			-		
4-Chlorotoluene	0.0024	0.0024	U	-			-		
4-Methyl-2-pentanone	0.0024	0.0024	U	-			-		
Acetone	0.67	0.006	J	-			-		
Benzene	0.0024	0.0024	U	-			-		
Bromobenzene	0.0024	0.0024	U	-			-		
Bromochloromethane	0.0024	0.0024	U	-			-		
Bromodichloromethane	0.0024	0.0024	U	-			-		
Bromoform	0.0024	0.0024	U	-			-		
Bromomethane	0.026	0.0024		-			-		
Carbon disulfide	0.0024	0.0024	U	-			-		
Carbon tetrachloride	0.0024	0.0024	U	-			-		
Chlorobenzene	0.0024	0.0024	U	-			-		
Chloroethane	0.0024	0.0024	U	-			-		
Chloroform	0.0024	0.0024	U	-			-		
Chloromethane	0.006	0.006	U	-			-		
cis-1,2-Dichloroethene	0.0024	0.0024	U	-			-		
cis-1,3-Dichloropropene	0.0024	0.0024	U	-			-		
Dibromochloromethane	0.0024	0.0024	U	-			-		
Dibromomethane	0.0024	0.0024	U	-			-		
Dichlorodifluoromethane	0.0024	0.0024	U	-			-		
Ethylbenzene	0.0024	0.0024	U	-			-		
Hexachlorobutadiene	0.0024	0.0024	U	-			-		
Isopropylbenzene	0.0024	0.0024	U	-			-		
m+p-Xylene	0.006	0.006	U	-			-		
Methyl Tertiary Butyl Ether	0.0024	0.0024	U	-			-		
Methylene chloride	0.012	0.012	U	-			-		
n-Butylbenzene	0.0024	0.0024	U	-			-		
n-Propylbenzene	0.0024	0.0024	U	-			-		
Naphthalene	0.0024	0.0024	U	-			-		
o-Xylene	0.003	0.003	U	-			-		
4-Isopropyltoluene	0.0024	0.0024	U	-			-		
sec-Butylbenzene	0.0024	0.0024	U	-			-		
Styrene	0.0024	0.0024	U	-			-		
tert-Butylbenzene	0.0024	0.0024	U	-			-		
Tetrachloroethene	0.0024	0.0024	U	-			-		
Toluene	0.0024	0.0024	U	-			-		
trans-1,2-Dichloroethene	0.0024	0.0024	U	-			-		
trans-1,3-Dichloropropene	0.0024	0.0024	U	-			-		
Trichloroethene	0.0024	0.0024	U	-			-		
Trichlorofluoromethane	0.0024	0.0024	U	-			-		
Vinyl chloride	0.0024	0.0024	U	-			-		
Semivolatile Organic Compounds (mg/kg)									
1,2,4-Trichlorobenzene	0.18	0.18	U	-			-		
1,2-Dichlorobenzene	0.18	0.18	U	-			-		
1,3-Dichlorobenzene	0.18	0.18	U	-			-		
1,4-Dichlorobenzene	0.18	0.18	U	-			-		
2,4,5-Trichlorophenol	0.18	0.18	U	-			-		
2,4,6-Trichlorophenol	0.18	0.18	U	-			-		
2,4-Dichlorophenol	0.18	0.18	U	-			-		
2,4-Dimethylphenol	0.18	0.18	U	-			-		
2,4-Dinitrophenol	0.18	0.18	U	-			-		
2,4-Dinitrotoluene	0.18	0.18	U	-			-		
2,6-Dinitrotoluene	0.18	0.18	U	-			-		
2-Chloronaphthalene	0.18	0.18	U	-			-		
2-Chlorophenol	0.18	0.18	U	-			-		
2-Methylnaphthalene	0.18	0.18	U	-			-		
2-Methylphenol	0.18	0.18	U	-			-		
2-Nitroaniline	0.18	0.18	U	-			-		
2-Nitrophenol	0.18	0.18	U	-			-		
3,3-Dichlorobenzidine	0.18	0.18	U	-			-		
3-Nitroaniline	0.18	0.18	U	-			-		
4,6-Dinitro-2-methylphenol	0.18	0.18	U	-			-		
4-Bromophenyl-phenylether	0.18	0.18	U	-			-		
4-Chloro-3-methylphenol	0.18	0.18	U	-			-		
4-Chloroaniline	0.18	0.18	U	-			-		

TABLE B-S22
ANALYTICAL RESULTS FOR GRID S22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	S22			S22			S22		
Sample Name	P3IF-BA-GRID-S022			P3IF-SS-IS-SO-S022			P3IF-SS-IS-SO-S522		
Date Collected	June 16, 2023			June 16, 2023			June 16, 2023		
Semivolatile Organic Compounds (mg/kg), continued									
4-Chlorophenyl-phenylether	0.18	0.18	U	-			-		
4-Nitroaniline	0.18	0.18	U	-			-		
4-Nitrophenol	0.18	0.18	U	-			-		
Acenaphthene	0.18	0.18	U	-			-		
Acenaphthylene	0.18	0.18	U	-			-		
Anthracene	0.18	0.18	U	-			-		
Benzo(a)anthracene	0.18	0.18	U	-			-		
Benzo(a)pyrene	0.14	0.14	U	-			-		
Benzo(b)fluoranthene	0.18	0.18	U	-			-		
Benzo(g,h,i)perylene	0.18	0.18	U	-			-		
Benzo(k)fluoranthene	0.18	0.18	U	-			-		
Benzoic acid	0.18	0.18	U	-			-		
Benzyl Alcohol	0.18	0.18	U	-			-		
Bis(2-chloro-1-methylethyl) ether	0.18	0.18	U	-			-		
Bis(2-chloroethoxy)methane	0.18	0.18	U	-			-		
Bis(2-chloroethyl)ether	0.18	0.18	U	-			-		
Bis(2-ethylhexyl)phthalate	0.18	0.18	U	-			-		
Butyl benzyl phthalate	0.18	0.18	U	-			-		
Carbazole	0.18	0.18	U	-			-		
Chrysene	0.18	0.18	U	-			-		
Di-n-butyl phthalate	0.18	0.18	U	-			-		
Di-n-octyl phthalate	0.18	0.18	U	-			-		
Dibenz(a,h)anthracene	0.14	0.14	U	-			-		
Dibenzofuran	0.18	0.18	U	-			-		
Diethyl phthalate	0.18	0.18	U	-			-		
Dimethyl phthalate	0.18	0.18	U	-			-		
Fluoranthene	0.18	0.18	U	-			-		
Fluorene	0.18	0.18	U	-			-		
Hexachlorobenzene	0.18	0.18	U	-			-		
Hexachlorobutadiene	0.18	0.18	U	-			-		
Hexachloroethane	0.18	0.18	U	-			-		
Indeno(1,2,3-cd)pyrene	0.18	0.18	U	-			-		
Isophorone	0.18	0.18	U	-			-		
n-Nitroso-di-n-propylamine	0.18	0.18	U	-			-		
n-Nitrosodimethylamine	0.021	0.021	UJ	-			-		
n-Nitrosodiphenylamine	0.18	0.18	U	-			-		
Naphthalene	0.18	0.18	U	-			-		
Nitrobenzene	0.18	0.18	U	-			-		
Pentachlorophenol	0.18	0.18	U	-			-		
Phenanthrene	0.18	0.18	U	-			-		
Phenol	0.18	0.18	U	-			-		
Pyrene	0.18	0.18	U	-			-		
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
1,3-Dinitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,4,6-Trinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,4-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,6-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
3-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
4-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	-			0.075	0.075	UJ	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	-			0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
Nitroglycerin	-			0.15	0.15	UJ	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	-			0.075	0.075	UJ	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	-			0.25	0.25	UJ	0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)									
Aroclor 1016	0.021	0.021	U	-			-		
Aroclor 1221	0.021	0.021	U	-			-		
Aroclor 1232	0.01	0.01	U	-			-		
Aroclor 1242	0.01	0.01	U	-			-		
Aroclor 1248	0.01	0.01	U	-			-		
Aroclor 1254	0.01	0.01	U	-			-		
Aroclor 1260	0.01	0.01	U	-			-		
Dioxins/Furans (mg/kg)									
Octachlorodibenzofuran (OCDF)	0.00000072	0.00000072	J	-			-		
Octachlorodibenzo-p-dioxin (OCDD)	0.000024	0.000024	J	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.00000081	0.00000081	U	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	0.0000043	0.0000043	J	-			-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.00000011	0.00000011	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.00000022	0.00000022	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000012	0.00000012	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.0000002	0.0000002	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000052	0.000000052	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.00000027	0.00000027	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000042	0.000000042	U	-			-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000029	0.00000029	U	-			-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.000000045	0.000000045	U	-			-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.00000022	0.00000022	U	-			-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000029	0.00000029	U	-			-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.00000031	0.00000031	U	-			-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.00000004	0.00000004	U	-			-		

TABLE B-S22
ANALYTICAL RESULTS FOR GRID S22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	S22			S22			S22		
Sample Name	P3IF-BA-GRID-S022			P3IF-SS-IS-SO-S022			P3IF-SS-IS-SO-S522		
Date Collected	June 16, 2023			June 16, 2023			June 16, 2023		
Metals (mg/kg)									
Aluminum	-			13000	4		13000	4	
Antimony	-			0.37	0.15		0.17	0.15	J
Arsenic	-			1.2	0.3		1.4	0.3	
Barium	-			200	0.2		210	0.2	
Beryllium	-			0.56	0.3	J	0.63	0.3	J
Cadmium	-			1.1	0.08		0.86	0.08	
Calcium (Ca)	-			5700	15		5400	15	
Chromium	-			16	0.2		12	0.2	
Cobalt	-			3.9	0.08		4	0.08	
Copper	-			280	0.2		170	0.2	
Iron (Fe)	-			7000	8		7100	8	
Lead	-			12	0.05		10	0.05	
Magnesium (Mg)	-			5500	5		5100	5	
Manganese (Mn)	-			340	0.08		370	0.08	
Mercury	-			0.02	0.04	J	0.022	0.041	J
Nickel	-			12	0.2		9.7	0.2	
Potassium (K)	-			1000	8		1100	8	
Selenium	-			0.96	0.1		0.84	0.1	
Silver	-			0.18	0.05		0.16	0.05	
Sodium (Na)	-			51	8		44	8	
Thallium	-			0.065	0.05	J	0.062	0.05	J
Vanadium	-			9.1	0.1		9	0.1	
Zinc	-			34	1.5		29	1.5	
Other Parameters (mg/kg)									
Cyanide (CN-)	0.32	0.32	U	-			-		
Nitrate	12	2.1		-			-		
Perchlorate	0.0021	0.0021	U	-			-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-S22
ANALYTICAL RESULTS FOR GRID S22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	S22		
Sample Name	P3IF-SS-IS-SO-S622		
Date Collected	June 16, 2023		
	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)			
1,1,1,2-Tetrachloroethane	-		
1,1,1-Trichloroethane	-		
1,1,2,2-Tetrachloroethane	-		
1,1,2-Trichloroethane	-		
1,1-Dichloroethane	-		
1,1-Dichloroethene	-		
1,1-Dichloropropene	-		
1,2,3-Trichlorobenzene	-		
1,2,3-Trichloropropane	-		
1,2,4-Trichlorobenzene	-		
1,2,4-Trimethylbenzene	-		
1,2-Dibromo-3-chloropropane	-		
1,2-Dibromoethane	-		
1,2-Dichlorobenzene	-		
1,2-Dichloroethane	-		
1,2-Dichloropropane	-		
1,3,5-Trimethylbenzene	-		
1,3-Dichlorobenzene	-		
1,3-Dichloropropane	-		
1,4-Dichlorobenzene	-		
2,2-Dichloropropane	-		
2-Butanone	-		
2-Chlorotoluene	-		
2-Hexanone	-		
4-Chlorotoluene	-		
4-Methyl-2-pentanone	-		
Acetone	-		
Benzene	-		
Bromobenzene	-		
Bromochloromethane	-		
Bromodichloromethane	-		
Bromoform	-		
Bromomethane	-		
Carbon disulfide	-		
Carbon tetrachloride	-		
Chlorobenzene	-		
Chloroethane	-		
Chloroform	-		
Chloromethane	-		
cis-1,2-Dichloroethene	-		
cis-1,3-Dichloropropene	-		
Dibromochloromethane	-		
Dibromomethane	-		
Dichlorodifluoromethane	-		
Ethylbenzene	-		
Hexachlorobutadiene	-		
Isopropylbenzene	-		
m+p-Xylene	-		
Methyl Tertiary Butyl Ether	-		
Methylene chloride	-		
n-Butylbenzene	-		
n-Propylbenzene	-		
Naphthalene	-		
o-Xylene	-		
4-Isopropyltoluene	-		
sec-Butylbenzene	-		
Styrene	-		
tert-Butylbenzene	-		
Tetrachloroethene	-		
Toluene	-		
trans-1,2-Dichloroethene	-		
trans-1,3-Dichloropropene	-		
Trichloroethene	-		
Trichlorofluoromethane	-		
Vinyl chloride	-		
Semivolatile Organic Compounds (mg/kg)			
1,2,4-Trichlorobenzene	-		
1,2-Dichlorobenzene	-		
1,3-Dichlorobenzene	-		
1,4-Dichlorobenzene	-		
2,4,5-Trichlorophenol	-		
2,4,6-Trichlorophenol	-		
2,4-Dichlorophenol	-		
2,4-Dimethylphenol	-		
2,4-Dinitrophenol	-		
2,4-Dinitrotoluene	-		
2,6-Dinitrotoluene	-		
2-Chloronaphthalene	-		
2-Chlorophenol	-		
2-Methylnaphthalene	-		
2-Methylphenol	-		
2-Nitroaniline	-		
2-Nitrophenol	-		
3,3-Dichlorobenzidine	-		
3-Nitroaniline	-		
4,6-Dinitro-2-methylphenol	-		
4-Bromophenyl-phenylether	-		
4-Chloro-3-methylphenol	-		
4-Chloroaniline	-		

TABLE B-S22
ANALYTICAL RESULTS FOR GRID S22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	S22		
Sample Name	P3IF-SS-IS-SO-S622		
Date Collected	June 16, 2023		
Semivolatile Organic Compounds (mg/kg), continued			
4-Chlorophenyl-phenylether	-		
4-Nitroaniline	-		
4-Nitrophenol	-		
Acenaphthene	-		
Acenaphthylene	-		
Anthracene	-		
Benzo(a)anthracene	-		
Benzo(a)pyrene	-		
Benzo(b)fluoranthene	-		
Benzo(g,h,i)perylene	-		
Benzo(k)fluoranthene	-		
Benzoic acid	-		
Benzyl Alcohol	-		
Bis(2-chloro-1-methylethyl) ether	-		
Bis(2-chloroethoxy)methane	-		
Bis(2-chloroethyl)ether	-		
Bis(2-ethylhexyl)phthalate	-		
Butyl benzyl phthalate	-		
Carbazole	-		
Chrysene	-		
Di-n-butyl phthalate	-		
Di-n-octyl phthalate	-		
Dibenz(a,h)anthracene	-		
Dibenzofuran	-		
Diethyl phthalate	-		
Dimethyl phthalate	-		
Fluoranthene	-		
Fluorene	-		
Hexachlorobenzene	-		
Hexachlorobutadiene	-		
Hexachloroethane	-		
Indeno(1,2,3-cd)pyrene	-		
Isophorone	-		
n-Nitroso-di-n-propylamine	-		
n-Nitrosodimethylamine	-		
n-Nitrosodiphenylamine	-		
Naphthalene	-		
Nitrobenzene	-		
Pentachlorophenol	-		
Phenanthrene	-		
Phenol	-		
Pyrene	-		
Explosives (mg/kg)			
1,3,5-Trinitrobenzene	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	UJ
2,4,6-Trinitrotoluene	0.075	0.075	UJ
2,4-Dinitrotoluene	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	UJ
2-Nitrotoluene	0.075	0.075	UJ
3-Nitrotoluene	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	0.075	0.075	UJ
4-Nitrotoluene	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	UJ
Nitroglycerin	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)			
Aroclor 1016	-		
Aroclor 1221	-		
Aroclor 1232	-		
Aroclor 1242	-		
Aroclor 1248	-		
Aroclor 1254	-		
Aroclor 1260	-		
Dioxins/Furans (mg/kg)			
Octachlorodibenzofuran (OCDF)	-		
Octachlorodibenzo-p-dioxin (OCDD)	-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	-		

TABLE B-S22
ANALYTICAL RESULTS FOR GRID S22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	S22		
Sample Name	P3IF-SS-IS-SO-S622		
Date Collected	June 16, 2023		
Metals (mg/kg)			
Aluminum	14000	4	
Antimony	0.19	0.15	J
Arsenic	1.4	0.3	
Barium	250	0.2	
Beryllium	0.69	0.3	J
Cadmium	0.78	0.08	
Calcium (Ca)	5500	15	
Chromium	15	0.2	
Cobalt	4.1	0.08	
Copper	220	0.2	
Iron (Fe)	7100	8	
Lead	14	0.05	
Magnesium (Mg)	5600	5	
Manganese (Mn)	350	0.08	
Mercury	0.021	0.041	J
Nickel	11	0.2	
Potassium (K)	1100	8	
Selenium	0.77	0.1	
Silver	0.19	0.05	
Sodium (Na)	47	8	
Thallium	0.067	0.05	J
Vanadium	9.3	0.1	
Zinc	33	1.5	
Other Parameters (mg/kg)			
Cyanide (CN-)	-		
Nitrate	-		
Perchlorate	-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-T22
ANALYTICAL RESULTS FOR GRID T22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	T22			T22			T22		
Sample Name	P3IF-BA-GRID-T022			P3IF-SS-IS-SO-T022			P3IF-SS-IS-SO-T522		
Date Collected	June 16, 2023			June 16, 2023			June 16, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)									
1,1,1,2-Tetrachloroethane	0.0016	0.0016	U	-			-		
1,1,1-Trichloroethane	0.0016	0.0016	U	-			-		
1,1,2,2-Tetrachloroethane	0.0016	0.0016	U	-			-		
1,1,2-Trichloroethane	0.0016	0.0016	U	-			-		
1,1-Dichloroethane	0.0016	0.0016	U	-			-		
1,1-Dichloroethene	0.0016	0.0016	U	-			-		
1,1-Dichloropropene	0.0016	0.0016	U	-			-		
1,2,3-Trichlorobenzene	0.0016	0.0016	U	-			-		
1,2,3-Trichloropropane	0.004	0.004	U	-			-		
1,2,4-Trichlorobenzene	0.0016	0.0016	U	-			-		
1,2,4-Trimethylbenzene	0.0016	0.0016	U	-			-		
1,2-Dibromo-3-chloropropane	0.004	0.004	U	-			-		
1,2-Dibromoethane	0.0016	0.0016	U	-			-		
1,2-Dichlorobenzene	0.0016	0.0016	U	-			-		
1,2-Dichloroethane	0.0016	0.0016	U	-			-		
1,2-Dichloropropane	0.0016	0.0016	U	-			-		
1,3,5-Trimethylbenzene	0.0016	0.0016	U	-			-		
1,3-Dichlorobenzene	0.0016	0.0016	U	-			-		
1,3-Dichloropropane	0.0016	0.0016	U	-			-		
1,4-Dichlorobenzene	0.0016	0.0016	U	-			-		
2,2-Dichloropropane	0.0016	0.0016	U	-			-		
2-Butanone	0.0024	0.0024	U	-			-		
2-Chlorotoluene	0.0016	0.0016	U	-			-		
2-Hexanone	0.0016	0.0016	U	-			-		
4-Chlorotoluene	0.0016	0.0016	U	-			-		
4-Methyl-2-pentanone	0.0016	0.0016	U	-			-		
Acetone	0.28	0.004		-			-		
Benzene	0.0016	0.0016	U	-			-		
Bromobenzene	0.0016	0.0016	U	-			-		
Bromochloromethane	0.0016	0.0016	U	-			-		
Bromodichloromethane	0.0016	0.0016	U	-			-		
Bromoform	0.0016	0.0016	U	-			-		
Bromomethane	0.0016	0.0016	U	-			-		
Carbon disulfide	0.0016	0.0016	U	-			-		
Carbon tetrachloride	0.0016	0.0016	U	-			-		
Chlorobenzene	0.0016	0.0016	U	-			-		
Chloroethane	0.0016	0.0016	U	-			-		
Chloroform	0.0016	0.0016	U	-			-		
Chloromethane	0.004	0.004	U	-			-		
cis-1,2-Dichloroethene	0.0016	0.0016	U	-			-		
cis-1,3-Dichloropropene	0.0016	0.0016	U	-			-		
Dibromochloromethane	0.0016	0.0016	U	-			-		
Dibromomethane	0.0016	0.0016	U	-			-		
Dichlorodifluoromethane	0.0016	0.0016	U	-			-		
Ethylbenzene	0.0016	0.0016	U	-			-		
Hexachlorobutadiene	0.0016	0.0016	U	-			-		
Isopropylbenzene	0.0016	0.0016	U	-			-		
m+p-Xylene	0.004	0.004	U	-			-		
Methyl Tertiary Butyl Ether	0.0016	0.0016	U	-			-		
Methylene chloride	0.0081	0.0081	U	-			-		
n-Butylbenzene	0.0016	0.0016	U	-			-		
n-Propylbenzene	0.0016	0.0016	U	-			-		
Naphthalene	0.0016	0.0016	U	-			-		
o-Xylene	0.002	0.002	U	-			-		
4-Isopropyltoluene	0.0016	0.0016	U	-			-		
sec-Butylbenzene	0.0016	0.0016	U	-			-		
Styrene	0.0016	0.0016	U	-			-		
tert-Butylbenzene	0.0016	0.0016	U	-			-		
Tetrachloroethene	0.0016	0.0016	U	-			-		
Toluene	0.0016	0.0016	U	-			-		
trans-1,2-Dichloroethene	0.0016	0.0016	U	-			-		
trans-1,3-Dichloropropene	0.0016	0.0016	U	-			-		
Trichloroethene	0.0016	0.0016	U	-			-		
Trichlorofluoromethane	0.0016	0.0016	U	-			-		
Vinyl chloride	0.0016	0.0016	U	-			-		
Semivolatile Organic Compounds (mg/kg)									
1,2,4-Trichlorobenzene	0.17	0.17	U	-			-		
1,2-Dichlorobenzene	0.17	0.17	U	-			-		
1,3-Dichlorobenzene	0.17	0.17	U	-			-		
1,4-Dichlorobenzene	0.17	0.17	U	-			-		
2,4,5-Trichlorophenol	0.17	0.17	U	-			-		
2,4,6-Trichlorophenol	0.17	0.17	U	-			-		
2,4-Dichlorophenol	0.17	0.17	U	-			-		
2,4-Dimethylphenol	0.17	0.17	U	-			-		
2,4-Dinitrophenol	0.17	0.17	U	-			-		
2,4-Dinitrotoluene	0.17	0.17	U	-			-		
2,6-Dinitrotoluene	0.17	0.17	U	-			-		
2-Chloronaphthalene	0.17	0.17	U	-			-		
2-Chlorophenol	0.17	0.17	U	-			-		
2-Methylnaphthalene	0.17	0.17	U	-			-		
2-Methylphenol	0.17	0.17	U	-			-		
2-Nitroaniline	0.17	0.17	U	-			-		
2-Nitrophenol	0.17	0.17	U	-			-		
3,3-Dichlorobenzidine	0.17	0.17	U	-			-		
3-Nitroaniline	0.17	0.17	U	-			-		
4,6-Dinitro-2-methylphenol	0.17	0.17	U	-			-		
4-Bromophenyl-phenylether	0.17	0.17	U	-			-		
4-Chloro-3-methylphenol	0.17	0.17	U	-			-		
4-Chloroaniline	0.17	0.17	U	-			-		

TABLE B-T22
ANALYTICAL RESULTS FOR GRID T22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	T22			T22			T22		
Sample Name	P3IF-BA-GRID-T022			P3IF-SS-IS-SO-T022			P3IF-SS-IS-SO-T522		
Date Collected	June 16, 2023			June 16, 2023			June 16, 2023		
Semivolatile Organic Compounds (mg/kg), continued									
4-Chlorophenyl-phenylether	0.17	0.17	U	-			-		
4-Nitroaniline	0.17	0.17	U	-			-		
4-Nitrophenol	0.17	0.17	U	-			-		
Acenaphthene	0.17	0.17	U	-			-		
Acenaphthylene	0.17	0.17	U	-			-		
Anthracene	0.17	0.17	U	-			-		
Benzo(a)anthracene	0.17	0.17	U	-			-		
Benzo(a)pyrene	0.14	0.14	U	-			-		
Benzo(b)fluoranthene	0.17	0.17	U	-			-		
Benzo(g,h,i)perylene	0.17	0.17	U	-			-		
Benzo(k)fluoranthene	0.17	0.17	U	-			-		
Benzoic acid	0.17	0.17	U	-			-		
Benzyl Alcohol	0.17	0.17	U	-			-		
Bis(2-chloro-1-methylethyl) ether	0.17	0.17	U	-			-		
Bis(2-chloroethoxy)methane	0.17	0.17	U	-			-		
Bis(2-chloroethyl)ether	0.17	0.17	U	-			-		
Bis(2-ethylhexyl)phthalate	0.17	0.17	U	-			-		
Butyl benzyl phthalate	0.17	0.17	U	-			-		
Carbazole	0.17	0.17	U	-			-		
Chrysene	0.17	0.17	U	-			-		
Di-n-butyl phthalate	0.17	0.17	U	-			-		
Di-n-octyl phthalate	0.17	0.17	U	-			-		
Dibenz(a,h)anthracene	0.14	0.14	U	-			-		
Dibenzofuran	0.17	0.17	U	-			-		
Diethyl phthalate	0.17	0.17	U	-			-		
Dimethyl phthalate	0.17	0.17	U	-			-		
Fluoranthene	0.17	0.17	U	-			-		
Fluorene	0.17	0.17	U	-			-		
Hexachlorobenzene	0.17	0.17	U	-			-		
Hexachlorobutadiene	0.17	0.17	U	-			-		
Hexachloroethane	0.17	0.17	U	-			-		
Indeno(1,2,3-cd)pyrene	0.17	0.17	U	-			-		
Isophorone	0.17	0.17	U	-			-		
n-Nitroso-di-n-propylamine	0.17	0.17	U	-			-		
n-Nitrosodimethylamine	0.021	0.021	UJ	-			-		
n-Nitrosodiphenylamine	0.17	0.17	U	-			-		
Naphthalene	0.17	0.17	U	-			-		
Nitrobenzene	0.17	0.17	U	-			-		
Pentachlorophenol	0.17	0.17	U	-			-		
Phenanthrene	0.17	0.17	U	-			-		
Phenol	0.17	0.17	U	-			-		
Pyrene	0.17	0.17	U	-			-		
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
1,3-Dinitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,4,6-Trinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,4-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,6-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
3-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
4-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	-			0.075	0.075	UJ	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	-			0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
Nitroglycerin	-			0.15	0.15	UJ	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	-			0.075	0.075	UJ	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	-			0.25	0.25	UJ	0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)									
Aroclor 1016	0.021	0.021	U	-			-		
Aroclor 1221	0.021	0.021	U	-			-		
Aroclor 1232	0.01	0.01	U	-			-		
Aroclor 1242	0.01	0.01	U	-			-		
Aroclor 1248	0.01	0.01	U	-			-		
Aroclor 1254	0.01	0.01	U	-			-		
Aroclor 1260	0.01	0.01	U	-			-		
Dioxins/Furans (mg/kg)									
Octachlorodibenzofuran (OCDF)	0.00000027	0.00000027	U	-			-		
Octachlorodibenzo-p-dioxin (OCDD)	0.0000056	0.0000056	J	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.000000033	0.000000033	U	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	0.0000014	0.0000014	J	-			-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.000000042	0.000000042	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000063	0.000000063	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000009	0.00000009	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.00000015	0.00000015	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000054	0.000000054	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.000000077	0.000000077	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000011	0.00000011	U	-			-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000023	0.00000023	U	-			-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.000000053	0.000000053	U	-			-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.00000022	0.00000022	U	-			-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000024	0.00000024	U	-			-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.00000016	0.00000016	U	-			-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.000000051	0.000000051	U	-			-		

TABLE B-T22
ANALYTICAL RESULTS FOR GRID T22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	T22			T22			T22		
Sample Name	P3IF-BA-GRID-T022			P3IF-SS-IS-SO-T022			P3IF-SS-IS-SO-T522		
Date Collected	June 16, 2023			June 16, 2023			June 16, 2023		
Metals (mg/kg)									
Aluminum	-			12000	4		16000	4	
Antimony	-			0.19	0.15	J	0.62	0.15	
Arsenic	-			1.4	0.3		1.8	0.3	
Barium	-			220	0.2		260	0.2	
Beryllium	-			0.52	0.3	J	0.73	0.3	J
Cadmium	-			1.2	0.08		1.3	0.08	
Calcium (Ca)	-			5000	15		5700	15	
Chromium	-			15	0.2		19	0.2	
Cobalt	-			3.9	0.08		4.8	0.08	
Copper	-			240	0.2		270	0.2	
Iron (Fe)	-			7000	8		8900	8	
Lead	-			13	0.05	J	24	0.05	J
Magnesium (Mg)	-			4600	5		5900	5	
Manganese (Mn)	-			360	0.08		440	0.08	
Mercury	-			0.027	0.041	J	0.024	0.041	J
Nickel	-			11	0.2		13	0.2	
Potassium (K)	-			1200	8		1500	8	
Selenium	-			0.63	0.1		0.86	0.1	
Silver	-			0.23	0.05		0.22	0.05	
Sodium (Na)	-			46	8		54	8	
Thallium	-			0.058	0.05	J	0.069	0.05	J
Vanadium	-			11	0.1		13	0.1	
Zinc	-			39	1.5		43	1.5	
Other Parameters (mg/kg)									
Cyanide (CN-)	0.33	0.33	U	-			-		
Nitrate	11	2		-			-		
Perchlorate	0.0021	0.0021	U	-			-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-T22
ANALYTICAL RESULTS FOR GRID T22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	T22		
Sample Name	P3IF-SS-IS-SO-T622		
Date Collected	June 16, 2023		
	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)			
1,1,1,2-Tetrachloroethane	-		
1,1,1-Trichloroethane	-		
1,1,2,2-Tetrachloroethane	-		
1,1,2-Trichloroethane	-		
1,1-Dichloroethane	-		
1,1-Dichloroethene	-		
1,1-Dichloropropene	-		
1,2,3-Trichlorobenzene	-		
1,2,3-Trichloropropane	-		
1,2,4-Trichlorobenzene	-		
1,2,4-Trimethylbenzene	-		
1,2-Dibromo-3-chloropropane	-		
1,2-Dibromoethane	-		
1,2-Dichlorobenzene	-		
1,2-Dichloroethane	-		
1,2-Dichloropropane	-		
1,3,5-Trimethylbenzene	-		
1,3-Dichlorobenzene	-		
1,3-Dichloropropane	-		
1,4-Dichlorobenzene	-		
2,2-Dichloropropane	-		
2-Butanone	-		
2-Chlorotoluene	-		
2-Hexanone	-		
4-Chlorotoluene	-		
4-Methyl-2-pentanone	-		
Acetone	-		
Benzene	-		
Bromobenzene	-		
Bromochloromethane	-		
Bromodichloromethane	-		
Bromoform	-		
Bromomethane	-		
Carbon disulfide	-		
Carbon tetrachloride	-		
Chlorobenzene	-		
Chloroethane	-		
Chloroform	-		
Chloromethane	-		
cis-1,2-Dichloroethene	-		
cis-1,3-Dichloropropene	-		
Dibromochloromethane	-		
Dibromomethane	-		
Dichlorodifluoromethane	-		
Ethylbenzene	-		
Hexachlorobutadiene	-		
Isopropylbenzene	-		
m+p-Xylene	-		
Methyl Tertiary Butyl Ether	-		
Methylene chloride	-		
n-Butylbenzene	-		
n-Propylbenzene	-		
Naphthalene	-		
o-Xylene	-		
4-Isopropyltoluene	-		
sec-Butylbenzene	-		
Styrene	-		
tert-Butylbenzene	-		
Tetrachloroethene	-		
Toluene	-		
trans-1,2-Dichloroethene	-		
trans-1,3-Dichloropropene	-		
Trichloroethene	-		
Trichlorofluoromethane	-		
Vinyl chloride	-		
Semivolatile Organic Compounds (mg/kg)			
1,2,4-Trichlorobenzene	-		
1,2-Dichlorobenzene	-		
1,3-Dichlorobenzene	-		
1,4-Dichlorobenzene	-		
2,4,5-Trichlorophenol	-		
2,4,6-Trichlorophenol	-		
2,4-Dichlorophenol	-		
2,4-Dimethylphenol	-		
2,4-Dinitrophenol	-		
2,4-Dinitrotoluene	-		
2,6-Dinitrotoluene	-		
2-Chloronaphthalene	-		
2-Chlorophenol	-		
2-Methylnaphthalene	-		
2-Methylphenol	-		
2-Nitroaniline	-		
2-Nitrophenol	-		
3,3-Dichlorobenzidine	-		
3-Nitroaniline	-		
4,6-Dinitro-2-methylphenol	-		
4-Bromophenyl-phenylether	-		
4-Chloro-3-methylphenol	-		
4-Chloroaniline	-		

TABLE B-T22
ANALYTICAL RESULTS FOR GRID T22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	T22		
Sample Name	P3IF-SS-IS-SO-T622		
Date Collected	June 16, 2023		
Semivolatile Organic Compounds (mg/kg), continued			
4-Chlorophenyl-phenylether	-		
4-Nitroaniline	-		
4-Nitrophenol	-		
Acenaphthene	-		
Acenaphthylene	-		
Anthracene	-		
Benzo(a)anthracene	-		
Benzo(a)pyrene	-		
Benzo(b)fluoranthene	-		
Benzo(g,h,i)perylene	-		
Benzo(k)fluoranthene	-		
Benzoic acid	-		
Benzyl Alcohol	-		
Bis(2-chloro-1-methylethyl) ether	-		
Bis(2-chloroethoxy)methane	-		
Bis(2-chloroethyl)ether	-		
Bis(2-ethylhexyl)phthalate	-		
Butyl benzyl phthalate	-		
Carbazole	-		
Chrysene	-		
Di-n-butyl phthalate	-		
Di-n-octyl phthalate	-		
Dibenz(a,h)anthracene	-		
Dibenzofuran	-		
Diethyl phthalate	-		
Dimethyl phthalate	-		
Fluoranthene	-		
Fluorene	-		
Hexachlorobenzene	-		
Hexachlorobutadiene	-		
Hexachloroethane	-		
Indeno(1,2,3-cd)pyrene	-		
Isophorone	-		
n-Nitroso-di-n-propylamine	-		
n-Nitrosodimethylamine	-		
n-Nitrosodiphenylamine	-		
Naphthalene	-		
Nitrobenzene	-		
Pentachlorophenol	-		
Phenanthrene	-		
Phenol	-		
Pyrene	-		
Explosives (mg/kg)			
1,3,5-Trinitrobenzene	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	UJ
2,4,6-Trinitrotoluene	0.075	0.075	UJ
2,4-Dinitrotoluene	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	UJ
2-Nitrotoluene	0.075	0.075	UJ
3-Nitrotoluene	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	0.075	0.075	UJ
4-Nitrotoluene	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	UJ
Nitroglycerin	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)			
Aroclor 1016	-		
Aroclor 1221	-		
Aroclor 1232	-		
Aroclor 1242	-		
Aroclor 1248	-		
Aroclor 1254	-		
Aroclor 1260	-		
Dioxins/Furans (mg/kg)			
Octachlorodibenzofuran (OCDF)	-		
Octachlorodibenzo-p-dioxin (OCDD)	-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	-		

TABLE B-T22
ANALYTICAL RESULTS FOR GRID T22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	T22		
Sample Name	P3IF-SS-IS-SO-T622		
Date Collected	June 16, 2023		
Metals (mg/kg)			
Aluminum	15000	4	
Antimony	0.14	0.15	J
Arsenic	1.8	0.3	
Barium	290	0.2	
Beryllium	0.7	0.3	J
Cadmium	0.85	0.08	
Calcium (Ca)	5600	15	
Chromium	14	0.2	
Cobalt	4.7	0.08	
Copper	170	0.2	
Iron (Fe)	8500	8	
Lead	15	0.05	
Magnesium (Mg)	5500	5	
Manganese (Mn)	420	0.08	
Mercury	0.026	0.042	J
Nickel	11	0.2	
Potassium (K)	1500	8	
Selenium	1	0.1	
Silver	0.17	0.05	
Sodium (Na)	51	8	
Thallium	0.076	0.05	J
Vanadium	13	0.1	
Zinc	40	1.5	
Other Parameters (mg/kg)			
Cyanide (CN-)	-		
Nitrate	-		
Perchlorate	-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-U22
ANALYTICAL RESULTS FOR GRID U22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	U22			U22			U22		
Sample Name	P3IF-BA-GRID-U022			P3IF-SS-IS-SO-U022			P3IF-SS-IS-SO-U522		
Date Collected	June 16, 2023			June 16, 2023			June 16, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)									
1,1,1,2-Tetrachloroethane	0.0027	0.0027	U	-			-		
1,1,1-Trichloroethane	0.0027	0.0027	U	-			-		
1,1,2,2-Tetrachloroethane	0.0027	0.0027	U	-			-		
1,1,2-Trichloroethane	0.0027	0.0027	U	-			-		
1,1-Dichloroethane	0.0027	0.0027	U	-			-		
1,1-Dichloroethene	0.0027	0.0027	U	-			-		
1,1-Dichloropropene	0.0027	0.0027	U	-			-		
1,2,3-Trichlorobenzene	0.0027	0.0027	U	-			-		
1,2,3-Trichloropropane	0.0067	0.0067	U	-			-		
1,2,4-Trichlorobenzene	0.0027	0.0027	U	-			-		
1,2,4-Trimethylbenzene	0.0027	0.0027	U	-			-		
1,2-Dibromo-3-chloropropane	0.0067	0.0067	U	-			-		
1,2-Dibromoethane	0.0027	0.0027	U	-			-		
1,2-Dichlorobenzene	0.0027	0.0027	U	-			-		
1,2-Dichloroethane	0.0027	0.0027	U	-			-		
1,2-Dichloropropane	0.0027	0.0027	U	-			-		
1,3,5-Trimethylbenzene	0.0027	0.0027	U	-			-		
1,3-Dichlorobenzene	0.0027	0.0027	U	-			-		
1,3-Dichloropropane	0.0027	0.0027	U	-			-		
1,4-Dichlorobenzene	0.0027	0.0027	U	-			-		
2,2-Dichloropropane	0.0027	0.0027	U	-			-		
2-Butanone	0.004	0.004	U	-			-		
2-Chlorotoluene	0.0027	0.0027	U	-			-		
2-Hexanone	0.0027	0.0027	U	-			-		
4-Chlorotoluene	0.0027	0.0027	U	-			-		
4-Methyl-2-pentanone	0.0027	0.0027	U	-			-		
Acetone	1.1	0.0067	J	-			-		
Benzene	0.0027	0.0027	U	-			-		
Bromobenzene	0.0027	0.0027	U	-			-		
Bromochloromethane	0.0027	0.0027	U	-			-		
Bromodichloromethane	0.0027	0.0027	U	-			-		
Bromoform	0.0027	0.0027	U	-			-		
Bromomethane	0.013	0.0027		-			-		
Carbon disulfide	0.0027	0.0027	U	-			-		
Carbon tetrachloride	0.0027	0.0027	U	-			-		
Chlorobenzene	0.0027	0.0027	U	-			-		
Chloroethane	0.0027	0.0027	U	-			-		
Chloroform	0.0027	0.0027	U	-			-		
Chloromethane	0.0067	0.0067	U	-			-		
cis-1,2-Dichloroethene	0.0027	0.0027	U	-			-		
cis-1,3-Dichloropropene	0.0027	0.0027	U	-			-		
Dibromochloromethane	0.0027	0.0027	U	-			-		
Dibromomethane	0.0027	0.0027	U	-			-		
Dichlorodifluoromethane	0.0027	0.0027	U	-			-		
Ethylbenzene	0.0027	0.0027	U	-			-		
Hexachlorobutadiene	0.0027	0.0027	U	-			-		
Isopropylbenzene	0.0027	0.0027	U	-			-		
m+p-Xylene	0.0067	0.0067	U	-			-		
Methyl Tertiary Butyl Ether	0.0027	0.0027	U	-			-		
Methylene chloride	0.013	0.013	U	-			-		
n-Butylbenzene	0.0027	0.0027	U	-			-		
n-Propylbenzene	0.0027	0.0027	U	-			-		
Naphthalene	0.0027	0.0027	U	-			-		
o-Xylene	0.0033	0.0033	U	-			-		
4-Isopropyltoluene	0.0027	0.0027	U	-			-		
sec-Butylbenzene	0.0027	0.0027	U	-			-		
Styrene	0.0027	0.0027	U	-			-		
tert-Butylbenzene	0.0027	0.0027	U	-			-		
Tetrachloroethene	0.0027	0.0027	U	-			-		
Toluene	0.0027	0.0027	U	-			-		
trans-1,2-Dichloroethene	0.0027	0.0027	U	-			-		
trans-1,3-Dichloropropene	0.0027	0.0027	U	-			-		
Trichloroethene	0.0027	0.0027	U	-			-		
Trichlorofluoromethane	0.0027	0.0027	U	-			-		
Vinyl chloride	0.0027	0.0027	U	-			-		
Semivolatile Organic Compounds (mg/kg)									
1,2,4-Trichlorobenzene	0.36	0.36	U	-			-		
1,2-Dichlorobenzene	0.36	0.36	U	-			-		
1,3-Dichlorobenzene	0.36	0.36	U	-			-		
1,4-Dichlorobenzene	0.36	0.36	U	-			-		
2,4,5-Trichlorophenol	0.36	0.36	U	-			-		
2,4,6-Trichlorophenol	0.36	0.36	U	-			-		
2,4-Dichlorophenol	0.36	0.36	U	-			-		
2,4-Dimethylphenol	0.36	0.36	U	-			-		
2,4-Dinitrophenol	0.36	0.36	U	-			-		
2,4-Dinitrotoluene	0.36	0.36	U	-			-		
2,6-Dinitrotoluene	0.36	0.36	U	-			-		
2-Chloronaphthalene	0.36	0.36	U	-			-		
2-Chlorophenol	0.36	0.36	U	-			-		
2-Methylnaphthalene	0.36	0.36	U	-			-		
2-Methylphenol	0.36	0.36	U	-			-		
2-Nitroaniline	0.36	0.36	U	-			-		
2-Nitrophenol	0.36	0.36	U	-			-		
3,3-Dichlorobenzidine	0.36	0.36	U	-			-		
3-Nitroaniline	0.36	0.36	U	-			-		
4,6-Dinitro-2-methylphenol	0.36	0.36	U	-			-		
4-Bromophenyl-phenylether	0.36	0.36	U	-			-		
4-Chloro-3-methylphenol	0.36	0.36	U	-			-		
4-Chloroaniline	0.36	0.36	U	-			-		

TABLE B-U22
ANALYTICAL RESULTS FOR GRID U22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	U22			U22			U22		
Sample Name	P3IF-BA-GRID-U022			P3IF-SS-IS-SO-U022			P3IF-SS-IS-SO-U522		
Date Collected	June 16, 2023			June 16, 2023			June 16, 2023		
Semivolatile Organic Compounds (mg/kg), continued									
4-Chlorophenyl-phenylether	0.36	0.36	U	-			-		
4-Nitroaniline	0.36	0.36	U	-			-		
4-Nitrophenol	0.36	0.36	U	-			-		
Acenaphthene	0.36	0.36	U	-			-		
Acenaphthylene	0.36	0.36	U	-			-		
Anthracene	0.36	0.36	U	-			-		
Benzo(a)anthracene	0.36	0.36	U	-			-		
Benzo(a)pyrene	0.28	0.28	U	-			-		
Benzo(b)fluoranthene	0.36	0.36	U	-			-		
Benzo(g,h,i)perylene	0.36	0.36	U	-			-		
Benzo(k)fluoranthene	0.36	0.36	U	-			-		
Benzoic acid	0.36	0.36	U	-			-		
Benzyl Alcohol	0.36	0.36	U	-			-		
Bis(2-chloro-1-methylethyl) ether	0.36	0.36	U	-			-		
Bis(2-chloroethoxy)methane	0.36	0.36	U	-			-		
Bis(2-chloroethyl)ether	0.36	0.36	U	-			-		
Bis(2-ethylhexyl)phthalate	0.36	0.36	U	-			-		
Butyl benzyl phthalate	0.36	0.36	U	-			-		
Carbazole	0.36	0.36	U	-			-		
Chrysene	0.36	0.36	U	-			-		
Di-n-butyl phthalate	0.36	0.36	U	-			-		
Di-n-octyl phthalate	0.36	0.36	U	-			-		
Dibenz(a,h)anthracene	**0.28**	**0.28**	**U**	-			-		
Dibenzofuran	0.36	0.36	U	-			-		
Diethyl phthalate	0.36	0.36	U	-			-		
Dimethyl phthalate	0.36	0.36	U	-			-		
Fluoranthene	0.36	0.36	U	-			-		
Fluorene	0.36	0.36	U	-			-		
Hexachlorobenzene	0.36	0.36	U	-			-		
Hexachlorobutadiene	0.36	0.36	U	-			-		
Hexachloroethane	0.36	0.36	U	-			-		
Indeno(1,2,3-cd)pyrene	0.36	0.36	U	-			-		
Isophorone	0.36	0.36	U	-			-		
n-Nitroso-di-n-propylamine	0.36	0.36	U	-			-		
n-Nitrosodimethylamine	0.022	0.022	UJ	-			-		
n-Nitrosodiphenylamine	0.36	0.36	U	-			-		
Naphthalene	0.36	0.36	U	-			-		
Nitrobenzene	0.36	0.36	U	-			-		
Pentachlorophenol	0.36	0.36	U	-			-		
Phenanthrene	0.36	0.36	U	-			-		
Phenol	0.36	0.36	U	-			-		
Pyrene	0.36	0.36	U	-			-		
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
1,3-Dinitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,4,6-Trinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,4-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,6-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
3-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
4-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	-			0.075	0.075	UJ	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	-			0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
Nitroglycerin	-			0.15	0.15	UJ	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	-			0.075	0.075	UJ	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	-			0.25	0.25	UJ	0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)									
Aroclor 1016	0.021	0.021	UJ	-			-		
Aroclor 1221	0.021	0.021	UJ	-			-		
Aroclor 1232	0.011	0.011	UJ	-			-		
Aroclor 1242	0.011	0.011	UJ	-			-		
Aroclor 1248	0.011	0.011	UJ	-			-		
Aroclor 1254	0.011	0.011	UJ	-			-		
Aroclor 1260	0.011	0.011	UJ	-			-		
Dioxins/Furans (mg/kg)									
Octachlorodibenzofuran (OCDF)	0.0000051	0.0000051	J	-			-		
Octachlorodibenzo-p-dioxin (OCDD)	0.000058	0.000013		-			-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.00000011	0.00000011	U	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	0.000013	0.0000063		-			-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.00000015	0.00000015	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.00000013	0.00000013	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000022	0.00000022	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.00000012	0.00000012	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.0000002	0.0000002	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.00000016	0.00000016	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000023	0.00000023	U	-			-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.0000002	0.0000002	U	-			-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.00000013	0.00000013	U	-			-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000081	0.000000081	U	-			-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.0000002	0.0000002	U	-			-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.00000029	0.00000029	U	-			-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.000000074	0.000000074	U	-			-		

TABLE B-U22
ANALYTICAL RESULTS FOR GRID U22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	U22			U22			U22		
Sample Name	P3IF-BA-GRID-U022			P3IF-SS-IS-SO-U022			P3IF-SS-IS-SO-U522		
Date Collected	June 16, 2023			June 16, 2023			June 16, 2023		
Metals (mg/kg)									
Aluminum	-			15000	4		16000	4	
Antimony	-			0.49	0.15		0.27	0.15	
Arsenic	-			1.5	0.3		1.5	0.3	
Barium	-			250	0.2		230	0.2	
Beryllium	-			0.56	0.3	J	0.59	0.3	J
Cadmium	-			1.8	0.08		1.2	0.08	
Calcium (Ca)	-			5000	15		4200	15	
Chromium	-			24	0.2	J	22	0.2	
Cobalt	-			4.7	0.08		4.9	0.08	
Copper	-			410	0.2		290	0.2	
Iron (Fe)	-			9000	8		8900	8	
Lead	-			16	0.05		13	0.05	
Magnesium (Mg)	-			5300	5		5800	5	
Manganese (Mn)	-			370	0.08		360	0.08	
Mercury	-			0.023	0.041	J	0.021	0.042	J
Nickel	-			16	0.2		14	0.2	
Potassium (K)	-			1400	8		1500	8	
Selenium	-			0.78	0.1		0.82	0.1	
Silver	-			0.27	0.05		0.21	0.05	
Sodium (Na)	-			68	8		60	8	
Thallium	-			0.064	0.05	J	0.058	0.05	J
Vanadium	-			10	0.1		11	0.1	
Zinc	-			47	1.5		38	1.5	
Other Parameters (mg/kg)									
Cyanide (CN-)	0.34	0.34	U	-			-		
Nitrate	58	2.2		-			-		
Perchlorate	0.021	0.021	U	-			-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-U22
ANALYTICAL RESULTS FOR GRID U22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	U22		
Sample Name	P3IF-SS-IS-SO-U622		
Date Collected	June 16, 2023		
	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)			
1,1,1,2-Tetrachloroethane	-		
1,1,1-Trichloroethane	-		
1,1,2,2-Tetrachloroethane	-		
1,1,2-Trichloroethane	-		
1,1-Dichloroethane	-		
1,1-Dichloroethene	-		
1,1-Dichloropropene	-		
1,2,3-Trichlorobenzene	-		
1,2,3-Trichloropropane	-		
1,2,4-Trichlorobenzene	-		
1,2,4-Trimethylbenzene	-		
1,2-Dibromo-3-chloropropane	-		
1,2-Dibromoethane	-		
1,2-Dichlorobenzene	-		
1,2-Dichloroethane	-		
1,2-Dichloropropane	-		
1,3,5-Trimethylbenzene	-		
1,3-Dichlorobenzene	-		
1,3-Dichloropropane	-		
1,4-Dichlorobenzene	-		
2,2-Dichloropropane	-		
2-Butanone	-		
2-Chlorotoluene	-		
2-Hexanone	-		
4-Chlorotoluene	-		
4-Methyl-2-pentanone	-		
Acetone	-		
Benzene	-		
Bromobenzene	-		
Bromochloromethane	-		
Bromodichloromethane	-		
Bromoform	-		
Bromomethane	-		
Carbon disulfide	-		
Carbon tetrachloride	-		
Chlorobenzene	-		
Chloroethane	-		
Chloroform	-		
Chloromethane	-		
cis-1,2-Dichloroethene	-		
cis-1,3-Dichloropropene	-		
Dibromochloromethane	-		
Dibromomethane	-		
Dichlorodifluoromethane	-		
Ethylbenzene	-		
Hexachlorobutadiene	-		
Isopropylbenzene	-		
m+p-Xylene	-		
Methyl Tertiary Butyl Ether	-		
Methylene chloride	-		
n-Butylbenzene	-		
n-Propylbenzene	-		
Naphthalene	-		
o-Xylene	-		
4-Isopropyltoluene	-		
sec-Butylbenzene	-		
Styrene	-		
tert-Butylbenzene	-		
Tetrachloroethene	-		
Toluene	-		
trans-1,2-Dichloroethene	-		
trans-1,3-Dichloropropene	-		
Trichloroethene	-		
Trichlorofluoromethane	-		
Vinyl chloride	-		
Semivolatile Organic Compounds (mg/kg)			
1,2,4-Trichlorobenzene	-		
1,2-Dichlorobenzene	-		
1,3-Dichlorobenzene	-		
1,4-Dichlorobenzene	-		
2,4,5-Trichlorophenol	-		
2,4,6-Trichlorophenol	-		
2,4-Dichlorophenol	-		
2,4-Dimethylphenol	-		
2,4-Dinitrophenol	-		
2,4-Dinitrotoluene	-		
2,6-Dinitrotoluene	-		
2-Chloronaphthalene	-		
2-Chlorophenol	-		
2-Methylnaphthalene	-		
2-Methylphenol	-		
2-Nitroaniline	-		
2-Nitrophenol	-		
3,3-Dichlorobenzidine	-		
3-Nitroaniline	-		
4,6-Dinitro-2-methylphenol	-		
4-Bromophenyl-phenylether	-		
4-Chloro-3-methylphenol	-		
4-Chloroaniline	-		

TABLE B-U22
ANALYTICAL RESULTS FOR GRID U22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	U22		
Sample Name	P3IF-SS-IS-SO-U622		
Date Collected	June 16, 2023		
Semivolatile Organic Compounds (mg/kg), continued			
4-Chlorophenyl-phenylether	-		
4-Nitroaniline	-		
4-Nitrophenol	-		
Acenaphthene	-		
Acenaphthylene	-		
Anthracene	-		
Benzo(a)anthracene	-		
Benzo(a)pyrene	-		
Benzo(b)fluoranthene	-		
Benzo(g,h,i)perylene	-		
Benzo(k)fluoranthene	-		
Benzoic acid	-		
Benzyl Alcohol	-		
Bis(2-chloro-1-methylethyl) ether	-		
Bis(2-chloroethoxy)methane	-		
Bis(2-chloroethyl)ether	-		
Bis(2-ethylhexyl)phthalate	-		
Butyl benzyl phthalate	-		
Carbazole	-		
Chrysene	-		
Di-n-butyl phthalate	-		
Di-n-octyl phthalate	-		
Dibenz(a,h)anthracene	-		
Dibenzofuran	-		
Diethyl phthalate	-		
Dimethyl phthalate	-		
Fluoranthene	-		
Fluorene	-		
Hexachlorobenzene	-		
Hexachlorobutadiene	-		
Hexachloroethane	-		
Indeno(1,2,3-cd)pyrene	-		
Isophorone	-		
n-Nitroso-di-n-propylamine	-		
n-Nitrosodimethylamine	-		
n-Nitrosodiphenylamine	-		
Naphthalene	-		
Nitrobenzene	-		
Pentachlorophenol	-		
Phenanthrene	-		
Phenol	-		
Pyrene	-		
Explosives (mg/kg)			
1,3,5-Trinitrobenzene	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	UJ
2,4,6-Trinitrotoluene	0.075	0.075	UJ
2,4-Dinitrotoluene	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	UJ
2-Nitrotoluene	0.075	0.075	UJ
3-Nitrotoluene	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	0.075	0.075	UJ
4-Nitrotoluene	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	UJ
Nitroglycerin	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)			
Aroclor 1016	-		
Aroclor 1221	-		
Aroclor 1232	-		
Aroclor 1242	-		
Aroclor 1248	-		
Aroclor 1254	-		
Aroclor 1260	-		
Dioxins/Furans (mg/kg)			
Octachlorodibenzofuran (OCDF)	-		
Octachlorodibenzo-p-dioxin (OCDD)	-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	-		

TABLE B-U22
ANALYTICAL RESULTS FOR GRID U22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	U22		
Sample Name	P3IF-SS-IS-SO-U622		
Date Collected	June 16, 2023		
Metals (mg/kg)			
Aluminum	17000	4	
Antimony	0.24	0.15	
Arsenic	1.4	0.3	
Barium	210	0.2	
Beryllium	0.54	0.3	J
Cadmium	1.3	0.08	
Calcium (Ca)	4000	15	
Chromium	62	0.2	J
Cobalt	5	0.08	
Copper	320	0.2	
Iron (Fe)	10000	8	
Lead	13	0.05	
Magnesium (Mg)	6200	5	
Manganese (Mn)	340	0.08	
Mercury	0.023	0.041	J
Nickel	15	0.2	
Potassium (K)	1500	8	
Selenium	0.84	0.1	
Silver	0.19	0.05	
Sodium (Na)	76	8	
Thallium	0.053	0.05	J
Vanadium	12	0.1	
Zinc	38	1.5	
Other Parameters (mg/kg)			
Cyanide (CN-)	-		
Nitrate	-		
Perchlorate	-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-V22
ANALYTICAL RESULTS FOR GRID V22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	V22			V22			V22		
Sample Name	P3IF-BA-GRID-V022			P3IF-SS-IS-SO-V022			P3IF-SS-IS-SO-V522		
Date Collected	June 19, 2023			June 19, 2023			June 19, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)									
1,1,1,2-Tetrachloroethane	0.0024	0.0024	U	-			-		
1,1,1-Trichloroethane	0.0024	0.0024	U	-			-		
1,1,2,2-Tetrachloroethane	0.0024	0.0024	U	-			-		
1,1,2-Trichloroethane	0.0024	0.0024	U	-			-		
1,1-Dichloroethane	0.0024	0.0024	U	-			-		
1,1-Dichloroethene	0.0024	0.0024	U	-			-		
1,1-Dichloropropene	0.0024	0.0024	U	-			-		
1,2,3-Trichlorobenzene	0.0024	0.0024	U	-			-		
1,2,3-Trichloropropane	0.0059	0.0059	U	-			-		
1,2,4-Trichlorobenzene	0.0024	0.0024	U	-			-		
1,2,4-Trimethylbenzene	0.0024	0.0024	U	-			-		
1,2-Dibromo-3-chloropropane	0.0059	0.0059	U	-			-		
1,2-Dibromoethane	0.0024	0.0024	U	-			-		
1,2-Dichlorobenzene	0.0024	0.0024	U	-			-		
1,2-Dichloroethane	0.0024	0.0024	U	-			-		
1,2-Dichloropropane	0.0024	0.0024	U	-			-		
1,3,5-Trimethylbenzene	0.0024	0.0024	U	-			-		
1,3-Dichlorobenzene	0.0024	0.0024	U	-			-		
1,3-Dichloropropane	0.0024	0.0024	U	-			-		
1,4-Dichlorobenzene	0.0024	0.0024	U	-			-		
2,2-Dichloropropane	0.0024	0.0024	U	-			-		
2-Butanone	0.0035	0.0035	U	-			-		
2-Chlorotoluene	0.0024	0.0024	U	-			-		
2-Hexanone	0.0024	0.0024	U	-			-		
4-Chlorotoluene	0.0024	0.0024	U	-			-		
4-Methyl-2-pentanone	0.0024	0.0024	U	-			-		
Acetone	0.12	0.0059		-			-		
Benzene	0.0024	0.0024	U	-			-		
Bromobenzene	0.0024	0.0024	U	-			-		
Bromochloromethane	0.0024	0.0024	U	-			-		
Bromodichloromethane	0.0024	0.0024	U	-			-		
Bromoform	0.0024	0.0024	U	-			-		
Bromomethane	0.0024	0.0024	U	-			-		
Carbon disulfide	0.0024	0.0024	U	-			-		
Carbon tetrachloride	0.0024	0.0024	U	-			-		
Chlorobenzene	0.0024	0.0024	U	-			-		
Chloroethane	0.0024	0.0024	U	-			-		
Chloroform	0.0024	0.0024	U	-			-		
Chloromethane	0.0059	0.0059	U	-			-		
cis-1,2-Dichloroethene	0.0024	0.0024	U	-			-		
cis-1,3-Dichloropropene	0.0024	0.0024	U	-			-		
Dibromochloromethane	0.0024	0.0024	U	-			-		
Dibromomethane	0.0024	0.0024	U	-			-		
Dichlorodifluoromethane	0.0024	0.0024	U	-			-		
Ethylbenzene	0.0024	0.0024	U	-			-		
Hexachlorobutadiene	0.0024	0.0024	U	-			-		
Isopropylbenzene	0.0024	0.0024	U	-			-		
m+p-Xylene	0.0059	0.0059	U	-			-		
Methyl Tertiary Butyl Ether	0.0024	0.0024	U	-			-		
Methylene chloride	0.012	0.012	U	-			-		
n-Butylbenzene	0.0024	0.0024	U	-			-		
n-Propylbenzene	0.0024	0.0024	U	-			-		
Naphthalene	0.0024	0.0024	U	-			-		
o-Xylene	0.003	0.003	U	-			-		
4-Isopropyltoluene	0.0024	0.0024	U	-			-		
sec-Butylbenzene	0.0024	0.0024	U	-			-		
Styrene	0.0024	0.0024	U	-			-		
tert-Butylbenzene	0.0024	0.0024	U	-			-		
Tetrachloroethene	0.0024	0.0024	U	-			-		
Toluene	0.0024	0.0024	U	-			-		
trans-1,2-Dichloroethene	0.0024	0.0024	U	-			-		
trans-1,3-Dichloropropene	0.0024	0.0024	U	-			-		
Trichloroethene	0.0024	0.0024	U	-			-		
Trichlorofluoromethane	0.0024	0.0024	U	-			-		
Vinyl chloride	0.0024	0.0024	U	-			-		
Semivolatile Organic Compounds (mg/kg)									
1,2,4-Trichlorobenzene	0.18	0.18	U	-			-		
1,2-Dichlorobenzene	0.18	0.18	U	-			-		
1,3-Dichlorobenzene	0.18	0.18	U	-			-		
1,4-Dichlorobenzene	0.18	0.18	U	-			-		
2,4,5-Trichlorophenol	0.18	0.18	U	-			-		
2,4,6-Trichlorophenol	0.18	0.18	U	-			-		
2,4-Dichlorophenol	0.18	0.18	U	-			-		
2,4-Dimethylphenol	0.18	0.18	U	-			-		
2,4-Dinitrophenol	0.18	0.18	U	-			-		
2,4-Dinitrotoluene	0.18	0.18	U	-			-		
2,6-Dinitrotoluene	0.18	0.18	U	-			-		
2-Chloronaphthalene	0.18	0.18	U	-			-		
2-Chlorophenol	0.18	0.18	U	-			-		
2-Methylnaphthalene	0.18	0.18	U	-			-		
2-Methylphenol	0.18	0.18	U	-			-		
2-Nitroaniline	0.18	0.18	U	-			-		
2-Nitrophenol	0.18	0.18	U	-			-		
3,3-Dichlorobenzidine	0.18	0.18	U	-			-		
3-Nitroaniline	0.18	0.18	U	-			-		
4,6-Dinitro-2-methylphenol	0.18	0.18	U	-			-		
4-Bromophenyl-phenylether	0.18	0.18	U	-			-		
4-Chloro-3-methylphenol	0.18	0.18	U	-			-		
4-Chloroaniline	0.18	0.18	U	-			-		

TABLE B-V22
ANALYTICAL RESULTS FOR GRID V22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	V22			V22			V22		
Sample Name	P3IF-BA-GRID-V022			P3IF-SS-IS-SO-V022			P3IF-SS-IS-SO-V522		
Date Collected	June 19, 2023			June 19, 2023			June 19, 2023		
Semivolatile Organic Compounds (mg/kg), continued									
4-Chlorophenyl-phenylether	0.18	0.18	U	-			-		
4-Nitroaniline	0.18	0.18	U	-			-		
4-Nitrophenol	0.18	0.18	U	-			-		
Acenaphthene	0.18	0.18	U	-			-		
Acenaphthylene	0.18	0.18	U	-			-		
Anthracene	0.18	0.18	U	-			-		
Benzo(a)anthracene	0.18	0.18	U	-			-		
Benzo(a)pyrene	0.14	0.14	U	-			-		
Benzo(b)fluoranthene	0.18	0.18	U	-			-		
Benzo(g,h,i)perylene	0.18	0.18	U	-			-		
Benzo(k)fluoranthene	0.18	0.18	U	-			-		
Benzoic acid	0.18	0.18	U	-			-		
Benzyl Alcohol	0.18	0.18	U	-			-		
Bis(2-chloro-1-methylethyl) ether	0.18	0.18	U	-			-		
Bis(2-chloroethoxy)methane	0.18	0.18	U	-			-		
Bis(2-chloroethyl)ether	0.18	0.18	U	-			-		
Bis(2-ethylhexyl)phthalate	0.18	0.18	U	-			-		
Butyl benzyl phthalate	0.18	0.18	U	-			-		
Carbazole	0.18	0.18	U	-			-		
Chrysene	0.18	0.18	U	-			-		
Di-n-butyl phthalate	0.18	0.18	U	-			-		
Di-n-octyl phthalate	0.18	0.18	U	-			-		
Dibenz(a,h)anthracene	0.14	0.14	U	-			-		
Dibenzofuran	0.18	0.18	U	-			-		
Diethyl phthalate	0.18	0.18	U	-			-		
Dimethyl phthalate	0.18	0.18	U	-			-		
Fluoranthene	0.18	0.18	U	-			-		
Fluorene	0.18	0.18	U	-			-		
Hexachlorobenzene	0.18	0.18	U	-			-		
Hexachlorobutadiene	0.18	0.18	U	-			-		
Hexachloroethane	0.18	0.18	U	-			-		
Indeno(1,2,3-cd)pyrene	0.18	0.18	U	-			-		
Isophorone	0.18	0.18	U	-			-		
n-Nitroso-di-n-propylamine	0.18	0.18	U	-			-		
n-Nitrosodimethylamine	0.021	0.021	UJ	-			-		
n-Nitrosodiphenylamine	0.18	0.18	U	-			-		
Naphthalene	0.18	0.18	U	-			-		
Nitrobenzene	0.18	0.18	U	-			-		
Pentachlorophenol	0.18	0.18	U	-			-		
Phenanthrene	0.18	0.18	U	-			-		
Phenol	0.18	0.18	U	-			-		
Pyrene	0.18	0.18	U	-			-		
Explosives (mg/kg)**									
1,3,5-Trinitrobenzene	-			0.075	0.075	U	0.075	0.075	U
1,3-Dinitrobenzene	-			0.075	0.075	U	0.075	0.075	U
2,4,6-Trinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2,4-Dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2,6-Dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2-Nitrotoluene	-			0.075	0.075	U	0.075	0.075	U
3-Nitrotoluene	-			0.075	0.075	U	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	-			0.075	0.075	U	0.17	0.075	
4-Nitrotoluene	-			0.075	0.075	U	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	-			0.075	0.075	U	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	-			0.075	0.075	U	0.075	0.075	U
Nitrobenzene	-			0.075	0.075	U	0.075	0.075	U
Nitroglycerin	-			0.15	0.15	U	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	-			0.075	0.075	U	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	-			0.25	0.25	U	0.25	0.25	U
Polychlorinated Biphenyls (mg/kg)									
Aroclor 1016	0.021	0.021	U	-			-		
Aroclor 1221	0.021	0.021	U	-			-		
Aroclor 1232	0.011	0.011	U	-			-		
Aroclor 1242	0.011	0.011	U	-			-		
Aroclor 1248	0.011	0.011	U	-			-		
Aroclor 1254	0.011	0.011	U	-			-		
Aroclor 1260	0.011	0.011	U	-			-		
Dioxins/Furans (mg/kg)									
Octachlorodibenzofuran (OCDF)	0.00000016	0.00000016	U	-			-		
Octachlorodibenzo-p-dioxin (OCDD)	0.0000054	0.0000054	U	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.0000003	0.0000003	U	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	0.0000011	0.0000011	U	-			-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.000000095	0.000000095	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000077	0.000000077	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000078	0.000000078	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000071	0.000000071	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000071	0.000000071	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.000000094	0.000000094	UJ	-			-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000013	0.00000013	U	-			-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.000000078	0.000000078	U	-			-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.000000056	0.000000056	U	-			-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000044	0.000000044	U	-			-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.000000081	0.000000081	U	-			-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.00000017	0.00000017	U	-			-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.000000035	0.000000035	U	-			-		

TABLE B-V22
ANALYTICAL RESULTS FOR GRID V22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	V22			V22			V22		
Sample Name	P3IF-BA-GRID-V022			P3IF-SS-IS-SO-V022			P3IF-SS-IS-SO-V522		
Date Collected	June 19, 2023			June 19, 2023			June 19, 2023		
Metals (mg/kg)									
Aluminum	-			13000	4		13000	4	
Antimony	-			0.11	0.15	J	0.11	0.15	J
Arsenic	-			0.97	0.3		0.91	0.3	
Barium	-			350	0.2		340	0.2	
Beryllium	-			0.93	0.3	J	0.85	0.3	J
Cadmium	-			0.79	0.08		0.79	0.08	
Calcium (Ca)	-			16000	15		18000	15	
Chromium	-			11	0.2		13	0.2	
Cobalt	-			4.3	0.08		4.1	0.08	
Copper	-			140	0.2		170	0.2	
Iron (Fe)	-			7400	8		7800	8	
Lead	-			12	0.05		12	0.05	
Magnesium (Mg)	-			4600	5		4700	5	
Manganese (Mn)	-			400	0.08		410	0.08	
Mercury	-			0.019	0.042	J	0.018	0.042	J
Nickel	-			12	0.2		12	0.2	
Potassium (K)	-			1400	8		1300	8	
Selenium	-			1.1	0.1		0.96	0.1	
Silver	-			0.13	0.05		0.16	0.05	
Sodium (Na)	-			44	8		47	8	
Thallium	-			0.057	0.05	J	0.057	0.05	J
Vanadium	-			6.5	0.1		6.6	0.1	
Zinc	-			27	1.5		28	1.5	
Other Parameters (mg/kg)									
Cyanide (CN-)	0.33	0.33	U	-			-		
Nitrate	1.8	2.1	J	-			-		
Perchlorate	0.002	0.002	U	-			-		

Notes:
**Explosives were resampled on March22, 2024. The explosive results from the original sample from June 2023 were all rejected.
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-V22
ANALYTICAL RESULTS FOR GRID V22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	V22		
Sample Name	P3IF-SS-IS-SO-V622		
Date Collected	June 19, 2023		
	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)			
1,1,1,2-Tetrachloroethane	-		
1,1,1-Trichloroethane	-		
1,1,2,2-Tetrachloroethane	-		
1,1,2-Trichloroethane	-		
1,1-Dichloroethane	-		
1,1-Dichloroethene	-		
1,1-Dichloropropene	-		
1,2,3-Trichlorobenzene	-		
1,2,3-Trichloropropane	-		
1,2,4-Trichlorobenzene	-		
1,2,4-Trimethylbenzene	-		
1,2-Dibromo-3-chloropropane	-		
1,2-Dibromoethane	-		
1,2-Dichlorobenzene	-		
1,2-Dichloroethane	-		
1,2-Dichloropropane	-		
1,3,5-Trimethylbenzene	-		
1,3-Dichlorobenzene	-		
1,3-Dichloropropane	-		
1,4-Dichlorobenzene	-		
2,2-Dichloropropane	-		
2-Butanone	-		
2-Chlorotoluene	-		
2-Hexanone	-		
4-Chlorotoluene	-		
4-Methyl-2-pentanone	-		
Acetone	-		
Benzene	-		
Bromobenzene	-		
Bromochloromethane	-		
Bromodichloromethane	-		
Bromoform	-		
Bromomethane	-		
Carbon disulfide	-		
Carbon tetrachloride	-		
Chlorobenzene	-		
Chloroethane	-		
Chloroform	-		
Chloromethane	-		
cis-1,2-Dichloroethene	-		
cis-1,3-Dichloropropene	-		
Dibromochloromethane	-		
Dibromomethane	-		
Dichlorodifluoromethane	-		
Ethylbenzene	-		
Hexachlorobutadiene	-		
Isopropylbenzene	-		
m+p-Xylene	-		
Methyl Tertiary Butyl Ether	-		
Methylene chloride	-		
n-Butylbenzene	-		
n-Propylbenzene	-		
Naphthalene	-		
o-Xylene	-		
4-Isopropyltoluene	-		
sec-Butylbenzene	-		
Styrene	-		
tert-Butylbenzene	-		
Tetrachloroethene	-		
Toluene	-		
trans-1,2-Dichloroethene	-		
trans-1,3-Dichloropropene	-		
Trichloroethene	-		
Trichlorofluoromethane	-		
Vinyl chloride	-		
Semivolatile Organic Compounds (mg/kg)			
1,2,4-Trichlorobenzene	-		
1,2-Dichlorobenzene	-		
1,3-Dichlorobenzene	-		
1,4-Dichlorobenzene	-		
2,4,5-Trichlorophenol	-		
2,4,6-Trichlorophenol	-		
2,4-Dichlorophenol	-		
2,4-Dimethylphenol	-		
2,4-Dinitrophenol	-		
2,4-Dinitrotoluene	-		
2,6-Dinitrotoluene	-		
2-Chloronaphthalene	-		
2-Chlorophenol	-		
2-Methylnaphthalene	-		
2-Methylphenol	-		
2-Nitroaniline	-		
2-Nitrophenol	-		
3,3-Dichlorobenzidine	-		
3-Nitroaniline	-		
4,6-Dinitro-2-methylphenol	-		
4-Bromophenyl-phenylether	-		
4-Chloro-3-methylphenol	-		
4-Chloroaniline	-		

TABLE B-V22
ANALYTICAL RESULTS FOR GRID V22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	V22		
Sample Name	P3IF-SS-IS-SO-V622		
Date Collected	June 19, 2023		
Semivolatile Organic Compounds (mg/kg), continued			
4-Chlorophenyl-phenylether	-		
4-Nitroaniline	-		
4-Nitrophenol	-		
Acenaphthene	-		
Acenaphthylene	-		
Anthracene	-		
Benzo(a)anthracene	-		
Benzo(a)pyrene	-		
Benzo(b)fluoranthene	-		
Benzo(g,h,i)perylene	-		
Benzo(k)fluoranthene	-		
Benzoic acid	-		
Benzyl Alcohol	-		
Bis(2-chloro-1-methylethyl) ether	-		
Bis(2-chloroethoxy)methane	-		
Bis(2-chloroethyl)ether	-		
Bis(2-ethylhexyl)phthalate	-		
Butyl benzyl phthalate	-		
Carbazole	-		
Chrysene	-		
Di-n-butyl phthalate	-		
Di-n-octyl phthalate	-		
Dibenz(a,h)anthracene	-		
Dibenzofuran	-		
Diethyl phthalate	-		
Dimethyl phthalate	-		
Fluoranthene	-		
Fluorene	-		
Hexachlorobenzene	-		
Hexachlorobutadiene	-		
Hexachloroethane	-		
Indeno(1,2,3-cd)pyrene	-		
Isophorone	-		
n-Nitroso-di-n-propylamine	-		
n-Nitrosodimethylamine	-		
n-Nitrosodiphenylamine	-		
Naphthalene	-		
Nitrobenzene	-		
Pentachlorophenol	-		
Phenanthrene	-		
Phenol	-		
Pyrene	-		
Explosives (mg/kg)**			
1,3,5-Trinitrobenzene	0.075	0.075	U
1,3-Dinitrobenzene	0.075	0.075	U
2,4,6-Trinitrotoluene	0.075	0.075	U
2,4-Dinitrotoluene	0.075	0.075	U
2,6-Dinitrotoluene	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	0.075	0.075	U
2-Nitrotoluene	0.075	0.075	U
3-Nitrotoluene	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	0.14	0.075	
4-Nitrotoluene	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	U
Nitrobenzene	0.075	0.075	U
Nitroglycerin	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	0.25	0.25	U
Polychlorinated Biphenyls (mg/kg)			
Aroclor 1016	-		
Aroclor 1221	-		
Aroclor 1232	-		
Aroclor 1242	-		
Aroclor 1248	-		
Aroclor 1254	-		
Aroclor 1260	-		
Dioxins/Furans (mg/kg)			
Octachlorodibenzofuran (OCDF)	-		
Octachlorodibenzo-p-dioxin (OCDD)	-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	-		

TABLE B-V22
ANALYTICAL RESULTS FOR GRID V22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	V22		
Sample Name	P3IF-SS-IS-SO-V622		
Date Collected	June 19, 2023		
Metals (mg/kg)			
Aluminum	15000	4	
Antimony	0.17	0.15	J
Arsenic	1.1	0.3	
Barium	410	0.2	
Beryllium	1	0.3	
Cadmium	0.76	0.08	
Calcium (Ca)	24000	15	
Chromium	14	0.2	
Cobalt	4.4	0.08	
Copper	180	0.2	
Iron (Fe)	9200	8	
Lead	15	0.05	
Magnesium (Mg)	5200	5	
Manganese (Mn)	490	0.08	
Mercury	0.019	0.042	J
Nickel	13	0.2	
Potassium (K)	1700	8	
Selenium	1.1	0.1	
Silver	0.15	0.05	
Sodium (Na)	50	8	
Thallium	0.068	0.05	J
Vanadium	10	0.1	
Zinc	28	1.5	
Other Parameters (mg/kg)			
Cyanide (CN-)	-		
Nitrate	-		
Perchlorate	-		

Notes:
**Explosives were resampled on March22, 2024. The explosive r
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-W22
ANALYTICAL RESULTS FOR GRID W22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	W22			W22			W22		
Sample Name	P3IF-BA-GRID-W022			P3IF-SS-IS-SO-W022			P3IF-SS-IS-SO-W522		
Date Collected	June 19, 2023			June 19, 2023			June 19, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)									
1,1,1,2-Tetrachloroethane	0.0022	0.0022	U	-			-		
1,1,1-Trichloroethane	0.0022	0.0022	U	-			-		
1,1,2,2-Tetrachloroethane	0.0022	0.0022	U	-			-		
1,1,2-Trichloroethane	0.0022	0.0022	U	-			-		
1,1-Dichloroethane	0.0022	0.0022	U	-			-		
1,1-Dichloroethene	0.0022	0.0022	U	-			-		
1,1-Dichloropropene	0.0022	0.0022	U	-			-		
1,2,3-Trichlorobenzene	0.0022	0.0022	U	-			-		
1,2,3-Trichloropropane	0.0054	0.0054	U	-			-		
1,2,4-Trichlorobenzene	0.0022	0.0022	U	-			-		
1,2,4-Trimethylbenzene	0.0022	0.0022	U	-			-		
1,2-Dibromo-3-chloropropane	0.0054	0.0054	U	-			-		
1,2-Dibromoethane	0.0022	0.0022	U	-			-		
1,2-Dichlorobenzene	0.0022	0.0022	U	-			-		
1,2-Dichloroethane	0.0022	0.0022	U	-			-		
1,2-Dichloropropane	0.0022	0.0022	U	-			-		
1,3,5-Trimethylbenzene	0.0022	0.0022	U	-			-		
1,3-Dichlorobenzene	0.0022	0.0022	U	-			-		
1,3-Dichloropropane	0.0022	0.0022	U	-			-		
1,4-Dichlorobenzene	0.0022	0.0022	U	-			-		
2,2-Dichloropropane	0.0022	0.0022	U	-			-		
2-Butanone	0.0032	0.0032	U	-			-		
2-Chlorotoluene	0.0022	0.0022	U	-			-		
2-Hexanone	0.0022	0.0022	U	-			-		
4-Chlorotoluene	0.0022	0.0022	U	-			-		
4-Methyl-2-pentanone	0.0022	0.0022	U	-			-		
Acetone	0.11	0.0054		-			-		
Benzene	0.0022	0.0022	U	-			-		
Bromobenzene	0.0022	0.0022	U	-			-		
Bromochloromethane	0.0022	0.0022	U	-			-		
Bromodichloromethane	0.0022	0.0022	U	-			-		
Bromoform	0.0022	0.0022	U	-			-		
Bromomethane	0.0022	0.0022	U	-			-		
Carbon disulfide	0.0022	0.0022	U	-			-		
Carbon tetrachloride	0.0022	0.0022	U	-			-		
Chlorobenzene	0.0022	0.0022	U	-			-		
Chloroethane	0.0022	0.0022	U	-			-		
Chloroform	0.0022	0.0022	U	-			-		
Chloromethane	0.0054	0.0054	U	-			-		
cis-1,2-Dichloroethene	0.0022	0.0022	U	-			-		
cis-1,3-Dichloropropene	0.0022	0.0022	U	-			-		
Dibromochloromethane	0.0022	0.0022	U	-			-		
Dibromomethane	0.0022	0.0022	U	-			-		
Dichlorodifluoromethane	0.0022	0.0022	U	-			-		
Ethylbenzene	0.0022	0.0022	U	-			-		
Hexachlorobutadiene	0.0022	0.0022	U	-			-		
Isopropylbenzene	0.0022	0.0022	U	-			-		
m+p-Xylene	0.0054	0.0054	U	-			-		
Methyl Tertiary Butyl Ether	0.0022	0.0022	U	-			-		
Methylene chloride	0.011	0.011	U	-			-		
n-Butylbenzene	0.0022	0.0022	U	-			-		
n-Propylbenzene	0.0022	0.0022	U	-			-		
Naphthalene	0.0022	0.0022	U	-			-		
o-Xylene	0.0027	0.0027	U	-			-		
4-Isopropyltoluene	0.0022	0.0022	U	-			-		
sec-Butylbenzene	0.0022	0.0022	U	-			-		
Styrene	0.0022	0.0022	U	-			-		
tert-Butylbenzene	0.0022	0.0022	U	-			-		
Tetrachloroethene	0.0022	0.0022	U	-			-		
Toluene	0.0022	0.0022	U	-			-		
trans-1,2-Dichloroethene	0.0022	0.0022	U	-			-		
trans-1,3-Dichloropropene	0.0022	0.0022	U	-			-		
Trichloroethene	0.0022	0.0022	U	-			-		
Trichlorofluoromethane	0.0022	0.0022	U	-			-		
Vinyl chloride	0.0022	0.0022	U	-			-		
Semivolatile Organic Compounds (mg/kg)									
1,2,4-Trichlorobenzene	0.2	0.2	U	-			-		
1,2-Dichlorobenzene	0.2	0.2	U	-			-		
1,3-Dichlorobenzene	0.2	0.2	U	-			-		
1,4-Dichlorobenzene	0.2	0.2	U	-			-		
2,4,5-Trichlorophenol	0.2	0.2	U	-			-		
2,4,6-Trichlorophenol	0.2	0.2	U	-			-		
2,4-Dichlorophenol	0.2	0.2	U	-			-		
2,4-Dimethylphenol	0.2	0.2	U	-			-		
2,4-Dinitrophenol	0.2	0.2	U	-			-		
2,4-Dinitrotoluene	0.2	0.2	U	-			-		
2,6-Dinitrotoluene	0.2	0.2	U	-			-		
2-Chloronaphthalene	0.2	0.2	U	-			-		
2-Chlorophenol	0.2	0.2	U	-			-		
2-Methylnaphthalene	0.2	0.2	U	-			-		
2-Methylphenol	0.2	0.2	U	-			-		
2-Nitroaniline	0.2	0.2	U	-			-		
2-Nitrophenol	0.2	0.2	U	-			-		
3,3-Dichlorobenzidine	0.2	0.2	U	-			-		
3-Nitroaniline	0.2	0.2	U	-			-		
4,6-Dinitro-2-methylphenol	0.2	0.2	U	-			-		
4-Bromophenyl-phenylether	0.2	0.2	U	-			-		
4-Chloro-3-methylphenol	0.2	0.2	U	-			-		
4-Chloroaniline	0.2	0.2	U	-			-		

TABLE B-W22
ANALYTICAL RESULTS FOR GRID W22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	W22			W22			W22		
Sample Name	P3IF-BA-GRID-W022			P3IF-SS-IS-SO-W022			P3IF-SS-IS-SO-W522		
Date Collected	June 19, 2023			June 19, 2023			June 19, 2023		
Semivolatile Organic Compounds (mg/kg), continued									
4-Chlorophenyl-phenylether	0.2	0.2	U	-			-		
4-Nitroaniline	0.2	0.2	U	-			-		
4-Nitrophenol	0.2	0.2	U	-			-		
Acenaphthene	0.2	0.2	U	-			-		
Acenaphthylene	0.2	0.2	U	-			-		
Anthracene	0.2	0.2	U	-			-		
Benzo(a)anthracene	0.2	0.2	U	-			-		
Benzo(a)pyrene	0.16	0.16	U	-			-		
Benzo(b)fluoranthene	0.2	0.2	U	-			-		
Benzo(g,h,i)perylene	0.2	0.2	U	-			-		
Benzo(k)fluoranthene	0.2	0.2	U	-			-		
Benzoic acid	0.2	0.2	U	-			-		
Benzyl Alcohol	0.2	0.2	U	-			-		
Bis(2-chloro-1-methylethyl) ether	0.2	0.2	U	-			-		
Bis(2-chloroethoxy)methane	0.2	0.2	U	-			-		
Bis(2-chloroethyl)ether	0.2	0.2	U	-			-		
Bis(2-ethylhexyl)phthalate	0.2	0.2	U	-			-		
Butyl benzyl phthalate	0.2	0.2	U	-			-		
Carbazole	0.2	0.2	U	-			-		
Chrysene	0.2	0.2	U	-			-		
Di-n-butyl phthalate	0.2	0.2	U	-			-		
Di-n-octyl phthalate	0.2	0.2	U	-			-		
Dibenz(a,h)anthracene	**0.16**	**0.16**	**U**	-			-		
Dibenzofuran	0.2	0.2	U	-			-		
Diethyl phthalate	0.2	0.2	U	-			-		
Dimethyl phthalate	0.2	0.2	U	-			-		
Fluoranthene	0.2	0.2	U	-			-		
Fluorene	0.2	0.2	U	-			-		
Hexachlorobenzene	0.2	0.2	U	-			-		
Hexachlorobutadiene	0.2	0.2	U	-			-		
Hexachloroethane	0.2	0.2	U	-			-		
Indeno(1,2,3-cd)pyrene	0.2	0.2	U	-			-		
Isophorone	0.2	0.2	U	-			-		
n-Nitroso-di-n-propylamine	0.2	0.2	U	-			-		
n-Nitrosodimethylamine	**0.024**	**0.024**	**UJ**	-			-		
n-Nitrosodiphenylamine	0.2	0.2	U	-			-		
Naphthalene	0.2	0.2	U	-			-		
Nitrobenzene	0.2	0.2	U	-			-		
Pentachlorophenol	0.2	0.2	U	-			-		
Phenanthrene	0.2	0.2	U	-			-		
Phenol	0.2	0.2	U	-			-		
Pyrene	0.2	0.2	U	-			-		
Explosives (mg/kg)**									
1,3,5-Trinitrobenzene	-			0.075	0.075	U	0.075	0.075	U
1,3-Dinitrobenzene	-			0.075	0.075	U	0.075	0.075	U
2,4,6-Trinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2,4-Dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2,6-Dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	-			0.075	0.075	U	0.075	0.075	U
2-Nitrotoluene	-			0.075	0.075	U	0.075	0.075	U
3-Nitrotoluene	-			0.075	0.075	U	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	-			0.13	0.075		0.14	0.075	
4-Nitrotoluene	-			0.075	0.075	U	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	-			0.075	0.075	U	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	-			0.075	0.075	U	0.075	0.075	U
Nitrobenzene	-			0.075	0.075	U	0.075	0.075	U
Nitroglycerin	-			0.15	0.15	U	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	-			0.075	0.075	U	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	-			0.25	0.25	U	0.25	0.25	U
Polychlorinated Biphenyls (mg/kg)									
Aroclor 1016	0.024	0.024	U	-			-		
Aroclor 1221	0.024	0.024	U	-			-		
Aroclor 1232	0.012	0.012	U	-			-		
Aroclor 1242	0.012	0.012	U	-			-		
Aroclor 1248	0.012	0.012	U	-			-		
Aroclor 1254	0.012	0.012	U	-			-		
Aroclor 1260	0.012	0.012	U	-			-		
Dioxins/Furans (mg/kg)									
Octachlorodibenzofuran (OCDF)	0.00000019	0.00000019	J	-			-		
Octachlorodibenzo-p-dioxin (OCDD)	0.0000049	0.0000049	J	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.00000007	0.00000007	U	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	0.00000054	0.00000054	U	-			-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.00000009	0.00000009	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000036	0.000000036	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000051	0.000000051	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000033	0.000000033	J	-			-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000036	0.000000036	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.000000051	0.000000051	UJ	-			-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000038	0.000000038	U	-			-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.000000089	0.000000089	U	-			-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.000000023	0.000000023	U	-			-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.00000018	0.00000018	J	-			-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000021	0.00000021	J	-			-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.00000057	0.00000057	J	-			-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.000000068	0.000000068	U	-			-		

TABLE B-W22
ANALYTICAL RESULTS FOR GRID W22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	W22			W22			W22		
Sample Name	P3IF-BA-GRID-W022			P3IF-SS-IS-SO-W022			P3IF-SS-IS-SO-W522		
Date Collected	June 19, 2023			June 19, 2023			June 19, 2023		
Metals (mg/kg)									
Aluminum	-			15000	4		18000	4	
Antimony	-			0.13	0.15	J	0.15	0.15	U
Arsenic	-			1.1	0.3		1.2	0.3	
Barium	-			470	0.2		430	0.2	
Beryllium	-			1	0.3		1	0.3	
Cadmium	-			0.81	0.08		0.77	0.08	
Calcium (Ca)	-			34000	15		37000	15	
Chromium	-			12	0.2		14	0.2	
Cobalt	-			4.4	0.08		4.9	0.08	
Copper	-			120	0.2		130	0.2	
Iron (Fe)	-			8500	8		9600	8	
Lead	-			15	0.05		13	0.05	
Magnesium (Mg)	-			4800	5		5600	5	
Manganese (Mn)	-			610	0.08		670	0.08	
Mercury	-			0.019	0.041	J	0.021	0.041	J
Nickel	-			12	0.2		13	0.2	
Potassium (K)	-			1600	8		2100	8	
Selenium	-			0.92	0.1		1.1	0.1	
Silver	-			0.12	0.05		0.11	0.05	
Sodium (Na)	-			39	8		54	8	
Thallium	-			0.067	0.05	J	0.069	0.05	J
Vanadium	-			7.8	0.1		9.7	0.1	
Zinc	-			24	1.5		28	1.5	
Other Parameters (mg/kg)									
Cyanide (CN-)	0.38	0.38	U	-			-		
Nitrate	2.5	2.4	J	-			-		
Perchlorate	0.0023	0.0023	U	-			-		

Notes:
**Explosives were resampled on March22, 2024. The explosive results from the original sample from June 2023 were all rejected.
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-W22
ANALYTICAL RESULTS FOR GRID W22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	W22		
Sample Name	P3IF-SS-IS-SO-W622		
Date Collected	June 19, 2023		
	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)			
1,1,1,2-Tetrachloroethane	-		
1,1,1-Trichloroethane	-		
1,1,2,2-Tetrachloroethane	-		
1,1,2-Trichloroethane	-		
1,1-Dichloroethane	-		
1,1-Dichloroethene	-		
1,1-Dichloropropene	-		
1,2,3-Trichlorobenzene	-		
1,2,3-Trichloropropane	-		
1,2,4-Trichlorobenzene	-		
1,2,4-Trimethylbenzene	-		
1,2-Dibromo-3-chloropropane	-		
1,2-Dibromoethane	-		
1,2-Dichlorobenzene	-		
1,2-Dichloroethane	-		
1,2-Dichloropropane	-		
1,3,5-Trimethylbenzene	-		
1,3-Dichlorobenzene	-		
1,3-Dichloropropane	-		
1,4-Dichlorobenzene	-		
2,2-Dichloropropane	-		
2-Butanone	-		
2-Chlorotoluene	-		
2-Hexanone	-		
4-Chlorotoluene	-		
4-Methyl-2-pentanone	-		
Acetone	-		
Benzene	-		
Bromobenzene	-		
Bromochloromethane	-		
Bromodichloromethane	-		
Bromoform	-		
Bromomethane	-		
Carbon disulfide	-		
Carbon tetrachloride	-		
Chlorobenzene	-		
Chloroethane	-		
Chloroform	-		
Chloromethane	-		
cis-1,2-Dichloroethene	-		
cis-1,3-Dichloropropene	-		
Dibromochloromethane	-		
Dibromomethane	-		
Dichlorodifluoromethane	-		
Ethylbenzene	-		
Hexachlorobutadiene	-		
Isopropylbenzene	-		
m+p-Xylene	-		
Methyl Tertiary Butyl Ether	-		
Methylene chloride	-		
n-Butylbenzene	-		
n-Propylbenzene	-		
Naphthalene	-		
o-Xylene	-		
4-Isopropyltoluene	-		
sec-Butylbenzene	-		
Styrene	-		
tert-Butylbenzene	-		
Tetrachloroethene	-		
Toluene	-		
trans-1,2-Dichloroethene	-		
trans-1,3-Dichloropropene	-		
Trichloroethene	-		
Trichlorofluoromethane	-		
Vinyl chloride	-		
Semivolatile Organic Compounds (mg/kg)			
1,2,4-Trichlorobenzene	-		
1,2-Dichlorobenzene	-		
1,3-Dichlorobenzene	-		
1,4-Dichlorobenzene	-		
2,4,5-Trichlorophenol	-		
2,4,6-Trichlorophenol	-		
2,4-Dichlorophenol	-		
2,4-Dimethylphenol	-		
2,4-Dinitrophenol	-		
2,4-Dinitrotoluene	-		
2,6-Dinitrotoluene	-		
2-Chloronaphthalene	-		
2-Chlorophenol	-		
2-Methylnaphthalene	-		
2-Methylphenol	-		
2-Nitroaniline	-		
2-Nitrophenol	-		
3,3-Dichlorobenzidine	-		
3-Nitroaniline	-		
4,6-Dinitro-2-methylphenol	-		
4-Bromophenyl-phenylether	-		
4-Chloro-3-methylphenol	-		
4-Chloroaniline	-		

TABLE B-W22
ANALYTICAL RESULTS FOR GRID W22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	W22		
Sample Name	P3IF-SS-IS-SO-W622		
Date Collected	June 19, 2023		
Semivolatile Organic Compounds (mg/kg), continued			
4-Chlorophenyl-phenylether	-		
4-Nitroaniline	-		
4-Nitrophenol	-		
Acenaphthene	-		
Acenaphthylene	-		
Anthracene	-		
Benzo(a)anthracene	-		
Benzo(a)pyrene	-		
Benzo(b)fluoranthene	-		
Benzo(g,h,i)perylene	-		
Benzo(k)fluoranthene	-		
Benzoic acid	-		
Benzyl Alcohol	-		
Bis(2-chloro-1-methylethyl) ether	-		
Bis(2-chloroethoxy)methane	-		
Bis(2-chloroethyl)ether	-		
Bis(2-ethylhexyl)phthalate	-		
Butyl benzyl phthalate	-		
Carbazole	-		
Chrysene	-		
Di-n-butyl phthalate	-		
Di-n-octyl phthalate	-		
Dibenz(a,h)anthracene	-		
Dibenzofuran	-		
Diethyl phthalate	-		
Dimethyl phthalate	-		
Fluoranthene	-		
Fluorene	-		
Hexachlorobenzene	-		
Hexachlorobutadiene	-		
Hexachloroethane	-		
Indeno(1,2,3-cd)pyrene	-		
Isophorone	-		
n-Nitroso-di-n-propylamine	-		
n-Nitrosodimethylamine	-		
n-Nitrosodiphenylamine	-		
Naphthalene	-		
Nitrobenzene	-		
Pentachlorophenol	-		
Phenanthrene	-		
Phenol	-		
Pyrene	-		
Explosives (mg/kg)**			
1,3,5-Trinitrobenzene	0.075	0.075	U
1,3-Dinitrobenzene	0.075	0.075	U
2,4,6-Trinitrotoluene	0.075	0.075	U
2,4-Dinitrotoluene	0.075	0.075	U
2,6-Dinitrotoluene	0.075	0.075	U
2-Amino-4,6-dinitrotoluene	0.075	0.075	U
2-Nitrotoluene	0.075	0.075	U
3-Nitrotoluene	0.075	0.075	U
4-Amino-2,6-Dinitrotoluene	0.19	0.075	
4-Nitrotoluene	0.075	0.075	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	U
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	U
Nitrobenzene	0.075	0.075	U
Nitroglycerin	0.15	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	U
Pentaerythritol tetranitrate (PETN)	0.25	0.25	U
Polychlorinated Biphenyls (mg/kg)			
Aroclor 1016	-		
Aroclor 1221	-		
Aroclor 1232	-		
Aroclor 1242	-		
Aroclor 1248	-		
Aroclor 1254	-		
Aroclor 1260	-		
Dioxins/Furans (mg/kg)			
Octachlorodibenzofuran (OCDF)	-		
Octachlorodibenzo-p-dioxin (OCDD)	-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	-		

TABLE B-W22
ANALYTICAL RESULTS FOR GRID W22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	W22		
Sample Name	P3IF-SS-IS-SO-W622		
Date Collected	June 19, 2023		
Metals (mg/kg)			
Aluminum	16000	4	
Antimony	0.15	0.15	UJ
Arsenic	1.1	0.3	J
Barium	440	0.2	
Beryllium	1	0.3	
Cadmium	0.69	0.08	
Calcium (Ca)	32000	15	
Chromium	13	0.2	
Cobalt	4.5	0.08	J
Copper	120	0.2	
Iron (Fe)	8700	8	
Lead	14	0.05	
Magnesium (Mg)	5100	5	J
Manganese (Mn)	600	0.08	
Mercury	0.025	0.042	J
Nickel	12	0.2	
Potassium (K)	1800	8	
Selenium	1.1	0.1	J
Silver	0.13	0.05	
Sodium (Na)	42	8	
Thallium	0.07	0.05	J
Vanadium	7.9	0.1	
Zinc	27	1.5	
Other Parameters (mg/kg)			
Cyanide (CN-)	-		
Nitrate	-		
Perchlorate	-		

Notes:
**Explosives were resampled on March22, 2024. The explosive r
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-W23
ANALYTICAL RESULTS FOR GRID W23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	W23			W23			W23		
Sample Name	P3IF-BA-GRID W023			P3IF-SS-IS-SO-W023			P3IF-SS-IS-SO-W523		
Date Collected	June 19, 2023			June 19, 2023			June 19, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)									
1,1,1,2-Tetrachloroethane	0.0019	0.0019	U	-			-		
1,1,1-Trichloroethane	0.0019	0.0019	U	-			-		
1,1,2,2-Tetrachloroethane	0.0019	0.0019	U	-			-		
1,1,2-Trichloroethane	0.0019	0.0019	U	-			-		
1,1-Dichloroethane	0.0019	0.0019	U	-			-		
1,1-Dichloroethene	0.0019	0.0019	U	-			-		
1,1-Dichloropropene	0.0019	0.0019	U	-			-		
1,2,3-Trichlorobenzene	0.0019	0.0019	U	-			-		
1,2,3-Trichloropropane	0.0048	0.0048	U	-			-		
1,2,4-Trichlorobenzene	0.0019	0.0019	U	-			-		
1,2,4-Trimethylbenzene	0.0019	0.0019	U	-			-		
1,2-Dibromo-3-chloropropane	0.0048	0.0048	U	-			-		
1,2-Dibromoethane	0.0019	0.0019	U	-			-		
1,2-Dichlorobenzene	0.0019	0.0019	U	-			-		
1,2-Dichloroethane	0.0019	0.0019	U	-			-		
1,2-Dichloropropane	0.0019	0.0019	U	-			-		
1,3,5-Trimethylbenzene	0.0019	0.0019	U	-			-		
1,3-Dichlorobenzene	0.0019	0.0019	U	-			-		
1,3-Dichloropropane	0.0019	0.0019	U	-			-		
1,4-Dichlorobenzene	0.0019	0.0019	U	-			-		
2,2-Dichloropropane	0.0019	0.0019	U	-			-		
2-Butanone	0.0029	0.0029	U	-			-		
2-Chlorotoluene	0.0019	0.0019	U	-			-		
2-Hexanone	0.0019	0.0019	U	-			-		
4-Chlorotoluene	0.0019	0.0019	U	-			-		
4-Methyl-2-pentanone	0.0019	0.0019	U	-			-		
Acetone	0.26	0.0048		-			-		
Benzene	0.0019	0.0019	U	-			-		
Bromobenzene	0.0019	0.0019	U	-			-		
Bromochloromethane	0.0019	0.0019	U	-			-		
Bromodichloromethane	0.0019	0.0019	U	-			-		
Bromoform	0.0019	0.0019	U	-			-		
Bromomethane	0.0019	0.0019	U	-			-		
Carbon disulfide	0.0019	0.0019	U	-			-		
Carbon tetrachloride	0.0019	0.0019	U	-			-		
Chlorobenzene	0.0019	0.0019	U	-			-		
Chloroethane	0.0019	0.0019	U	-			-		
Chloroform	0.0019	0.0019	U	-			-		
Chloromethane	0.0048	0.0048	U	-			-		
cis-1,2-Dichloroethene	0.0019	0.0019	U	-			-		
cis-1,3-Dichloropropene	0.0019	0.0019	U	-			-		
Dibromochloromethane	0.0019	0.0019	U	-			-		
Dibromomethane	0.0019	0.0019	U	-			-		
Dichlorodifluoromethane	0.0019	0.0019	U	-			-		
Ethylbenzene	0.0019	0.0019	U	-			-		
Hexachlorobutadiene	0.0019	0.0019	U	-			-		
Isopropylbenzene	0.0019	0.0019	U	-			-		
m+p-Xylene	0.0048	0.0048	U	-			-		
Methyl Tertiary Butyl Ether	0.0019	0.0019	U	-			-		
Methylene chloride	0.0097	0.0097	U	-			-		
n-Butylbenzene	0.0019	0.0019	U	-			-		
n-Propylbenzene	0.0019	0.0019	U	-			-		
Naphthalene	0.0019	0.0019	U	-			-		
o-Xylene	0.0024	0.0024	U	-			-		
4-Isopropyltoluene	0.0019	0.0019	U	-			-		
sec-Butylbenzene	0.0019	0.0019	U	-			-		
Styrene	0.0019	0.0019	U	-			-		
tert-Butylbenzene	0.0019	0.0019	U	-			-		
Tetrachloroethene	0.0019	0.0019	U	-			-		
Toluene	0.0019	0.0019	U	-			-		
trans-1,2-Dichloroethene	0.0019	0.0019	U	-			-		
trans-1,3-Dichloropropene	0.0019	0.0019	U	-			-		
Trichloroethene	0.0019	0.0019	U	-			-		
Trichlorofluoromethane	0.0019	0.0019	U	-			-		
Vinyl chloride	0.0019	0.0019	U	-			-		
Semivolatile Organic Compounds (mg/kg)									
1,2,4-Trichlorobenzene	0.18	0.18	U	-			-		
1,2-Dichlorobenzene	0.18	0.18	U	-			-		
1,3-Dichlorobenzene	0.18	0.18	U	-			-		
1,4-Dichlorobenzene	0.18	0.18	U	-			-		
2,4,5-Trichlorophenol	0.18	0.18	U	-			-		
2,4,6-Trichlorophenol	0.18	0.18	U	-			-		
2,4-Dichlorophenol	0.18	0.18	U	-			-		
2,4-Dimethylphenol	0.18	0.18	U	-			-		
2,4-Dinitrophenol	0.18	0.18	U	-			-		
2,4-Dinitrotoluene	0.18	0.18	U	-			-		
2,6-Dinitrotoluene	0.18	0.18	U	-			-		
2-Chloronaphthalene	0.18	0.18	U	-			-		
2-Chlorophenol	0.18	0.18	U	-			-		
2-Methylnaphthalene	0.18	0.18	U	-			-		
2-Methylphenol	0.18	0.18	U	-			-		
2-Nitroaniline	0.18	0.18	U	-			-		
2-Nitrophenol	0.18	0.18	U	-			-		
3,3-Dichlorobenzidine	0.18	0.18	U	-			-		
3-Nitroaniline	0.18	0.18	U	-			-		
4,6-Dinitro-2-methylphenol	0.18	0.18	U	-			-		
4-Bromophenyl-phenylether	0.18	0.18	U	-			-		
4-Chloro-3-methylphenol	0.18	0.18	U	-			-		
4-Chloroaniline	0.18	0.18	U	-			-		

TABLE B-W23
ANALYTICAL RESULTS FOR GRID W23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	W23			W23			W23		
Sample Name	P3IF-BA-GRID W023			P3IF-SS-IS-SO-W023			P3IF-SS-IS-SO-W523		
Date Collected	June 19, 2023			June 19, 2023			June 19, 2023		
Semivolatile Organic Compounds (mg/kg), continued									
4-Chlorophenyl-phenylether	0.18	0.18	U	-			-		
4-Nitroaniline	0.18	0.18	U	-			-		
4-Nitrophenol	0.18	0.18	U	-			-		
Acenaphthene	0.18	0.18	U	-			-		
Acenaphthylene	0.18	0.18	U	-			-		
Anthracene	0.18	0.18	U	-			-		
Benzo(a)anthracene	0.18	0.18	U	-			-		
Benzo(a)pyrene	0.14	0.14	U	-			-		
Benzo(b)fluoranthene	0.18	0.18	U	-			-		
Benzo(g,h,i)perylene	0.18	0.18	U	-			-		
Benzo(k)fluoranthene	0.18	0.18	U	-			-		
Benzoic acid	0.18	0.18	U	-			-		
Benzyl Alcohol	0.18	0.18	U	-			-		
Bis(2-chloro-1-methylethyl) ether	0.18	0.18	U	-			-		
Bis(2-chloroethoxy)methane	0.18	0.18	U	-			-		
Bis(2-chloroethyl)ether	0.18	0.18	U	-			-		
Bis(2-ethylhexyl)phthalate	0.18	0.18	U	-			-		
Butyl benzyl phthalate	0.18	0.18	U	-			-		
Carbazole	0.18	0.18	U	-			-		
Chrysene	0.18	0.18	U	-			-		
Di-n-butyl phthalate	0.18	0.18	U	-			-		
Di-n-octyl phthalate	0.18	0.18	U	-			-		
Dibenz(a,h)anthracene	0.14	0.14	U	-			-		
Dibenzofuran	0.18	0.18	U	-			-		
Diethyl phthalate	0.18	0.18	U	-			-		
Dimethyl phthalate	0.18	0.18	U	-			-		
Fluoranthene	0.18	0.18	U	-			-		
Fluorene	0.18	0.18	U	-			-		
Hexachlorobenzene	0.18	0.18	U	-			-		
Hexachlorobutadiene	0.18	0.18	U	-			-		
Hexachloroethane	0.18	0.18	U	-			-		
Indeno(1,2,3-cd)pyrene	0.18	0.18	U	-			-		
Isophorone	0.18	0.18	U	-			-		
n-Nitroso-di-n-propylamine	0.18	0.18	U	-			-		
n-Nitrosodimethylamine	0.021	0.021	UJ	-			-		
n-Nitrosodiphenylamine	0.18	0.18	U	-			-		
Naphthalene	0.18	0.18	U	-			-		
Nitrobenzene	0.18	0.18	U	-			-		
Pentachlorophenol	0.18	0.18	U	-			-		
Phenanthrene	0.18	0.18	U	-			-		
Phenol	0.18	0.18	U	-			-		
Pyrene	0.18	0.18	U	-			-		
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
1,3-Dinitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,4,6-Trinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,4-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,6-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
3-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
4-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	-			0.075	0.075	UJ	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	-			0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
Nitroglycerin	-			0.15	0.15	UJ	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	-			0.075	0.075	UJ	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	-			0.25	0.25	UJ	0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)									
Aroclor 1016	0.021	0.021	U	-			-		
Aroclor 1221	0.021	0.021	U	-			-		
Aroclor 1232	0.011	0.011	U	-			-		
Aroclor 1242	0.011	0.011	U	-			-		
Aroclor 1248	0.011	0.011	U	-			-		
Aroclor 1254	0.011	0.011	U	-			-		
Aroclor 1260	0.011	0.011	U	-			-		
Dioxins/Furans (mg/kg)									
Octachlorodibenzofuran (OCDF)	0.00000027	0.00000027	J	-			-		
Octachlorodibenzo-p-dioxin (OCDD)	0.0000053	0.0000053	J	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.0000004	0.0000004	J	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	0.00000088	0.00000088	U	-			-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.000000057	0.000000057	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000065	0.000000065	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000055	0.000000055	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000061	0.000000061	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000005	0.00000005	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.00000008	0.00000008	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.0000001	0.0000001	U	-			-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.000000096	0.000000096	U	-			-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.000000087	0.000000087	U	-			-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000067	0.000000067	U	-			-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000013	0.00000013	U	-			-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.00000017	0.00000017	U	-			-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.00000006	0.00000006	U	-			-		

TABLE B-W23
ANALYTICAL RESULTS FOR GRID W23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	W23			W23			W23		
Sample Name	P3IF-BA-GRID W023			P3IF-SS-IS-SO-W023			P3IF-SS-IS-SO-W523		
Date Collected	June 19, 2023			June 19, 2023			June 19, 2023		
Metals (mg/kg)									
Aluminum	-			19000	4		19000	4	
Antimony	-			0.079	0.15	J	0.15	0.15	U
Arsenic	-			1.1	0.3		1.1	0.3	
Barium	-			430	0.2		400	0.2	
Beryllium	-			0.94	0.3	J	0.97	0.3	J
Cadmium	-			0.87	0.08		0.6	0.08	
Calcium (Ca)	-			27000	15		26000	15	
Chromium	-			16	0.2		14	0.2	
Cobalt	-			5	0.08		4.9	0.08	
Copper	-			180	0.2	J	100	0.2	J
Iron (Fe)	-			10000	8		9700	8	
Lead	-			14	0.05		11	0.05	
Magnesium (Mg)	-			6300	5		6300	5	
Manganese (Mn)	-			630	0.08		590	0.08	
Mercury	-			0.042	0.042	U	0.042	0.042	U
Nickel	-			14	0.2		12	0.2	
Potassium (K)	-			2000	8		2000	8	
Selenium	-			1.7	0.1		1.3	0.1	
Silver	-			0.15	0.05	J	0.089	0.05	J
Sodium (Na)	-			51	8		45	8	
Thallium	-			0.06	0.05	J	0.052	0.05	J
Vanadium	-			11	0.1		11	0.1	
Zinc	-			32	1.5		28	1.5	
Other Parameters (mg/kg)									
Cyanide (CN-)	0.32	0.32	U	-			-		
Nitrate	3	2.1	J	-			-		
Perchlorate	0.0021	0.0021	U	-			-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-W23
ANALYTICAL RESULTS FOR GRID W23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	W23		
Sample Name	P3IF-SS-IS-SO-W623		
Date Collected	June 19, 2023		
	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)			
1,1,1,2-Tetrachloroethane	-		
1,1,1-Trichloroethane	-		
1,1,2,2-Tetrachloroethane	-		
1,1,2-Trichloroethane	-		
1,1-Dichloroethane	-		
1,1-Dichloroethene	-		
1,1-Dichloropropene	-		
1,2,3-Trichlorobenzene	-		
1,2,3-Trichloropropane	-		
1,2,4-Trichlorobenzene	-		
1,2,4-Trimethylbenzene	-		
1,2-Dibromo-3-chloropropane	-		
1,2-Dibromoethane	-		
1,2-Dichlorobenzene	-		
1,2-Dichloroethane	-		
1,2-Dichloropropane	-		
1,3,5-Trimethylbenzene	-		
1,3-Dichlorobenzene	-		
1,3-Dichloropropane	-		
1,4-Dichlorobenzene	-		
2,2-Dichloropropane	-		
2-Butanone	-		
2-Chlorotoluene	-		
2-Hexanone	-		
4-Chlorotoluene	-		
4-Methyl-2-pentanone	-		
Acetone	-		
Benzene	-		
Bromobenzene	-		
Bromochloromethane	-		
Bromodichloromethane	-		
Bromoform	-		
Bromomethane	-		
Carbon disulfide	-		
Carbon tetrachloride	-		
Chlorobenzene	-		
Chloroethane	-		
Chloroform	-		
Chloromethane	-		
cis-1,2-Dichloroethene	-		
cis-1,3-Dichloropropene	-		
Dibromochloromethane	-		
Dibromomethane	-		
Dichlorodifluoromethane	-		
Ethylbenzene	-		
Hexachlorobutadiene	-		
Isopropylbenzene	-		
m+p-Xylene	-		
Methyl Tertiary Butyl Ether	-		
Methylene chloride	-		
n-Butylbenzene	-		
n-Propylbenzene	-		
Naphthalene	-		
o-Xylene	-		
4-Isopropyltoluene	-		
sec-Butylbenzene	-		
Styrene	-		
tert-Butylbenzene	-		
Tetrachloroethene	-		
Toluene	-		
trans-1,2-Dichloroethene	-		
trans-1,3-Dichloropropene	-		
Trichloroethene	-		
Trichlorofluoromethane	-		
Vinyl chloride	-		
Semivolatile Organic Compounds (mg/kg)			
1,2,4-Trichlorobenzene	-		
1,2-Dichlorobenzene	-		
1,3-Dichlorobenzene	-		
1,4-Dichlorobenzene	-		
2,4,5-Trichlorophenol	-		
2,4,6-Trichlorophenol	-		
2,4-Dichlorophenol	-		
2,4-Dimethylphenol	-		
2,4-Dinitrophenol	-		
2,4-Dinitrotoluene	-		
2,6-Dinitrotoluene	-		
2-Chloronaphthalene	-		
2-Chlorophenol	-		
2-Methylnaphthalene	-		
2-Methylphenol	-		
2-Nitroaniline	-		
2-Nitrophenol	-		
3,3-Dichlorobenzidine	-		
3-Nitroaniline	-		
4,6-Dinitro-2-methylphenol	-		
4-Bromophenyl-phenylether	-		
4-Chloro-3-methylphenol	-		
4-Chloroaniline	-		

TABLE B-W23
ANALYTICAL RESULTS FOR GRID W23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	W23		
Sample Name	P3IF-SS-IS-SO-W623		
Date Collected	June 19, 2023		
Semivolatile Organic Compounds (mg/kg), continued			
4-Chlorophenyl-phenylether	-		
4-Nitroaniline	-		
4-Nitrophenol	-		
Acenaphthene	-		
Acenaphthylene	-		
Anthracene	-		
Benzo(a)anthracene	-		
Benzo(a)pyrene	-		
Benzo(b)fluoranthene	-		
Benzo(g,h,i)perylene	-		
Benzo(k)fluoranthene	-		
Benzoic acid	-		
Benzyl Alcohol	-		
Bis(2-chloro-1-methylethyl) ether	-		
Bis(2-chloroethoxy)methane	-		
Bis(2-chloroethyl)ether	-		
Bis(2-ethylhexyl)phthalate	-		
Butyl benzyl phthalate	-		
Carbazole	-		
Chrysene	-		
Di-n-butyl phthalate	-		
Di-n-octyl phthalate	-		
Dibenz(a,h)anthracene	-		
Dibenzofuran	-		
Diethyl phthalate	-		
Dimethyl phthalate	-		
Fluoranthene	-		
Fluorene	-		
Hexachlorobenzene	-		
Hexachlorobutadiene	-		
Hexachloroethane	-		
Indeno(1,2,3-cd)pyrene	-		
Isophorone	-		
n-Nitroso-di-n-propylamine	-		
n-Nitrosodimethylamine	-		
n-Nitrosodiphenylamine	-		
Naphthalene	-		
Nitrobenzene	-		
Pentachlorophenol	-		
Phenanthrene	-		
Phenol	-		
Pyrene	-		
Explosives (mg/kg)			
1,3,5-Trinitrobenzene	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	UJ
2,4,6-Trinitrotoluene	0.075	0.075	UJ
2,4-Dinitrotoluene	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	UJ
2-Nitrotoluene	0.075	0.075	UJ
3-Nitrotoluene	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	0.075	0.075	UJ
4-Nitrotoluene	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	UJ
Nitroglycerin	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)			
Aroclor 1016	-		
Aroclor 1221	-		
Aroclor 1232	-		
Aroclor 1242	-		
Aroclor 1248	-		
Aroclor 1254	-		
Aroclor 1260	-		
Dioxins/Furans (mg/kg)			
Octachlorodibenzofuran (OCDF)	-		
Octachlorodibenzo-p-dioxin (OCDD)	-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	-		

TABLE B-W23
ANALYTICAL RESULTS FOR GRID W23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	W23		
Sample Name	P3IF-SS-IS-SO-W623		
Date Collected	June 19, 2023		
Metals (mg/kg)			
Aluminum	19000	4	
Antimony	0.15	0.15	U
Arsenic	1.1	0.3	
Barium	420	0.2	
Beryllium	1	0.3	J
Cadmium	0.62	0.08	
Calcium (Ca)	25000	15	
Chromium	14	0.2	
Cobalt	4.9	0.08	
Copper	120	0.2	
Iron (Fe)	10000	8	
Lead	12	0.05	
Magnesium (Mg)	6300	5	
Manganese (Mn)	610	0.08	
Mercury	0.042	0.042	U
Nickel	12	0.2	
Potassium (K)	2100	8	
Selenium	1.5	0.1	
Silver	0.11	0.05	J
Sodium (Na)	64	8	
Thallium	0.06	0.05	J
Vanadium	11	0.1	
Zinc	28	1.5	
Other Parameters (mg/kg)			
Cyanide (CN-)	-		
Nitrate	-		
Perchlorate	-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-W24
ANALYTICAL RESULTS FOR GRID W24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	W24			W24			W24		
Sample Name	P3IF-BA-GRID-W024			P3IF-BA-GRID-W524			P3IF-SS-IS-SO-W024		
Date Collected	June 19, 2023			June 19, 2023			June 19, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)									
1,1,1,2-Tetrachloroethane	0.0022	0.0022	U	0.0019	0.0019	U	-		
1,1,1-Trichloroethane	0.0022	0.0022	U	0.0019	0.0019	U	-		
1,1,2,2-Tetrachloroethane	0.0022	0.0022	U	0.0019	0.0019	U	-		
1,1,2-Trichloroethane	0.0022	0.0022	U	0.0019	0.0019	U	-		
1,1-Dichloroethane	0.0022	0.0022	U	0.0019	0.0019	U	-		
1,1-Dichloroethene	0.0022	0.0022	U	0.0019	0.0019	U	-		
1,1-Dichloropropene	0.0022	0.0022	U	0.0019	0.0019	U	-		
1,2,3-Trichlorobenzene	0.0022	0.0022	U	0.0019	0.0019	U	-		
1,2,3-Trichloropropane	0.0056	0.0056	U	0.0048	0.0048	U	-		
1,2,4-Trichlorobenzene	0.0022	0.0022	U	0.0019	0.0019	U	-		
1,2,4-Trimethylbenzene	0.0022	0.0022	U	0.0019	0.0019	U	-		
1,2-Dibromo-3-chloropropane	0.0056	0.0056	U	0.0048	0.0048	U	-		
1,2-Dibromoethane	0.0022	0.0022	U	0.0019	0.0019	U	-		
1,2-Dichlorobenzene	0.0022	0.0022	U	0.0019	0.0019	U	-		
1,2-Dichloroethane	0.0022	0.0022	U	0.0019	0.0019	U	-		
1,2-Dichloropropane	0.0022	0.0022	U	0.0019	0.0019	U	-		
1,3,5-Trimethylbenzene	0.0022	0.0022	U	0.0019	0.0019	U	-		
1,3-Dichlorobenzene	0.0022	0.0022	U	0.0019	0.0019	U	-		
1,3-Dichloropropane	0.0022	0.0022	U	0.0019	0.0019	U	-		
1,4-Dichlorobenzene	0.0022	0.0022	U	0.0019	0.0019	U	-		
2,2-Dichloropropane	0.0022	0.0022	U	0.0019	0.0019	U	-		
2-Butanone	0.032	0.0033	J	0.0029	0.0029	UJ	-		
2-Chlorotoluene	0.0022	0.0022	U	0.0019	0.0019	U	-		
2-Hexanone	0.0022	0.0022	U	0.0019	0.0019	U	-		
4-Chlorotoluene	0.0022	0.0022	U	0.0019	0.0019	U	-		
4-Methyl-2-pentanone	0.0022	0.0022	U	0.0019	0.0019	U	-		
Acetone	0.54	0.0056	J	0.35	0.0048	J	-		
Benzene	0.0022	0.0022	U	0.0019	0.0019	U	-		
Bromobenzene	0.0022	0.0022	U	0.0019	0.0019	U	-		
Bromochloromethane	0.0022	0.0022	U	0.0019	0.0019	U	-		
Bromodichloromethane	0.0022	0.0022	U	0.0019	0.0019	U	-		
Bromoform	0.0022	0.0022	U	0.0019	0.0019	U	-		
Bromomethane	0.0022	0.0022	U	0.0019	0.0019	U	-		
Carbon disulfide	0.0022	0.0022	U	0.0019	0.0019	U	-		
Carbon tetrachloride	0.0022	0.0022	U	0.0019	0.0019	U	-		
Chlorobenzene	0.0022	0.0022	U	0.0019	0.0019	U	-		
Chloroethane	0.0022	0.0022	U	0.0019	0.0019	U	-		
Chloroform	0.0022	0.0022	U	0.0019	0.0019	U	-		
Chloromethane	0.0056	0.0056	U	0.0048	0.0048	U	-		
cis-1,2-Dichloroethene	0.0022	0.0022	U	0.0019	0.0019	U	-		
cis-1,3-Dichloropropene	0.0022	0.0022	U	0.0019	0.0019	U	-		
Dibromochloromethane	0.0022	0.0022	U	0.0019	0.0019	U	-		
Dibromomethane	0.0022	0.0022	U	0.0019	0.0019	U	-		
Dichlorodifluoromethane	0.0022	0.0022	U	0.0019	0.0019	U	-		
Ethylbenzene	0.0022	0.0022	U	0.0019	0.0019	U	-		
Hexachlorobutadiene	0.0022	0.0022	U	0.0019	0.0019	U	-		
Isopropylbenzene	0.0022	0.0022	U	0.0019	0.0019	U	-		
m+p-Xylene	0.0056	0.0056	U	0.0048	0.0048	U	-		
Methyl Tertiary Butyl Ether	0.0022	0.0022	U	0.0019	0.0019	U	-		
Methylene chloride	0.011	0.011	U	0.0096	0.0096	U	-		
n-Butylbenzene	0.0022	0.0022	U	0.0019	0.0019	U	-		
n-Propylbenzene	0.0022	0.0022	U	0.0019	0.0019	U	-		
Naphthalene	0.0022	0.0022	U	0.0019	0.0019	U	-		
o-Xylene	0.0028	0.0028	U	0.0024	0.0024	U	-		
4-Isopropyltoluene	0.0022	0.0022	U	0.0019	0.0019	U	-		
sec-Butylbenzene	0.0022	0.0022	U	0.0019	0.0019	U	-		
Styrene	0.0022	0.0022	U	0.0019	0.0019	U	-		
tert-Butylbenzene	0.0022	0.0022	U	0.0019	0.0019	U	-		
Tetrachloroethene	0.0022	0.0022	U	0.0019	0.0019	U	-		
Toluene	0.0022	0.0022	U	0.0019	0.0019	U	-		
trans-1,2-Dichloroethene	0.0022	0.0022	U	0.0019	0.0019	U	-		
trans-1,3-Dichloropropene	0.0022	0.0022	U	0.0019	0.0019	U	-		
Trichloroethene	0.0022	0.0022	U	0.0019	0.0019	U	-		
Trichlorofluoromethane	0.0022	0.0022	U	0.0019	0.0019	U	-		
Vinyl chloride	0.0022	0.0022	U	0.0019	0.0019	U	-		
Semivolatile Organic Compounds (mg/kg)									
1,2,4-Trichlorobenzene	0.17	0.17	U	0.17	0.17	U	-		
1,2-Dichlorobenzene	0.17	0.17	U	0.17	0.17	U	-		
1,3-Dichlorobenzene	0.17	0.17	U	0.17	0.17	U	-		
1,4-Dichlorobenzene	0.17	0.17	U	0.17	0.17	U	-		
2,4,5-Trichlorophenol	0.17	0.17	U	0.17	0.17	U	-		
2,4,6-Trichlorophenol	0.17	0.17	U	0.17	0.17	U	-		
2,4-Dichlorophenol	0.17	0.17	U	0.17	0.17	U	-		
2,4-Dimethylphenol	0.17	0.17	U	0.17	0.17	U	-		
2,4-Dinitrophenol	0.17	0.17	U	0.17	0.17	U	-		
2,4-Dinitrotoluene	0.17	0.17	U	0.17	0.17	U	-		
2,6-Dinitrotoluene	0.17	0.17	U	0.17	0.17	U	-		
2-Chloronaphthalene	0.17	0.17	U	0.17	0.17	U	-		
2-Chlorophenol	0.17	0.17	U	0.17	0.17	U	-		
2-Methylnaphthalene	0.17	0.17	U	0.17	0.17	U	-		
2-Methylphenol	0.17	0.17	U	0.17	0.17	U	-		
2-Nitroaniline	0.17	0.17	U	0.17	0.17	U	-		
2-Nitrophenol	0.17	0.17	U	0.17	0.17	U	-		
3,3-Dichlorobenzidine	0.17	0.17	U	0.17	0.17	U	-		
3-Nitroaniline	0.17	0.17	U	0.17	0.17	U	-		
4,6-Dinitro-2-methylphenol	0.17	0.17	U	0.17	0.17	U	-		
4-Bromophenyl-phenylether	0.17	0.17	U	0.17	0.17	U	-		
4-Chloro-3-methylphenol	0.17	0.17	U	0.17	0.17	U	-		
4-Chloroaniline	0.17	0.17	U	0.17	0.17	U	-		

TABLE B-W24
ANALYTICAL RESULTS FOR GRID W24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	W24			W24			W24		
Sample Name	P3IF-BA-GRID-W024			P3IF-BA-GRID-W524			P3IF-SS-IS-SO-W024		
Date Collected	June 19, 2023			June 19, 2023			June 19, 2023		
Semivolatile Organic Compounds (mg/kg), continued									
4-Chlorophenyl-phenylether	0.17	0.17	U	0.17	0.17	U	-		
4-Nitroaniline	0.17	0.17	U	0.17	0.17	U	-		
4-Nitrophenol	0.17	0.17	U	0.17	0.17	U	-		
Acenaphthene	0.17	0.17	U	0.17	0.17	U	-		
Acenaphthylene	0.17	0.17	U	0.17	0.17	U	-		
Anthracene	0.17	0.17	U	0.17	0.17	U	-		
Benzo(a)anthracene	0.17	0.17	U	0.17	0.17	U	-		
Benzo(a)pyrene	0.13	0.13	U	0.14	0.14	U	-		
Benzo(b)fluoranthene	0.17	0.17	U	0.17	0.17	U	-		
Benzo(g,h,i)perylene	0.17	0.17	U	0.17	0.17	U	-		
Benzo(k)fluoranthene	0.17	0.17	U	0.17	0.17	U	-		
Benzoic acid	0.17	0.17	U	0.17	0.17	U	-		
Benzyl Alcohol	0.17	0.17	U	0.17	0.17	U	-		
Bis(2-chloro-1-methylethyl) ether	0.17	0.17	U	0.17	0.17	U	-		
Bis(2-chloroethoxy)methane	0.17	0.17	U	0.17	0.17	U	-		
Bis(2-chloroethyl)ether	0.17	0.17	U	0.17	0.17	U	-		
Bis(2-ethylhexyl)phthalate	0.17	0.17	U	0.17	0.17	U	-		
Butyl benzyl phthalate	0.17	0.17	U	0.17	0.17	U	-		
Carbazole	0.17	0.17	U	0.17	0.17	U	-		
Chrysene	0.17	0.17	U	0.17	0.17	U	-		
Di-n-butyl phthalate	0.17	0.17	U	0.17	0.17	U	-		
Di-n-octyl phthalate	0.17	0.17	U	0.17	0.17	U	-		
Dibenz(a,h)anthracene	0.13	0.13	U	0.14	0.14	U	-		
Dibenzofuran	0.17	0.17	U	0.17	0.17	U	-		
Diethyl phthalate	0.17	0.17	U	0.17	0.17	U	-		
Dimethyl phthalate	0.17	0.17	U	0.17	0.17	U	-		
Fluoranthene	0.17	0.17	U	0.17	0.17	U	-		
Fluorene	0.17	0.17	U	0.17	0.17	U	-		
Hexachlorobenzene	0.17	0.17	U	0.17	0.17	U	-		
Hexachlorobutadiene	0.17	0.17	U	0.17	0.17	U	-		
Hexachloroethane	0.17	0.17	U	0.17	0.17	U	-		
Indeno(1,2,3-cd)pyrene	0.17	0.17	U	0.17	0.17	U	-		
Isophorone	0.17	0.17	U	0.17	0.17	U	-		
n-Nitroso-di-n-propylamine	0.17	0.17	U	0.17	0.17	U	-		
n-Nitrosodimethylamine	0.021	0.021	UJ	0.021	0.021	UJ	-		
n-Nitrosodiphenylamine	0.17	0.17	U	0.17	0.17	U	-		
Naphthalene	0.17	0.17	U	0.17	0.17	U	-		
Nitrobenzene	0.17	0.17	U	0.17	0.17	U	-		
Pentachlorophenol	0.17	0.17	U	0.17	0.17	U	-		
Phenanthrene	0.17	0.17	U	0.17	0.17	U	-		
Phenol	0.17	0.17	U	0.17	0.17	U	-		
Pyrene	0.17	0.17	U	0.17	0.17	U	-		
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	-			-			0.15	0.15	UJ
1,3-Dinitrobenzene	-			-			0.15	0.15	UJ
2,4,6-Trinitrotoluene	-			-			0.15	0.15	UJ
2,4-Dinitrotoluene	-			-			0.15	0.15	UJ
2,6-Dinitrotoluene	-			-			0.15	0.15	UJ
2-Amino-4,6-dinitrotoluene	-			-			0.15	0.15	UJ
2-Nitrotoluene	-			-			0.15	0.15	UJ
3-Nitrotoluene	-			-			0.15	0.15	UJ
4-Amino-2,6-Dinitrotoluene	-			-			0.15	0.15	UJ
4-Nitrotoluene	-			-			0.15	0.15	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	-			-			0.15	0.15	UJ
Methyl-2,4,6-trinitrophenylnitramine	-			-			0.15	0.15	UJ
Nitrobenzene	-			-			0.15	0.15	UJ
Nitroglycerin	-			-			0.3	0.3	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	-			-			0.15	0.15	UJ
Pentaerythritol tetranitrate (PETN)	-			-			0.5	0.5	UJ
Polychlorinated Biphenyls (mg/kg)									
Aroclor 1016	0.021	0.021	R	0.021	0.021	UJ	-		
Aroclor 1221	0.021	0.021	R	0.021	0.021	UJ	-		
Aroclor 1232	0.01	0.01	R	0.01	0.01	UJ	-		
Aroclor 1242	0.01	0.01	R	0.01	0.01	UJ	-		
Aroclor 1248	0.01	0.01	R	0.01	0.01	UJ	-		
Aroclor 1254	0.01	0.01	R	0.01	0.01	UJ	-		
Aroclor 1260	0.01	0.01	R	0.01	0.01	UJ	-		
Dioxins/Furans (mg/kg)									
Octachlorodibenzofuran (OCDF)	0.0000017	0.0000017	U	0.000002	0.000002	J	-		
Octachlorodibenzo-p-dioxin (OCDD)	0.000018	0.000018	J	0.000075	0.000013		-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.0000035	0.0000035	J	0.0000021	0.0000021	J	-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	0.0000027	0.0000027	U	0.0000045	0.0000045	U	-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.0000001	0.0000001	U	0.00000031	0.00000031	U	-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.00000013	0.00000013	U	0.00000012	0.00000012	U	-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000018	0.00000018	U	0.00000014	0.00000014	U	-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.00000012	0.00000012	U	0.00000012	0.00000012	J	-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000072	0.000000072	U	0.00000025	0.00000025	J	-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.00000016	0.00000016	UJ	0.00000015	0.00000015	UJ	-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000012	0.00000012	U	0.00000016	0.00000016	U	-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000016	0.00000016	U	0.00000024	0.00000024	U	-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.00000011	0.00000011	U	0.00000012	0.00000012	U	-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000057	0.000000057	U	0.0000001	0.0000001	U	-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000016	0.00000016	U	0.00000025	0.00000025	U	-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.00000023	0.00000023	U	0.00000035	0.00000035	U	-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.000000085	0.000000085	U	0.0000001	0.0000001	U	-		

TABLE B-W24
ANALYTICAL RESULTS FOR GRID W24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	W24			W24			W24		
Sample Name	P3IF-BA-GRID-W024			P3IF-BA-GRID-W524			P3IF-SS-IS-SO-W024		
Date Collected	June 19, 2023			June 19, 2023			June 19, 2023		
Metals (mg/kg)									
Aluminum	14000	4		15000	4		17000	4	
Antimony	0.28	0.15		0.13	0.15	J	0.15	0.15	U
Arsenic	1.5	0.3		1.3	0.3	J	0.94	0.3	
Barium	300	0.2		260	0.2	J	360	0.2	
Beryllium	0.57	0.3	J	0.59	0.3	J	0.84	0.3	J
Cadmium	1.7	0.08	J	0.96	0.08	J	0.53	0.08	
Calcium (Ca)	8200	15		7600	15	J	35000	15	
Chromium	19	0.2		16	0.2		12	0.2	
Cobalt	4.4	0.08		4.5	0.08	J	4.3	0.08	
Copper	350	0.2		210	0.2		110	0.2	
Iron (Fe)	8300	8		7800	8		8100	8	
Lead	22	0.05		15	0.05	J	9.9	0.05	
Magnesium (Mg)	5400	5		6300	5	J	6400	5	
Manganese (Mn)	450	0.08		410	0.08		550	0.08	
Mercury	0.1	0.1	U	0.1	0.1	U	0.14	0.042	
Nickel	13	0.2		11	0.2	J	11	0.2	
Potassium (K)	1600	8		1600	8		1600	8	
Selenium	1	0.1		0.95	0.1	J	1.1	0.1	
Silver	0.28	0.05		0.15	0.05	J	0.085	0.05	J
Sodium (Na)	45	8		38	8	J	36	8	
Thallium	0.061	0.05	J	0.053	0.05	J	0.056	0.05	J
Vanadium	10	0.1		10	0.1		8.8	0.1	
Zinc	55	1.5		41	1.5	J	25	1.5	
Other Parameters (mg/kg)									
Cyanide (CN-)	0.33	0.33	U	0.32	0.32	U	-		
Nitrate	24	2.2		11	2		-		
Perchlorate	0.002	0.002	U	0.002	0.002	U	-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-W24
ANALYTICAL RESULTS FOR GRID W24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	W24			W24		
Sample Name	P3IF-SS-IS-SO-W524			P3IF-SS-IS-SO-W624		
Date Collected	June 19, 2023			June 19, 2023		
	Result	LOD	Qual	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)						
1,1,1,2-Tetrachloroethane	-			-		
1,1,1-Trichloroethane	-			-		
1,1,2,2-Tetrachloroethane	-			-		
1,1,2-Trichloroethane	-			-		
1,1-Dichloroethane	-			-		
1,1-Dichloroethene	-			-		
1,1-Dichloropropene	-			-		
1,2,3-Trichlorobenzene	-			-		
1,2,3-Trichloropropane	-			-		
1,2,4-Trichlorobenzene	-			-		
1,2,4-Trimethylbenzene	-			-		
1,2-Dibromo-3-chloropropane	-			-		
1,2-Dibromoethane	-			-		
1,2-Dichlorobenzene	-			-		
1,2-Dichloroethane	-			-		
1,2-Dichloropropane	-			-		
1,3,5-Trimethylbenzene	-			-		
1,3-Dichlorobenzene	-			-		
1,3-Dichloropropane	-			-		
1,4-Dichlorobenzene	-			-		
2,2-Dichloropropane	-			-		
2-Butanone	-			-		
2-Chlorotoluene	-			-		
2-Hexanone	-			-		
4-Chlorotoluene	-			-		
4-Methyl-2-pentanone	-			-		
Acetone	-			-		
Benzene	-			-		
Bromobenzene	-			-		
Bromochloromethane	-			-		
Bromodichloromethane	-			-		
Bromoform	-			-		
Bromomethane	-			-		
Carbon disulfide	-			-		
Carbon tetrachloride	-			-		
Chlorobenzene	-			-		
Chloroethane	-			-		
Chloroform	-			-		
Chloromethane	-			-		
cis-1,2-Dichloroethene	-			-		
cis-1,3-Dichloropropene	-			-		
Dibromochloromethane	-			-		
Dibromomethane	-			-		
Dichlorodifluoromethane	-			-		
Ethylbenzene	-			-		
Hexachlorobutadiene	-			-		
Isopropylbenzene	-			-		
m+p-Xylene	-			-		
Methyl Tertiary Butyl Ether	-			-		
Methylene chloride	-			-		
n-Butylbenzene	-			-		
n-Propylbenzene	-			-		
Naphthalene	-			-		
o-Xylene	-			-		
4-Isopropyltoluene	-			-		
sec-Butylbenzene	-			-		
Styrene	-			-		
tert-Butylbenzene	-			-		
Tetrachloroethene	-			-		
Toluene	-			-		
trans-1,2-Dichloroethene	-			-		
trans-1,3-Dichloropropene	-			-		
Trichloroethene	-			-		
Trichlorofluoromethane	-			-		
Vinyl chloride	-			-		
Semivolatile Organic Compounds (mg/kg)						
1,2,4-Trichlorobenzene	-			-		
1,2-Dichlorobenzene	-			-		
1,3-Dichlorobenzene	-			-		
1,4-Dichlorobenzene	-			-		
2,4,5-Trichlorophenol	-			-		
2,4,6-Trichlorophenol	-			-		
2,4-Dichlorophenol	-			-		
2,4-Dimethylphenol	-			-		
2,4-Dinitrophenol	-			-		
2,4-Dinitrotoluene	-			-		
2,6-Dinitrotoluene	-			-		
2-Chloronaphthalene	-			-		
2-Chlorophenol	-			-		
2-Methylnaphthalene	-			-		
2-Methylphenol	-			-		
2-Nitroaniline	-			-		
2-Nitrophenol	-			-		
3,3-Dichlorobenzidine	-			-		
3-Nitroaniline	-			-		
4,6-Dinitro-2-methylphenol	-			-		
4-Bromophenyl-phenylether	-			-		
4-Chloro-3-methylphenol	-			-		
4-Chloroaniline	-			-		

TABLE B-W24
ANALYTICAL RESULTS FOR GRID W24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	W24			W24		
Sample Name	P3IF-SS-IS-SO-W524			P3IF-SS-IS-SO-W624		
Date Collected	June 19, 2023			June 19, 2023		
Semivolatile Organic Compounds (mg/kg), continued						
4-Chlorophenyl-phenylether	-			-		
4-Nitroaniline	-			-		
4-Nitrophenol	-			-		
Acenaphthene	-			-		
Acenaphthylene	-			-		
Anthracene	-			-		
Benzo(a)anthracene	-			-		
Benzo(a)pyrene	-			-		
Benzo(b)fluoranthene	-			-		
Benzo(g,h,i)perylene	-			-		
Benzo(k)fluoranthene	-			-		
Benzoic acid	-			-		
Benzyl Alcohol	-			-		
Bis(2-chloro-1-methylethyl) ether	-			-		
Bis(2-chloroethoxy)methane	-			-		
Bis(2-chloroethyl)ether	-			-		
Bis(2-ethylhexyl)phthalate	-			-		
Butyl benzyl phthalate	-			-		
Carbazole	-			-		
Chrysene	-			-		
Di-n-butyl phthalate	-			-		
Di-n-octyl phthalate	-			-		
Dibenz(a,h)anthracene	-			-		
Dibenzofuran	-			-		
Diethyl phthalate	-			-		
Dimethyl phthalate	-			-		
Fluoranthene	-			-		
Fluorene	-			-		
Hexachlorobenzene	-			-		
Hexachlorobutadiene	-			-		
Hexachloroethane	-			-		
Indeno(1,2,3-cd)pyrene	-			-		
Isophorone	-			-		
n-Nitroso-di-n-propylamine	-			-		
n-Nitrosodimethylamine	-			-		
n-Nitrosodiphenylamine	-			-		
Naphthalene	-			-		
Nitrobenzene	-			-		
Pentachlorophenol	-			-		
Phenanthrene	-			-		
Phenol	-			-		
Pyrene	-			-		
Explosives (mg/kg)						
1,3,5-Trinitrobenzene	0.15	0.15	UJ	0.15	0.15	UJ
1,3-Dinitrobenzene	0.15	0.15	UJ	0.15	0.15	UJ
2,4,6-Trinitrotoluene	0.15	0.15	UJ	0.15	0.15	UJ
2,4-Dinitrotoluene	0.15	0.15	UJ	0.15	0.15	UJ
2,6-Dinitrotoluene	0.15	0.15	UJ	0.15	0.15	UJ
2-Amino-4,6-dinitrotoluene	0.15	0.15	UJ	0.15	0.15	UJ
2-Nitrotoluene	0.15	0.15	UJ	0.15	0.15	UJ
3-Nitrotoluene	0.15	0.15	UJ	0.15	0.15	UJ
4-Amino-2,6-Dinitrotoluene	0.15	0.15	UJ	0.15	0.15	UJ
4-Nitrotoluene	0.15	0.15	UJ	0.15	0.15	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.15	0.15	UJ	0.15	0.15	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.15	0.15	UJ	0.15	0.15	UJ
Nitrobenzene	0.15	0.15	UJ	0.15	0.15	UJ
Nitroglycerin	0.3	0.3	UJ	0.3	0.3	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.15	0.15	UJ	0.15	0.15	UJ
Pentaerythritol tetranitrate (PETN)	0.5	0.5	UJ	0.5	0.5	UJ
Polychlorinated Biphenyls (mg/kg)						
Aroclor 1016	-			-		
Aroclor 1221	-			-		
Aroclor 1232	-			-		
Aroclor 1242	-			-		
Aroclor 1248	-			-		
Aroclor 1254	-			-		
Aroclor 1260	-			-		
Dioxins/Furans (mg/kg)						
Octachlorodibenzofuran (OCDF)	-			-		
Octachlorodibenzo-p-dioxin (OCDD)	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	-			-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	-			-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	-			-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-			-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	-			-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-			-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	-			-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	-			-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	-			-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	-			-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	-			-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	-			-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	-			-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	-			-		

TABLE B-W24
ANALYTICAL RESULTS FOR GRID W24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	W24			W24		
Sample Name	P3IF-SS-IS-SO-W524			P3IF-SS-IS-SO-W624		
Date Collected	June 19, 2023			June 19, 2023		
Metals (mg/kg)						
Aluminum	17000	4		15000	4	
Antimony	0.15	0.15	U	0.15	0.15	U
Arsenic	0.99	0.3		0.92	0.3	
Barium	390	0.2		390	0.2	
Beryllium	0.83	0.3	J	0.86	0.3	J
Cadmium	0.5	0.08		0.56	0.08	
Calcium (Ca)	34000	15		31000	15	
Chromium	12	0.2		12	0.2	
Cobalt	4.3	0.08		4.2	0.08	
Copper	96	0.2		120	0.2	
Iron (Fe)	8500	8		8000	8	
Lead	11	0.05		12	0.05	
Magnesium (Mg)	6200	5		6100	5	
Manganese (Mn)	510	0.08		530	0.08	
Mercury	0.11	0.11	U	0.078	0.041	J
Nickel	11	0.2		11	0.2	
Potassium (K)	1700	8		1500	8	
Selenium	1.2	0.1		1	0.1	
Silver	0.09	0.05	J	0.11	0.05	
Sodium (Na)	36	8		34	8	
Thallium	0.061	0.05	J	0.054	0.05	J
Vanadium	8.5	0.1		7.2	0.1	
Zinc	26	1.5		29	1.5	
Other Parameters (mg/kg)						
Cyanide (CN-)	-			-		
Nitrate	-			-		
Perchlorate	-			-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-X24
ANALYTICAL RESULTS FOR GRID X24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	X24			X24			X24		
Sample Name	P3IF-BA-GRID X024			P3IF-SS-IS-SO-X024			P3IF-SS-IS-SO-X524		
Date Collected	June 19, 2023			June 19, 2023			June 19, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)									
1,1,1,2-Tetrachloroethane	0.0022	0.0022	U	-			-		
1,1,1-Trichloroethane	0.0022	0.0022	U	-			-		
1,1,2,2-Tetrachloroethane	0.0022	0.0022	U	-			-		
1,1,2-Trichloroethane	0.0022	0.0022	U	-			-		
1,1-Dichloroethane	0.0022	0.0022	U	-			-		
1,1-Dichloroethene	0.0022	0.0022	U	-			-		
1,1-Dichloropropene	0.0022	0.0022	U	-			-		
1,2,3-Trichlorobenzene	0.0022	0.0022	U	-			-		
1,2,3-Trichloropropane	0.0054	0.0054	U	-			-		
1,2,4-Trichlorobenzene	0.0022	0.0022	U	-			-		
1,2,4-Trimethylbenzene	0.0022	0.0022	U	-			-		
1,2-Dibromo-3-chloropropane	0.0054	0.0054	U	-			-		
1,2-Dibromoethane	0.0022	0.0022	U	-			-		
1,2-Dichlorobenzene	0.0022	0.0022	U	-			-		
1,2-Dichloroethane	0.0022	0.0022	U	-			-		
1,2-Dichloropropane	0.0022	0.0022	U	-			-		
1,3,5-Trimethylbenzene	0.0022	0.0022	U	-			-		
1,3-Dichlorobenzene	0.0022	0.0022	U	-			-		
1,3-Dichloropropane	0.0022	0.0022	U	-			-		
1,4-Dichlorobenzene	0.0022	0.0022	U	-			-		
2,2-Dichloropropane	0.0022	0.0022	U	-			-		
2-Butanone	0.0032	0.0032	U	-			-		
2-Chlorotoluene	0.0022	0.0022	U	-			-		
2-Hexanone	0.0022	0.0022	U	-			-		
4-Chlorotoluene	0.0022	0.0022	U	-			-		
4-Methyl-2-pentanone	0.0022	0.0022	U	-			-		
Acetone	0.27	0.0054		-			-		
Benzene	0.0022	0.0022	U	-			-		
Bromobenzene	0.0022	0.0022	U	-			-		
Bromochloromethane	0.0022	0.0022	U	-			-		
Bromodichloromethane	0.0022	0.0022	U	-			-		
Bromoform	0.0022	0.0022	U	-			-		
Bromomethane	0.0022	0.0022	U	-			-		
Carbon disulfide	0.0022	0.0022	U	-			-		
Carbon tetrachloride	0.0022	0.0022	U	-			-		
Chlorobenzene	0.0022	0.0022	U	-			-		
Chloroethane	0.0022	0.0022	U	-			-		
Chloroform	0.0022	0.0022	U	-			-		
Chloromethane	0.0054	0.0054	U	-			-		
cis-1,2-Dichloroethene	0.0022	0.0022	U	-			-		
cis-1,3-Dichloropropene	0.0022	0.0022	U	-			-		
Dibromochloromethane	0.0022	0.0022	U	-			-		
Dibromomethane	0.0022	0.0022	U	-			-		
Dichlorodifluoromethane	0.0022	0.0022	U	-			-		
Ethylbenzene	0.0022	0.0022	U	-			-		
Hexachlorobutadiene	0.0022	0.0022	U	-			-		
Isopropylbenzene	0.0022	0.0022	U	-			-		
m+p-Xylene	0.0054	0.0054	U	-			-		
Methyl Tertiary Butyl Ether	0.0022	0.0022	U	-			-		
Methylene chloride	0.011	0.011	U	-			-		
n-Butylbenzene	0.0022	0.0022	U	-			-		
n-Propylbenzene	0.0022	0.0022	U	-			-		
Naphthalene	0.0022	0.0022	U	-			-		
o-Xylene	0.0027	0.0027	U	-			-		
4-Isopropyltoluene	0.0022	0.0022	U	-			-		
sec-Butylbenzene	0.0022	0.0022	U	-			-		
Styrene	0.0022	0.0022	U	-			-		
tert-Butylbenzene	0.0022	0.0022	U	-			-		
Tetrachloroethene	0.0022	0.0022	U	-			-		
Toluene	0.0022	0.0022	U	-			-		
trans-1,2-Dichloroethene	0.0022	0.0022	U	-			-		
trans-1,3-Dichloropropene	0.0022	0.0022	U	-			-		
Trichloroethene	0.0022	0.0022	U	-			-		
Trichlorofluoromethane	0.0022	0.0022	U	-			-		
Vinyl chloride	0.0022	0.0022	U	-			-		
Semivolatile Organic Compounds (mg/kg)									
1,2,4-Trichlorobenzene	0.18	0.18	U	-			-		
1,2-Dichlorobenzene	0.18	0.18	U	-			-		
1,3-Dichlorobenzene	0.18	0.18	U	-			-		
1,4-Dichlorobenzene	0.18	0.18	U	-			-		
2,4,5-Trichlorophenol	0.18	0.18	U	-			-		
2,4,6-Trichlorophenol	0.18	0.18	U	-			-		
2,4-Dichlorophenol	0.18	0.18	U	-			-		
2,4-Dimethylphenol	0.18	0.18	U	-			-		
2,4-Dinitrophenol	0.18	0.18	U	-			-		
2,4-Dinitrotoluene	0.18	0.18	U	-			-		
2,6-Dinitrotoluene	0.18	0.18	U	-			-		
2-Chloronaphthalene	0.18	0.18	U	-			-		
2-Chlorophenol	0.18	0.18	U	-			-		
2-Methylnaphthalene	0.18	0.18	U	-			-		
2-Methylphenol	0.18	0.18	U	-			-		
2-Nitroaniline	0.18	0.18	U	-			-		
2-Nitrophenol	0.18	0.18	U	-			-		
3,3-Dichlorobenzidine	0.18	0.18	U	-			-		
3-Nitroaniline	0.18	0.18	U	-			-		
4,6-Dinitro-2-methylphenol	0.18	0.18	U	-			-		
4-Bromophenyl-phenylether	0.18	0.18	U	-			-		
4-Chloro-3-methylphenol	0.18	0.18	U	-			-		
4-Chloroaniline	0.18	0.18	U	-			-		

TABLE B-X24
ANALYTICAL RESULTS FOR GRID X24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	X24			X24			X24		
Sample Name	P3IF-BA-GRID X024			P3IF-SS-IS-SO-X024			P3IF-SS-IS-SO-X524		
Date Collected	June 19, 2023			June 19, 2023			June 19, 2023		
Semivolatile Organic Compounds (mg/kg), continued									
4-Chlorophenyl-phenylether	0.18	0.18	U	-			-		
4-Nitroaniline	0.18	0.18	U	-			-		
4-Nitrophenol	0.18	0.18	U	-			-		
Acenaphthene	0.18	0.18	U	-			-		
Acenaphthylene	0.18	0.18	U	-			-		
Anthracene	0.18	0.18	U	-			-		
Benzo(a)anthracene	0.18	0.18	U	-			-		
Benzo(a)pyrene	0.14	0.14	U	-			-		
Benzo(b)fluoranthene	0.18	0.18	U	-			-		
Benzo(g,h,i)perylene	0.18	0.18	U	-			-		
Benzo(k)fluoranthene	0.18	0.18	U	-			-		
Benzoic acid	0.18	0.18	U	-			-		
Benzyl Alcohol	0.18	0.18	U	-			-		
Bis(2-chloro-1-methylethyl) ether	0.18	0.18	U	-			-		
Bis(2-chloroethoxy)methane	0.18	0.18	U	-			-		
Bis(2-chloroethyl)ether	0.18	0.18	U	-			-		
Bis(2-ethylhexyl)phthalate	0.18	0.18	U	-			-		
Butyl benzyl phthalate	0.18	0.18	U	-			-		
Carbazole	0.18	0.18	U	-			-		
Chrysene	0.18	0.18	U	-			-		
Di-n-butyl phthalate	0.18	0.18	U	-			-		
Di-n-octyl phthalate	0.18	0.18	U	-			-		
Dibenz(a,h)anthracene	0.14	0.14	U	-			-		
Dibenzofuran	0.18	0.18	U	-			-		
Diethyl phthalate	0.18	0.18	U	-			-		
Dimethyl phthalate	0.18	0.18	U	-			-		
Fluoranthene	0.18	0.18	U	-			-		
Fluorene	0.18	0.18	U	-			-		
Hexachlorobenzene	0.18	0.18	U	-			-		
Hexachlorobutadiene	0.18	0.18	U	-			-		
Hexachloroethane	0.18	0.18	U	-			-		
Indeno(1,2,3-cd)pyrene	0.18	0.18	U	-			-		
Isophorone	0.18	0.18	U	-			-		
n-Nitroso-di-n-propylamine	0.18	0.18	U	-			-		
n-Nitrosodimethylamine	0.021	0.021	UJ	-			-		
n-Nitrosodiphenylamine	0.18	0.18	U	-			-		
Naphthalene	0.18	0.18	U	-			-		
Nitrobenzene	0.18	0.18	U	-			-		
Pentachlorophenol	0.18	0.18	U	-			-		
Phenanthrene	0.18	0.18	U	-			-		
Phenol	0.18	0.18	U	-			-		
Pyrene	0.18	0.18	U	-			-		
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
1,3-Dinitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,4,6-Trinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,4-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2,6-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
2-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
3-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
4-Nitrotoluene	-			0.075	0.075	UJ	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	-			0.075	0.075	UJ	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	-			0.075	0.075	UJ	0.075	0.075	UJ
Nitrobenzene	-			0.075	0.075	UJ	0.075	0.075	UJ
Nitroglycerin	-			0.15	0.15	UJ	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	-			0.075	0.075	UJ	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	-			0.25	0.25	UJ	0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)									
Aroclor 1016	0.021	0.021	U	-			-		
Aroclor 1221	0.021	0.021	U	-			-		
Aroclor 1232	0.011	0.011	U	-			-		
Aroclor 1242	0.011	0.011	U	-			-		
Aroclor 1248	0.011	0.011	U	-			-		
Aroclor 1254	0.011	0.011	U	-			-		
Aroclor 1260	0.011	0.011	U	-			-		
Dioxins/Furans (mg/kg)									
Octachlorodibenzofuran (OCDF)	0.00000052	0.00000052	J	-			-		
Octachlorodibenzo-p-dioxin (OCDD)	0.0000064	0.0000064	J	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.00000028	0.00000028	U	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	0.00000096	0.00000096	U	-			-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.000000091	0.000000091	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000084	0.000000084	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000072	0.000000072	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000061	0.000000061	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000065	0.000000065	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.000000081	0.000000081	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000069	0.000000069	U	-			-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000011	0.00000011	U	-			-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.000000063	0.000000063	U	-			-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000045	0.000000045	J	-			-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000018	0.00000018	J	-			-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.00000017	0.00000017	U	-			-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.000000044	0.000000044	U	-			-		

TABLE B-X24
ANALYTICAL RESULTS FOR GRID X24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	X24			X24			X24		
Sample Name	P3IF-BA-GRID X024			P3IF-SS-IS-SO-X024			P3IF-SS-IS-SO-X524		
Date Collected	June 19, 2023			June 19, 2023			June 19, 2023		
Metals (mg/kg)									
Aluminum	-			21000	4		21000	4	
Antimony	-			0.14	0.15	J	0.15	0.15	J
Arsenic	-			1.1	0.3		1.1	0.3	
Barium	-			530	0.2		450	0.2	
Beryllium	-			1.1	0.3	J	1.1	0.3	J
Cadmium	-			0.89	0.08		0.61	0.08	
Calcium (Ca)	-			34000	15		31000	15	
Chromium	-			16	0.2		16	0.2	
Cobalt	-			5.4	0.08		5.1	0.08	
Copper	-			140	0.2		140	0.2	
Iron (Fe)	-			11000	8		11000	8	
Lead	-			14	0.05		14	0.05	
Magnesium (Mg)	-			6000	5		5800	5	
Manganese (Mn)	-			640	0.08		590	0.08	
Mercury	-			0.043	0.043	U	0.043	0.043	U
Nickel	-			15	0.2		14	0.2	
Potassium (K)	-			2800	8		2700	8	
Selenium	-			1.7	0.1		1.6	0.1	
Silver	-			0.16	0.05	J	0.14	0.05	J
Sodium (Na)	-			54	8		50	8	
Thallium	-			0.093	0.05	J	0.073	0.05	J
Vanadium	-			12	0.1		14	0.1	
Zinc	-			31	1.5		29	1.5	
Other Parameters (mg/kg)									
Cyanide (CN-)	0.32	0.32	U	-			-		
Nitrate	7.6	2.2	J	-			-		
Perchlorate	0.0021	0.0021	U	-			-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-X24
ANALYTICAL RESULTS FOR GRID X24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	X24		
Sample Name	P3IF-SS-IS-SO-X624		
Date Collected	June 19, 2023		
	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)			
1,1,1,2-Tetrachloroethane	-		
1,1,1-Trichloroethane	-		
1,1,2,2-Tetrachloroethane	-		
1,1,2-Trichloroethane	-		
1,1-Dichloroethane	-		
1,1-Dichloroethene	-		
1,1-Dichloropropene	-		
1,2,3-Trichlorobenzene	-		
1,2,3-Trichloropropane	-		
1,2,4-Trichlorobenzene	-		
1,2,4-Trimethylbenzene	-		
1,2-Dibromo-3-chloropropane	-		
1,2-Dibromoethane	-		
1,2-Dichlorobenzene	-		
1,2-Dichloroethane	-		
1,2-Dichloropropane	-		
1,3,5-Trimethylbenzene	-		
1,3-Dichlorobenzene	-		
1,3-Dichloropropane	-		
1,4-Dichlorobenzene	-		
2,2-Dichloropropane	-		
2-Butanone	-		
2-Chlorotoluene	-		
2-Hexanone	-		
4-Chlorotoluene	-		
4-Methyl-2-pentanone	-		
Acetone	-		
Benzene	-		
Bromobenzene	-		
Bromochloromethane	-		
Bromodichloromethane	-		
Bromoform	-		
Bromomethane	-		
Carbon disulfide	-		
Carbon tetrachloride	-		
Chlorobenzene	-		
Chloroethane	-		
Chloroform	-		
Chloromethane	-		
cis-1,2-Dichloroethene	-		
cis-1,3-Dichloropropene	-		
Dibromochloromethane	-		
Dibromomethane	-		
Dichlorodifluoromethane	-		
Ethylbenzene	-		
Hexachlorobutadiene	-		
Isopropylbenzene	-		
m+p-Xylene	-		
Methyl Tertiary Butyl Ether	-		
Methylene chloride	-		
n-Butylbenzene	-		
n-Propylbenzene	-		
Naphthalene	-		
o-Xylene	-		
4-Isopropyltoluene	-		
sec-Butylbenzene	-		
Styrene	-		
tert-Butylbenzene	-		
Tetrachloroethene	-		
Toluene	-		
trans-1,2-Dichloroethene	-		
trans-1,3-Dichloropropene	-		
Trichloroethene	-		
Trichlorofluoromethane	-		
Vinyl chloride	-		
Semivolatile Organic Compounds (mg/kg)			
1,2,4-Trichlorobenzene	-		
1,2-Dichlorobenzene	-		
1,3-Dichlorobenzene	-		
1,4-Dichlorobenzene	-		
2,4,5-Trichlorophenol	-		
2,4,6-Trichlorophenol	-		
2,4-Dichlorophenol	-		
2,4-Dimethylphenol	-		
2,4-Dinitrophenol	-		
2,4-Dinitrotoluene	-		
2,6-Dinitrotoluene	-		
2-Chloronaphthalene	-		
2-Chlorophenol	-		
2-Methylnaphthalene	-		
2-Methylphenol	-		
2-Nitroaniline	-		
2-Nitrophenol	-		
3,3-Dichlorobenzidine	-		
3-Nitroaniline	-		
4,6-Dinitro-2-methylphenol	-		
4-Bromophenyl-phenylether	-		
4-Chloro-3-methylphenol	-		
4-Chloroaniline	-		

TABLE B-X24
ANALYTICAL RESULTS FOR GRID X24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	X24		
Sample Name	P3IF-SS-IS-SO-X624		
Date Collected	June 19, 2023		
Semivolatile Organic Compounds (mg/kg), continued			
4-Chlorophenyl-phenylether	-		
4-Nitroaniline	-		
4-Nitrophenol	-		
Acenaphthene	-		
Acenaphthylene	-		
Anthracene	-		
Benzo(a)anthracene	-		
Benzo(a)pyrene	-		
Benzo(b)fluoranthene	-		
Benzo(g,h,i)perylene	-		
Benzo(k)fluoranthene	-		
Benzoic acid	-		
Benzyl Alcohol	-		
Bis(2-chloro-1-methylethyl) ether	-		
Bis(2-chloroethoxy)methane	-		
Bis(2-chloroethyl)ether	-		
Bis(2-ethylhexyl)phthalate	-		
Butyl benzyl phthalate	-		
Carbazole	-		
Chrysene	-		
Di-n-butyl phthalate	-		
Di-n-octyl phthalate	-		
Dibenz(a,h)anthracene	-		
Dibenzofuran	-		
Diethyl phthalate	-		
Dimethyl phthalate	-		
Fluoranthene	-		
Fluorene	-		
Hexachlorobenzene	-		
Hexachlorobutadiene	-		
Hexachloroethane	-		
Indeno(1,2,3-cd)pyrene	-		
Isophorone	-		
n-Nitroso-di-n-propylamine	-		
n-Nitrosodimethylamine	-		
n-Nitrosodiphenylamine	-		
Naphthalene	-		
Nitrobenzene	-		
Pentachlorophenol	-		
Phenanthrene	-		
Phenol	-		
Pyrene	-		
Explosives (mg/kg)			
1,3,5-Trinitrobenzene	0.075	0.075	UJ
1,3-Dinitrobenzene	0.075	0.075	UJ
2,4,6-Trinitrotoluene	0.075	0.075	UJ
2,4-Dinitrotoluene	0.075	0.075	UJ
2,6-Dinitrotoluene	0.075	0.075	UJ
2-Amino-4,6-dinitrotoluene	0.075	0.075	UJ
2-Nitrotoluene	0.075	0.075	UJ
3-Nitrotoluene	0.075	0.075	UJ
4-Amino-2,6-Dinitrotoluene	0.075	0.075	UJ
4-Nitrotoluene	0.075	0.075	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.075	0.075	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.075	0.075	UJ
Nitrobenzene	0.075	0.075	UJ
Nitroglycerin	0.15	0.15	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.075	0.075	UJ
Pentaerythritol tetranitrate (PETN)	0.25	0.25	UJ
Polychlorinated Biphenyls (mg/kg)			
Aroclor 1016	-		
Aroclor 1221	-		
Aroclor 1232	-		
Aroclor 1242	-		
Aroclor 1248	-		
Aroclor 1254	-		
Aroclor 1260	-		
Dioxins/Furans (mg/kg)			
Octachlorodibenzofuran (OCDF)	-		
Octachlorodibenzo-p-dioxin (OCDD)	-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	-		

TABLE B-X24
ANALYTICAL RESULTS FOR GRID X24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	X24		
Sample Name	P3IF-SS-IS-SO-X624		
Date Collected	June 19, 2023		
Metals (mg/kg)			
Aluminum	21000	4	
Antimony	0.11	0.15	J
Arsenic	1.2	0.3	
Barium	540	0.2	
Beryllium	1.3	0.3	J
Cadmium	0.81	0.08	
Calcium (Ca)	34000	15	
Chromium	16	0.2	
Cobalt	5.6	0.08	
Copper	170	0.2	
Iron (Fe)	11000	8	
Lead	16	0.05	
Magnesium (Mg)	6100	5	
Manganese (Mn)	690	0.08	
Mercury	0.042	0.042	U
Nickel	16	0.2	
Potassium (K)	2600	8	
Selenium	1.9	0.1	
Silver	0.15	0.05	J
Sodium (Na)	55	8	
Thallium	0.08	0.05	J
Vanadium	12	0.1	
Zinc	32	1.5	
Other Parameters (mg/kg)			
Cyanide (CN-)	-		
Nitrate	-		
Perchlorate	-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-Y24
ANALYTICAL RESULTS FOR GRID Y24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	Y24			Y24			Y24		
Sample Name	P3IF-BA-GRID Y024			P3IF-SS-IS-SO Y024			P3IF-SS-IS-SO Y524		
Date Collected	June 19, 2023			June 19, 2023			June 19, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)									
1,1,1,2-Tetrachloroethane	0.0023	0.0023	U	-			-		
1,1,1-Trichloroethane	0.0023	0.0023	U	-			-		
1,1,2,2-Tetrachloroethane	0.0023	0.0023	U	-			-		
1,1,2-Trichloroethane	0.0023	0.0023	U	-			-		
1,1-Dichloroethane	0.0023	0.0023	U	-			-		
1,1-Dichloroethene	0.0023	0.0023	U	-			-		
1,1-Dichloropropene	0.0023	0.0023	U	-			-		
1,2,3-Trichlorobenzene	0.0023	0.0023	U	-			-		
1,2,3-Trichloropropane	0.0057	0.0057	U	-			-		
1,2,4-Trichlorobenzene	0.0023	0.0023	U	-			-		
1,2,4-Trimethylbenzene	0.0023	0.0023	U	-			-		
1,2-Dibromo-3-chloropropane	0.0057	0.0057	U	-			-		
1,2-Dibromoethane	0.0023	0.0023	U	-			-		
1,2-Dichlorobenzene	0.0023	0.0023	U	-			-		
1,2-Dichloroethane	0.0023	0.0023	U	-			-		
1,2-Dichloropropane	0.0023	0.0023	U	-			-		
1,3,5-Trimethylbenzene	0.0023	0.0023	U	-			-		
1,3-Dichlorobenzene	0.0023	0.0023	U	-			-		
1,3-Dichloropropane	0.0023	0.0023	U	-			-		
1,4-Dichlorobenzene	0.0023	0.0023	U	-			-		
2,2-Dichloropropane	0.0023	0.0023	U	-			-		
2-Butanone	0.0034	0.0034	U	-			-		
2-Chlorotoluene	0.0023	0.0023	U	-			-		
2-Hexanone	0.0023	0.0023	U	-			-		
4-Chlorotoluene	0.0023	0.0023	U	-			-		
4-Methyl-2-pentanone	0.0023	0.0023	U	-			-		
Acetone	0.21	0.0057		-			-		
Benzene	0.0023	0.0023	U	-			-		
Bromobenzene	0.0023	0.0023	U	-			-		
Bromochloromethane	0.0023	0.0023	U	-			-		
Bromodichloromethane	0.0023	0.0023	U	-			-		
Bromoform	0.0023	0.0023	U	-			-		
Bromomethane	0.0023	0.0023	U	-			-		
Carbon disulfide	0.0023	0.0023	U	-			-		
Carbon tetrachloride	0.0023	0.0023	U	-			-		
Chlorobenzene	0.0023	0.0023	U	-			-		
Chloroethane	0.0023	0.0023	U	-			-		
Chloroform	0.0023	0.0023	U	-			-		
Chloromethane	0.0057	0.0057	U	-			-		
cis-1,2-Dichloroethene	0.0023	0.0023	U	-			-		
cis-1,3-Dichloropropene	0.0023	0.0023	U	-			-		
Dibromochloromethane	0.0023	0.0023	U	-			-		
Dibromomethane	0.0023	0.0023	U	-			-		
Dichlorodifluoromethane	0.0023	0.0023	U	-			-		
Ethylbenzene	0.0023	0.0023	U	-			-		
Hexachlorobutadiene	0.0023	0.0023	U	-			-		
Isopropylbenzene	0.0023	0.0023	U	-			-		
m+p-Xylene	0.0057	0.0057	U	-			-		
Methyl Tertiary Butyl Ether	0.0023	0.0023	U	-			-		
Methylene chloride	0.011	0.011	U	-			-		
n-Butylbenzene	0.0023	0.0023	U	-			-		
n-Propylbenzene	0.0023	0.0023	U	-			-		
Naphthalene	0.0023	0.0023	U	-			-		
o-Xylene	0.0029	0.0029	U	-			-		
4-Isopropyltoluene	0.0023	0.0023	U	-			-		
sec-Butylbenzene	0.0023	0.0023	U	-			-		
Styrene	0.0023	0.0023	U	-			-		
tert-Butylbenzene	0.0023	0.0023	U	-			-		
Tetrachloroethene	0.0023	0.0023	U	-			-		
Toluene	0.0023	0.0023	U	-			-		
trans-1,2-Dichloroethene	0.0023	0.0023	U	-			-		
trans-1,3-Dichloropropene	0.0023	0.0023	U	-			-		
Trichloroethene	0.0023	0.0023	U	-			-		
Trichlorofluoromethane	0.0023	0.0023	U	-			-		
Vinyl chloride	0.0023	0.0023	U	-			-		
Semivolatile Organic Compounds (mg/kg)									
1,2,4-Trichlorobenzene	0.21	0.21	U	-			-		
1,2-Dichlorobenzene	0.21	0.21	U	-			-		
1,3-Dichlorobenzene	0.21	0.21	U	-			-		
1,4-Dichlorobenzene	0.21	0.21	U	-			-		
2,4,5-Trichlorophenol	0.21	0.21	U	-			-		
2,4,6-Trichlorophenol	0.21	0.21	U	-			-		
2,4-Dichlorophenol	0.21	0.21	U	-			-		
2,4-Dimethylphenol	0.21	0.21	U	-			-		
2,4-Dinitrophenol	0.21	0.21	U	-			-		
2,4-Dinitrotoluene	0.21	0.21	U	-			-		
2,6-Dinitrotoluene	0.21	0.21	U	-			-		
2-Chloronaphthalene	0.21	0.21	U	-			-		
2-Chlorophenol	0.21	0.21	U	-			-		
2-Methylnaphthalene	0.21	0.21	U	-			-		
2-Methylphenol	0.21	0.21	U	-			-		
2-Nitroaniline	0.21	0.21	U	-			-		
2-Nitrophenol	0.21	0.21	U	-			-		
3,3-Dichlorobenzidine	0.21	0.21	U	-			-		
3-Nitroaniline	0.21	0.21	U	-			-		
4,6-Dinitro-2-methylphenol	0.21	0.21	U	-			-		
4-Bromophenyl-phenylether	0.21	0.21	U	-			-		
4-Chloro-3-methylphenol	0.21	0.21	U	-			-		
4-Chloroaniline	0.21	0.21	U	-			-		

TABLE B-Y24
ANALYTICAL RESULTS FOR GRID Y24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	Y24			Y24			Y24		
Sample Name	P3IF-BA-GRID Y024			P3IF-SS-IS-SO Y024			P3IF-SS-IS-SO Y524		
Date Collected	June 19, 2023			June 19, 2023			June 19, 2023		
Semivolatile Organic Compounds (mg/kg), continued									
4-Chlorophenyl-phenylether	0.21	0.21	U	-			-		
4-Nitroaniline	0.21	0.21	U	-			-		
4-Nitrophenol	0.21	0.21	U	-			-		
Acenaphthene	0.21	0.21	U	-			-		
Acenaphthylene	0.21	0.21	U	-			-		
Anthracene	0.21	0.21	U	-			-		
Benzo(a)anthracene	0.21	0.21	U	-			-		
Benzo(a)pyrene	0.16	0.16	U	-			-		
Benzo(b)fluoranthene	0.21	0.21	U	-			-		
Benzo(g,h,i)perylene	0.21	0.21	U	-			-		
Benzo(k)fluoranthene	0.21	0.21	U	-			-		
Benzoic acid	0.21	0.21	U	-			-		
Benzyl Alcohol	0.21	0.21	U	-			-		
Bis(2-chloro-1-methylethyl) ether	0.21	0.21	U	-			-		
Bis(2-chloroethoxy)methane	0.21	0.21	U	-			-		
Bis(2-chloroethyl)ether	0.21	0.21	U	-			-		
Bis(2-ethylhexyl)phthalate	0.21	0.21	U	-			-		
Butyl benzyl phthalate	0.21	0.21	U	-			-		
Carbazole	0.21	0.21	U	-			-		
Chrysene	0.21	0.21	U	-			-		
Di-n-butyl phthalate	0.21	0.21	U	-			-		
Di-n-octyl phthalate	0.21	0.21	U	-			-		
Dibenz(a,h)anthracene	**0.16**	**0.16**	**U**	-			-		
Dibenzofuran	0.21	0.21	U	-			-		
Diethyl phthalate	0.21	0.21	U	-			-		
Dimethyl phthalate	0.21	0.21	U	-			-		
Fluoranthene	0.21	0.21	U	-			-		
Fluorene	0.21	0.21	U	-			-		
Hexachlorobenzene	0.21	0.21	U	-			-		
Hexachlorobutadiene	0.21	0.21	U	-			-		
Hexachloroethane	0.21	0.21	U	-			-		
Indeno(1,2,3-cd)pyrene	0.21	0.21	U	-			-		
Isophorone	0.21	0.21	U	-			-		
n-Nitroso-di-n-propylamine	0.21	0.21	U	-			-		
n-Nitrosodimethylamine	**0.025**	**0.025**	**UJ**	-			-		
n-Nitrosodiphenylamine	0.21	0.21	U	-			-		
Naphthalene	0.21	0.21	U	-			-		
Nitrobenzene	0.21	0.21	U	-			-		
Pentachlorophenol	0.21	0.21	U	-			-		
Phenanthrene	0.21	0.21	U	-			-		
Phenol	0.21	0.21	U	-			-		
Pyrene	0.21	0.21	U	-			-		
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	-			0.15	0.15	UJ	0.15	0.15	UJ
1,3-Dinitrobenzene	-			0.15	0.15	UJ	0.15	0.15	UJ
2,4,6-Trinitrotoluene	-			0.15	0.15	UJ	0.15	0.15	UJ
2,4-Dinitrotoluene	-			0.15	0.15	UJ	0.15	0.15	UJ
2,6-Dinitrotoluene	-			0.15	0.15	UJ	0.15	0.15	UJ
2-Amino-4,6-dinitrotoluene	-			0.15	0.15	UJ	0.15	0.15	UJ
2-Nitrotoluene	-			0.15	0.15	UJ	0.15	0.15	UJ
3-Nitrotoluene	-			0.15	0.15	UJ	0.15	0.15	UJ
4-Amino-2,6-Dinitrotoluene	-			0.15	0.15	UJ	0.15	0.15	UJ
4-Nitrotoluene	-			0.15	0.15	UJ	0.15	0.15	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	-			0.15	0.15	UJ	0.15	0.15	UJ
Methyl-2,4,6-trinitrophenylnitramine	-			0.15	0.15	UJ	0.15	0.15	UJ
Nitrobenzene	-			0.15	0.15	UJ	0.15	0.15	UJ
Nitroglycerin	-			0.3	0.3	UJ	0.3	0.3	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	-			0.15	0.15	UJ	0.15	0.15	UJ
Pentaerythritol tetranitrate (PETN)	-			0.5	0.5	UJ	0.5	0.5	UJ
Polychlorinated Biphenyls (mg/kg)									
Aroclor 1016	0.024	0.024	U	-			-		
Aroclor 1221	0.024	0.024	U	-			-		
Aroclor 1232	0.012	0.012	U	-			-		
Aroclor 1242	0.012	0.012	U	-			-		
Aroclor 1248	0.012	0.012	U	-			-		
Aroclor 1254	0.012	0.012	U	-			-		
Aroclor 1260	0.012	0.012	U	-			-		
Dioxins/Furans (mg/kg)									
Octachlorodibenzofuran (OCDF)	0.000000031	0.000000031	U	-			-		
Octachlorodibenzo-p-dioxin (OCDD)	0.0000024	0.0000024	U	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.000000038	0.000000038	U	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	0.00000031	0.00000031	U	-			-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.000000048	0.000000048	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000037	0.000000037	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000024	0.00000024	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000034	0.000000034	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000022	0.00000022	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.000000045	0.000000045	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.0000003	0.0000003	U	-			-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000012	0.00000012	U	-			-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.000000058	0.000000058	U	-			-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000051	0.000000051	U	-			-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.00000012	0.00000012	U	-			-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.00000017	0.00000017	U	-			-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.000000074	0.000000074	U	-			-		

TABLE B-Y24
ANALYTICAL RESULTS FOR GRID Y24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	Y24			Y24			Y24		
Sample Name	P3IF-BA-GRID Y024			P3IF-SS-IS-SO Y024			P3IF-SS-IS-SO Y524		
Date Collected	June 19, 2023			June 19, 2023			June 19, 2023		
Metals (mg/kg)									
Aluminum	-			18000	4		19000	4	
Antimony	-			0.15	0.15	U	0.15	0.15	U
Arsenic	-			1.2	0.3		1.4	0.3	
Barium	-			820	0.2		610	0.2	
Beryllium	-			1.2	0.3	J	1.2	0.3	J
Cadmium	-			0.42	0.08		0.41	0.08	
Calcium (Ca)	-			38000	15		37000	15	
Chromium	-			12	0.2		12	0.2	
Cobalt	-			5.8	0.08		6	0.08	
Copper	-			93	0.2		67	0.2	
Iron (Fe)	-			11000	8		11000	8	
Lead	-			14	0.05		13	0.05	
Magnesium (Mg)	-			6000	5		6400	5	
Manganese (Mn)	-			630	0.08		630	0.08	
Mercury	-			1.7	0.043	J	0.045	0.045	UJ
Nickel	-			15	0.2		14	0.2	
Potassium (K)	-			1800	8		1900	8	
Selenium	-			1.8	0.1		2.1	0.1	
Silver	-			0.11	0.05	J	0.087	0.05	J
Sodium (Na)	-			49	8		53	8	
Thallium	-			0.074	0.05	J	0.064	0.05	J
Vanadium	-			11	0.1		12	0.1	
Zinc	-			26	1.5		25	1.5	
Other Parameters (mg/kg)									
Cyanide (CN-)	0.39	0.39	U	-			-		
Nitrate	6	2.4	J	-			-		
Perchlorate	0.0025	0.0025	U	-			-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-Y24
ANALYTICAL RESULTS FOR GRID Y24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	Y24		
Sample Name	P3IF-SS-IS-SO Y624		
Date Collected	June 19, 2023		
	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)			
1,1,1,2-Tetrachloroethane	-		
1,1,1-Trichloroethane	-		
1,1,2,2-Tetrachloroethane	-		
1,1,2-Trichloroethane	-		
1,1-Dichloroethane	-		
1,1-Dichloroethene	-		
1,1-Dichloropropene	-		
1,2,3-Trichlorobenzene	-		
1,2,3-Trichloropropane	-		
1,2,4-Trichlorobenzene	-		
1,2,4-Trimethylbenzene	-		
1,2-Dibromo-3-chloropropane	-		
1,2-Dibromoethane	-		
1,2-Dichlorobenzene	-		
1,2-Dichloroethane	-		
1,2-Dichloropropane	-		
1,3,5-Trimethylbenzene	-		
1,3-Dichlorobenzene	-		
1,3-Dichloropropane	-		
1,4-Dichlorobenzene	-		
2,2-Dichloropropane	-		
2-Butanone	-		
2-Chlorotoluene	-		
2-Hexanone	-		
4-Chlorotoluene	-		
4-Methyl-2-pentanone	-		
Acetone	-		
Benzene	-		
Bromobenzene	-		
Bromochloromethane	-		
Bromodichloromethane	-		
Bromoform	-		
Bromomethane	-		
Carbon disulfide	-		
Carbon tetrachloride	-		
Chlorobenzene	-		
Chloroethane	-		
Chloroform	-		
Chloromethane	-		
cis-1,2-Dichloroethene	-		
cis-1,3-Dichloropropene	-		
Dibromochloromethane	-		
Dibromomethane	-		
Dichlorodifluoromethane	-		
Ethylbenzene	-		
Hexachlorobutadiene	-		
Isopropylbenzene	-		
m+p-Xylene	-		
Methyl Tertiary Butyl Ether	-		
Methylene chloride	-		
n-Butylbenzene	-		
n-Propylbenzene	-		
Naphthalene	-		
o-Xylene	-		
4-Isopropyltoluene	-		
sec-Butylbenzene	-		
Styrene	-		
tert-Butylbenzene	-		
Tetrachloroethene	-		
Toluene	-		
trans-1,2-Dichloroethene	-		
trans-1,3-Dichloropropene	-		
Trichloroethene	-		
Trichlorofluoromethane	-		
Vinyl chloride	-		
Semivolatile Organic Compounds (mg/kg)			
1,2,4-Trichlorobenzene	-		
1,2-Dichlorobenzene	-		
1,3-Dichlorobenzene	-		
1,4-Dichlorobenzene	-		
2,4,5-Trichlorophenol	-		
2,4,6-Trichlorophenol	-		
2,4-Dichlorophenol	-		
2,4-Dimethylphenol	-		
2,4-Dinitrophenol	-		
2,4-Dinitrotoluene	-		
2,6-Dinitrotoluene	-		
2-Chloronaphthalene	-		
2-Chlorophenol	-		
2-Methylnaphthalene	-		
2-Methylphenol	-		
2-Nitroaniline	-		
2-Nitrophenol	-		
3,3-Dichlorobenzidine	-		
3-Nitroaniline	-		
4,6-Dinitro-2-methylphenol	-		
4-Bromophenyl-phenylether	-		
4-Chloro-3-methylphenol	-		
4-Chloroaniline	-		

TABLE B-Y24
ANALYTICAL RESULTS FOR GRID Y24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	Y24		
Sample Name	P3IF-SS-IS-SO Y624		
Date Collected	June 19, 2023		
Semivolatile Organic Compounds (mg/kg), continued			
4-Chlorophenyl-phenylether	-		
4-Nitroaniline	-		
4-Nitrophenol	-		
Acenaphthene	-		
Acenaphthylene	-		
Anthracene	-		
Benzo(a)anthracene	-		
Benzo(a)pyrene	-		
Benzo(b)fluoranthene	-		
Benzo(g,h,i)perylene	-		
Benzo(k)fluoranthene	-		
Benzoic acid	-		
Benzyl Alcohol	-		
Bis(2-chloro-1-methylethyl) ether	-		
Bis(2-chloroethoxy)methane	-		
Bis(2-chloroethyl)ether	-		
Bis(2-ethylhexyl)phthalate	-		
Butyl benzyl phthalate	-		
Carbazole	-		
Chrysene	-		
Di-n-butyl phthalate	-		
Di-n-octyl phthalate	-		
Dibenz(a,h)anthracene	-		
Dibenzofuran	-		
Diethyl phthalate	-		
Dimethyl phthalate	-		
Fluoranthene	-		
Fluorene	-		
Hexachlorobenzene	-		
Hexachlorobutadiene	-		
Hexachloroethane	-		
Indeno(1,2,3-cd)pyrene	-		
Isophorone	-		
n-Nitroso-di-n-propylamine	-		
n-Nitrosodimethylamine	-		
n-Nitrosodiphenylamine	-		
Naphthalene	-		
Nitrobenzene	-		
Pentachlorophenol	-		
Phenanthrene	-		
Phenol	-		
Pyrene	-		
Explosives (mg/kg)			
1,3,5-Trinitrobenzene	0.15	0.15	UJ
1,3-Dinitrobenzene	0.15	0.15	UJ
2,4,6-Trinitrotoluene	0.15	0.15	UJ
2,4-Dinitrotoluene	0.15	0.15	UJ
2,6-Dinitrotoluene	0.15	0.15	UJ
2-Amino-4,6-dinitrotoluene	0.15	0.15	UJ
2-Nitrotoluene	0.15	0.15	UJ
3-Nitrotoluene	0.15	0.15	UJ
4-Amino-2,6-Dinitrotoluene	0.15	0.15	UJ
4-Nitrotoluene	0.15	0.15	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.15	0.15	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.15	0.15	UJ
Nitrobenzene	0.15	0.15	UJ
Nitroglycerin	0.3	0.3	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.15	0.15	UJ
Pentaerythritol tetranitrate (PETN)	0.5	0.5	UJ
Polychlorinated Biphenyls (mg/kg)			
Aroclor 1016	-		
Aroclor 1221	-		
Aroclor 1232	-		
Aroclor 1242	-		
Aroclor 1248	-		
Aroclor 1254	-		
Aroclor 1260	-		
Dioxins/Furans (mg/kg)			
Octachlorodibenzofuran (OCDF)	-		
Octachlorodibenzo-p-dioxin (OCDD)	-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	-		

TABLE B-Y24
ANALYTICAL RESULTS FOR GRID Y24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	Y24		
Sample Name	P3IF-SS-IS-SO Y624		
Date Collected	June 19, 2023		
Metals (mg/kg)			
Aluminum	19000	4	
Antimony	0.15	0.15	U
Arsenic	1.5	0.3	
Barium	650	0.2	
Beryllium	1.1	0.3	J
Cadmium	0.51	0.08	
Calcium (Ca)	41000	15	
Chromium	13	0.2	
Cobalt	6.1	0.08	
Copper	87	0.2	
Iron (Fe)	13000	8	
Lead	15	0.05	
Magnesium (Mg)	6400	5	
Manganese (Mn)	760	0.08	
Mercury	0.043	0.043	UJ
Nickel	15	0.2	
Potassium (K)	1900	8	
Selenium	2.3	0.1	
Silver	0.11	0.05	J
Sodium (Na)	50	8	
Thallium	0.068	0.05	J
Vanadium	13	0.1	
Zinc	27	1.5	
Other Parameters (mg/kg)			
Cyanide (CN-)	-		
Nitrate	-		
Perchlorate	-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-Z24
ANALYTICAL RESULTS FOR GRID Z24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	Z24			Z24			Z24		
Sample Name	P3IF-BA-GRID Z024			P3IF-SS-IS-SO Z024			P3IF-SS-IS-SO Z524		
Date Collected	June 19, 2023			June 19, 2023			June 19, 2023		
	Result	LOD	Qual	Result	LOD	Qual	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)									
1,1,1,2-Tetrachloroethane	0.0018	0.0018	U	-			-		
1,1,1-Trichloroethane	0.0018	0.0018	U	-			-		
1,1,2,2-Tetrachloroethane	0.0018	0.0018	U	-			-		
1,1,2-Trichloroethane	0.0018	0.0018	U	-			-		
1,1-Dichloroethane	0.0018	0.0018	U	-			-		
1,1-Dichloroethene	0.0018	0.0018	U	-			-		
1,1-Dichloropropene	0.0018	0.0018	U	-			-		
1,2,3-Trichlorobenzene	0.0018	0.0018	U	-			-		
1,2,3-Trichloropropane	0.0046	0.0046	U	-			-		
1,2,4-Trichlorobenzene	0.0018	0.0018	U	-			-		
1,2,4-Trimethylbenzene	0.0018	0.0018	U	-			-		
1,2-Dibromo-3-chloropropane	0.0046	0.0046	U	-			-		
1,2-Dibromoethane	0.0018	0.0018	U	-			-		
1,2-Dichlorobenzene	0.0018	0.0018	U	-			-		
1,2-Dichloroethane	0.0018	0.0018	U	-			-		
1,2-Dichloropropane	0.0018	0.0018	U	-			-		
1,3,5-Trimethylbenzene	0.0018	0.0018	U	-			-		
1,3-Dichlorobenzene	0.0018	0.0018	U	-			-		
1,3-Dichloropropane	0.0018	0.0018	U	-			-		
1,4-Dichlorobenzene	0.0018	0.0018	U	-			-		
2,2-Dichloropropane	0.0018	0.0018	U	-			-		
2-Butanone	0.0028	0.0028	U	-			-		
2-Chlorotoluene	0.0018	0.0018	U	-			-		
2-Hexanone	0.0018	0.0018	U	-			-		
4-Chlorotoluene	0.0018	0.0018	U	-			-		
4-Methyl-2-pentanone	0.0018	0.0018	U	-			-		
Acetone	0.35	0.0046	J	-			-		
Benzene	0.0018	0.0018	U	-			-		
Bromobenzene	0.0018	0.0018	U	-			-		
Bromochloromethane	0.0018	0.0018	U	-			-		
Bromodichloromethane	0.0018	0.0018	U	-			-		
Bromoform	0.0018	0.0018	U	-			-		
Bromomethane	0.0018	0.0018	U	-			-		
Carbon disulfide	0.0018	0.0018	U	-			-		
Carbon tetrachloride	0.0018	0.0018	U	-			-		
Chlorobenzene	0.0018	0.0018	U	-			-		
Chloroethane	0.0018	0.0018	U	-			-		
Chloroform	0.0018	0.0018	U	-			-		
Chloromethane	0.0046	0.0046	U	-			-		
cis-1,2-Dichloroethene	0.0018	0.0018	U	-			-		
cis-1,3-Dichloropropene	0.0018	0.0018	U	-			-		
Dibromochloromethane	0.0018	0.0018	U	-			-		
Dibromomethane	0.0018	0.0018	U	-			-		
Dichlorodifluoromethane	0.0018	0.0018	U	-			-		
Ethylbenzene	0.0018	0.0018	U	-			-		
Hexachlorobutadiene	0.0018	0.0018	U	-			-		
Isopropylbenzene	0.0018	0.0018	U	-			-		
m+p-Xylene	0.0046	0.0046	U	-			-		
Methyl Tertiary Butyl Ether	0.0018	0.0018	U	-			-		
Methylene chloride	0.0092	0.0092	U	-			-		
n-Butylbenzene	0.0018	0.0018	U	-			-		
n-Propylbenzene	0.0018	0.0018	U	-			-		
Naphthalene	0.0018	0.0018	U	-			-		
o-Xylene	0.0023	0.0023	U	-			-		
4-Isopropyltoluene	0.0018	0.0018	U	-			-		
sec-Butylbenzene	0.0018	0.0018	U	-			-		
Styrene	0.0018	0.0018	U	-			-		
tert-Butylbenzene	0.0018	0.0018	U	-			-		
Tetrachloroethene	0.0018	0.0018	U	-			-		
Toluene	0.0018	0.0018	U	-			-		
trans-1,2-Dichloroethene	0.0018	0.0018	U	-			-		
trans-1,3-Dichloropropene	0.0018	0.0018	U	-			-		
Trichloroethene	0.0018	0.0018	U	-			-		
Trichlorofluoromethane	0.0018	0.0018	U	-			-		
Vinyl chloride	0.0018	0.0018	U	-			-		
Semivolatile Organic Compounds (mg/kg)									
1,2,4-Trichlorobenzene	0.17	0.17	U	-			-		
1,2-Dichlorobenzene	0.17	0.17	U	-			-		
1,3-Dichlorobenzene	0.17	0.17	U	-			-		
1,4-Dichlorobenzene	0.17	0.17	U	-			-		
2,4,5-Trichlorophenol	0.17	0.17	U	-			-		
2,4,6-Trichlorophenol	0.17	0.17	U	-			-		
2,4-Dichlorophenol	0.17	0.17	U	-			-		
2,4-Dimethylphenol	0.17	0.17	U	-			-		
2,4-Dinitrophenol	0.17	0.17	U	-			-		
2,4-Dinitrotoluene	0.17	0.17	U	-			-		
2,6-Dinitrotoluene	0.17	0.17	U	-			-		
2-Chloronaphthalene	0.17	0.17	U	-			-		
2-Chlorophenol	0.17	0.17	U	-			-		
2-Methylnaphthalene	0.17	0.17	U	-			-		
2-Methylphenol	0.17	0.17	U	-			-		
2-Nitroaniline	0.17	0.17	U	-			-		
2-Nitrophenol	0.17	0.17	U	-			-		
3,3-Dichlorobenzidine	0.17	0.17	U	-			-		
3-Nitroaniline	0.17	0.17	U	-			-		
4,6-Dinitro-2-methylphenol	0.17	0.17	U	-			-		
4-Bromophenyl-phenylether	0.17	0.17	U	-			-		
4-Chloro-3-methylphenol	0.17	0.17	U	-			-		
4-Chloroaniline	0.17	0.17	U	-			-		

TABLE B-Z24
ANALYTICAL RESULTS FOR GRID Z24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	Z24			Z24			Z24		
Sample Name	P3IF-BA-GRID Z024			P3IF-SS-IS-SO Z024			P3IF-SS-IS-SO Z524		
Date Collected	June 19, 2023			June 19, 2023			June 19, 2023		
Semivolatile Organic Compounds (mg/kg), continued									
4-Chlorophenyl-phenylether	0.17	0.17	U	-			-		
4-Nitroaniline	0.17	0.17	U	-			-		
4-Nitrophenol	0.17	0.17	U	-			-		
Acenaphthene	0.17	0.17	U	-			-		
Acenaphthylene	0.17	0.17	U	-			-		
Anthracene	0.17	0.17	U	-			-		
Benzo(a)anthracene	0.17	0.17	U	-			-		
Benzo(a)pyrene	0.13	0.13	U	-			-		
Benzo(b)fluoranthene	0.17	0.17	U	-			-		
Benzo(g,h,i)perylene	0.17	0.17	U	-			-		
Benzo(k)fluoranthene	0.17	0.17	U	-			-		
Benzoic acid	0.17	0.17	U	-			-		
Benzyl Alcohol	0.17	0.17	U	-			-		
Bis(2-chloro-1-methylethyl) ether	0.17	0.17	U	-			-		
Bis(2-chloroethoxy)methane	0.17	0.17	U	-			-		
Bis(2-chloroethyl)ether	0.17	0.17	U	-			-		
Bis(2-ethylhexyl)phthalate	0.21	0.17	J	-			-		
Butyl benzyl phthalate	0.17	0.17	U	-			-		
Carbazole	0.17	0.17	U	-			-		
Chrysene	0.17	0.17	U	-			-		
Di-n-butyl phthalate	0.17	0.17	U	-			-		
Di-n-octyl phthalate	0.17	0.17	U	-			-		
Dibenz(a,h)anthracene	0.13	0.13	U	-			-		
Dibenzofuran	0.17	0.17	U	-			-		
Diethyl phthalate	0.17	0.17	U	-			-		
Dimethyl phthalate	0.17	0.17	U	-			-		
Fluoranthene	0.17	0.17	U	-			-		
Fluorene	0.17	0.17	U	-			-		
Hexachlorobenzene	0.17	0.17	U	-			-		
Hexachlorobutadiene	0.17	0.17	U	-			-		
Hexachloroethane	0.17	0.17	U	-			-		
Indeno(1,2,3-cd)pyrene	0.17	0.17	U	-			-		
Isophorone	0.17	0.17	U	-			-		
n-Nitroso-di-n-propylamine	0.17	0.17	U	-			-		
n-Nitrosodimethylamine	0.02	0.02	UJ	-			-		
n-Nitrosodiphenylamine	0.17	0.17	U	-			-		
Naphthalene	0.17	0.17	U	-			-		
Nitrobenzene	0.17	0.17	U	-			-		
Pentachlorophenol	0.17	0.17	U	-			-		
Phenanthrene	0.17	0.17	U	-			-		
Phenol	0.17	0.17	U	-			-		
Pyrene	0.17	0.17	U	-			-		
Explosives (mg/kg)									
1,3,5-Trinitrobenzene	-			0.15	0.15	UJ	0.15	0.15	UJ
1,3-Dinitrobenzene	-			0.15	0.15	UJ	0.15	0.15	UJ
2,4,6-Trinitrotoluene	-			0.15	0.15	UJ	0.15	0.15	UJ
2,4-Dinitrotoluene	-			0.15	0.15	UJ	0.15	0.15	UJ
2,6-Dinitrotoluene	-			0.15	0.15	UJ	0.15	0.15	UJ
2-Amino-4,6-dinitrotoluene	-			0.15	0.15	UJ	0.15	0.15	UJ
2-Nitrotoluene	-			0.15	0.15	UJ	0.15	0.15	UJ
3-Nitrotoluene	-			0.15	0.15	UJ	0.15	0.15	UJ
4-Amino-2,6-Dinitrotoluene	-			0.15	0.15	UJ	0.15	0.15	UJ
4-Nitrotoluene	-			0.15	0.15	UJ	0.15	0.15	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	-			0.15	0.15	UJ	0.15	0.15	UJ
Methyl-2,4,6-trinitrophenylnitramine	-			0.15	0.15	UJ	0.15	0.15	UJ
Nitrobenzene	-			0.15	0.15	UJ	0.15	0.15	UJ
Nitroglycerin	-			0.3	0.3	UJ	0.3	0.3	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	-			0.15	0.15	UJ	0.15	0.15	UJ
Pentaerythritol tetranitrate (PETN)	-			0.5	0.5	UJ	0.5	0.5	UJ
Polychlorinated Biphenyls (mg/kg)									
Aroclor 1016	0.02	0.02	R	-			-		
Aroclor 1221	0.02	0.02	R	-			-		
Aroclor 1232	0.01	0.01	R	-			-		
Aroclor 1242	0.01	0.01	R	-			-		
Aroclor 1248	0.01	0.01	R	-			-		
Aroclor 1254	0.01	0.01	R	-			-		
Aroclor 1260	0.01	0.01	R	-			-		
Dioxins/Furans (mg/kg)									
Octachlorodibenzofuran (OCDF)	0.0000011	0.0000011	U	-			-		
Octachlorodibenzo-p-dioxin (OCDD)	0.000013	0.000013	J	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.00000054	0.00000054	U	-			-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	0.0000021	0.0000021	U	-			-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.00000012	0.00000012	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000075	0.000000075	U	-			-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000025	0.00000025	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.00000007	0.00000007	U	-			-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.000000084	0.000000084	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.000000092	0.000000092	U	-			-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.00000014	0.00000014	J	-			-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.0000002	0.0000002	U	-			-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.000000037	0.000000037	U	-			-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.000000038	0.000000038	U	-			-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.0000002	0.0000002	U	-			-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.000005	0.000005	UJ	-			-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.000000069	0.000000069	U	-			-		

TABLE B-Z24
ANALYTICAL RESULTS FOR GRID Z24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	Z24			Z24			Z24		
Sample Name	P3IF-BA-GRID Z024			P3IF-SS-IS-SO Z024			P3IF-SS-IS-SO Z524		
Date Collected	June 19, 2023			June 19, 2023			June 19, 2023		
Metals (mg/kg)									
Aluminum	-			15000	4		17000	4	
Antimony	-			0.15	0.15	U	0.15	0.15	U
Arsenic	-			1.6	0.3		1.8	0.3	
Barium	-			330	0.2		340	0.2	
Beryllium	-			0.75	0.3	J	0.86	0.3	J
Cadmium	-			0.84	0.08		0.81	0.08	
Calcium (Ca)	-			6700	15		8400	15	
Chromium	-			14	0.2		13	0.2	
Cobalt	-			5	0.08		5.3	0.08	
Copper	-			150	0.2		130	0.2	
Iron (Fe)	-			8600	8		9900	8	
Lead	-			14	0.05		14	0.05	
Magnesium (Mg)	-			5100	5		5500	5	
Manganese (Mn)	-			760	0.08		790	0.08	
Mercury	-			0.19	0.041		0.1	0.043	J
Nickel	-			11	0.2		12	0.2	
Potassium (K)	-			1300	8		1400	8	
Selenium	-			1.7	0.1		1.5	0.1	
Silver	-			0.14	0.05	J	0.14	0.05	J
Sodium (Na)	-			49	8		47	8	
Thallium	-			0.16	0.05		0.076	0.05	J
Vanadium	-			15	0.1		17	0.1	
Zinc	-			36	1.5		40	1.5	
Other Parameters (mg/kg)									
Cyanide (CN-)	0.32	0.32	U	-			-		
Nitrate	21	2.1		-			-		
Perchlorate	0.002	0.002	U	-			-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

TABLE B-Z24
ANALYTICAL RESULTS FOR GRID Z24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	Z24		
Sample Name	P3IF-SS-IS-SO Z624		
Date Collected	June 19, 2023		
	Result	LOD	Qual
Volatile Organic Compounds (mg/kg)			
1,1,1,2-Tetrachloroethane	-		
1,1,1-Trichloroethane	-		
1,1,2,2-Tetrachloroethane	-		
1,1,2-Trichloroethane	-		
1,1-Dichloroethane	-		
1,1-Dichloroethene	-		
1,1-Dichloropropene	-		
1,2,3-Trichlorobenzene	-		
1,2,3-Trichloropropane	-		
1,2,4-Trichlorobenzene	-		
1,2,4-Trimethylbenzene	-		
1,2-Dibromo-3-chloropropane	-		
1,2-Dibromoethane	-		
1,2-Dichlorobenzene	-		
1,2-Dichloroethane	-		
1,2-Dichloropropane	-		
1,3,5-Trimethylbenzene	-		
1,3-Dichlorobenzene	-		
1,3-Dichloropropane	-		
1,4-Dichlorobenzene	-		
2,2-Dichloropropane	-		
2-Butanone	-		
2-Chlorotoluene	-		
2-Hexanone	-		
4-Chlorotoluene	-		
4-Methyl-2-pentanone	-		
Acetone	-		
Benzene	-		
Bromobenzene	-		
Bromochloromethane	-		
Bromodichloromethane	-		
Bromoform	-		
Bromomethane	-		
Carbon disulfide	-		
Carbon tetrachloride	-		
Chlorobenzene	-		
Chloroethane	-		
Chloroform	-		
Chloromethane	-		
cis-1,2-Dichloroethene	-		
cis-1,3-Dichloropropene	-		
Dibromochloromethane	-		
Dibromomethane	-		
Dichlorodifluoromethane	-		
Ethylbenzene	-		
Hexachlorobutadiene	-		
Isopropylbenzene	-		
m+p-Xylene	-		
Methyl Tertiary Butyl Ether	-		
Methylene chloride	-		
n-Butylbenzene	-		
n-Propylbenzene	-		
Naphthalene	-		
o-Xylene	-		
4-Isopropyltoluene	-		
sec-Butylbenzene	-		
Styrene	-		
tert-Butylbenzene	-		
Tetrachloroethene	-		
Toluene	-		
trans-1,2-Dichloroethene	-		
trans-1,3-Dichloropropene	-		
Trichloroethene	-		
Trichlorofluoromethane	-		
Vinyl chloride	-		
Semivolatile Organic Compounds (mg/kg)			
1,2,4-Trichlorobenzene	-		
1,2-Dichlorobenzene	-		
1,3-Dichlorobenzene	-		
1,4-Dichlorobenzene	-		
2,4,5-Trichlorophenol	-		
2,4,6-Trichlorophenol	-		
2,4-Dichlorophenol	-		
2,4-Dimethylphenol	-		
2,4-Dinitrophenol	-		
2,4-Dinitrotoluene	-		
2,6-Dinitrotoluene	-		
2-Chloronaphthalene	-		
2-Chlorophenol	-		
2-Methylnaphthalene	-		
2-Methylphenol	-		
2-Nitroaniline	-		
2-Nitrophenol	-		
3,3-Dichlorobenzidine	-		
3-Nitroaniline	-		
4,6-Dinitro-2-methylphenol	-		
4-Bromophenyl-phenylether	-		
4-Chloro-3-methylphenol	-		
4-Chloroaniline	-		

TABLE B-Z24
ANALYTICAL RESULTS FOR GRID Z24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	Z24		
Sample Name	P3IF-SS-IS-SO Z624		
Date Collected	June 19, 2023		
Semivolatile Organic Compounds (mg/kg), continued			
4-Chlorophenyl-phenylether	-		
4-Nitroaniline	-		
4-Nitrophenol	-		
Acenaphthene	-		
Acenaphthylene	-		
Anthracene	-		
Benzo(a)anthracene	-		
Benzo(a)pyrene	-		
Benzo(b)fluoranthene	-		
Benzo(g,h,i)perylene	-		
Benzo(k)fluoranthene	-		
Benzoic acid	-		
Benzyl Alcohol	-		
Bis(2-chloro-1-methylethyl) ether	-		
Bis(2-chloroethoxy)methane	-		
Bis(2-chloroethyl)ether	-		
Bis(2-ethylhexyl)phthalate	-		
Butyl benzyl phthalate	-		
Carbazole	-		
Chrysene	-		
Di-n-butyl phthalate	-		
Di-n-octyl phthalate	-		
Dibenz(a,h)anthracene	-		
Dibenzofuran	-		
Diethyl phthalate	-		
Dimethyl phthalate	-		
Fluoranthene	-		
Fluorene	-		
Hexachlorobenzene	-		
Hexachlorobutadiene	-		
Hexachloroethane	-		
Indeno(1,2,3-cd)pyrene	-		
Isophorone	-		
n-Nitroso-di-n-propylamine	-		
n-Nitrosodimethylamine	-		
n-Nitrosodiphenylamine	-		
Naphthalene	-		
Nitrobenzene	-		
Pentachlorophenol	-		
Phenanthrene	-		
Phenol	-		
Pyrene	-		
Explosives (mg/kg)			
1,3,5-Trinitrobenzene	0.15	0.15	UJ
1,3-Dinitrobenzene	0.15	0.15	UJ
2,4,6-Trinitrotoluene	0.15	0.15	UJ
2,4-Dinitrotoluene	0.15	0.15	UJ
2,6-Dinitrotoluene	0.15	0.15	UJ
2-Amino-4,6-dinitrotoluene	0.15	0.15	UJ
2-Nitrotoluene	0.15	0.15	UJ
3-Nitrotoluene	0.15	0.15	UJ
4-Amino-2,6-Dinitrotoluene	0.15	0.15	UJ
4-Nitrotoluene	0.15	0.15	UJ
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.15	0.15	UJ
Methyl-2,4,6-trinitrophenylnitramine	0.15	0.15	UJ
Nitrobenzene	0.15	0.15	UJ
Nitroglycerin	0.3	0.3	UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.15	0.15	UJ
Pentaerythritol tetranitrate (PETN)	0.5	0.5	UJ
Polychlorinated Biphenyls (mg/kg)			
Aroclor 1016	-		
Aroclor 1221	-		
Aroclor 1232	-		
Aroclor 1242	-		
Aroclor 1248	-		
Aroclor 1254	-		
Aroclor 1260	-		
Dioxins/Furans (mg/kg)			
Octachlorodibenzofuran (OCDF)	-		
Octachlorodibenzo-p-dioxin (OCDD)	-		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	-		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	-		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	-		
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	-		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	-		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	-		
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	-		
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	-		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	-		

TABLE B-Z24
ANALYTICAL RESULTS FOR GRID Z24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

Field Identification	Z24		
Sample Name	P3IF-SS-IS-SO Z624		
Date Collected	June 19, 2023		
Metals (mg/kg)			
Aluminum	17000	4	
Antimony	0.2	0.15	
Arsenic	1.8	0.3	
Barium	410	0.2	
Beryllium	0.9	0.3	J
Cadmium	1.1	0.08	
Calcium (Ca)	8600	15	
Chromium	17	0.2	
Cobalt	5.4	0.08	
Copper	240	0.2	
Iron (Fe)	9900	8	
Lead	18	0.05	
Magnesium (Mg)	5700	5	
Manganese (Mn)	740	0.08	
Mercury	0.082	0.041	J
Nickel	13	0.2	
Potassium (K)	1400	8	
Selenium	1.6	0.1	
Silver	0.21	0.05	J
Sodium (Na)	55	8	
Thallium	0.07	0.05	J
Vanadium	18	0.1	
Zinc	39	1.5	
Other Parameters (mg/kg)			
Cyanide (CN-)	-		
Nitrate	-		
Perchlorate	-		

Notes:
< = less than LOD
- = not analyzed
LOD = LOD
mg/kg = milligrams per kilogram
Qual = qualifier
J = estimated
U = not detected
UJ = estimated nondetect

Appendix C.1 Laboratory Reports

Information on enclosed DVD

Appendix C.2 Data Validation

Information on enclosed DVD

Appendix D.1 Human Health Risk Assessment

Low Density

TABLE D1-AA32-1
GRID AA32 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	2,200	N	RSL			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	6.3	N	RSL			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		211	N	36	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		3.56	N	18.5	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	7.7	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		31.6	N	70.4	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	6.16	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	7.64	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		333	N	247	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		83.1	N	301	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	156	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U		60.4	N	131	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U		313	N	6.16	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	3,850	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		1,300	N	570	N	RSL			

TABLE D1-AA32-1
GRID AA32 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	23,000			NS	NS	78,000	N	NMED		2.95E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	31.3	N	NMED			
Arsenic	7440-38-2	mg/kg	1.2			7.07	N	13	N	NMED	1.70E-06	9.23E-02	
Barium	7440-39-3	mg/kg	160			NS	NS	15,600	N	NMED		1.03E-02	
Beryllium	7440-41-7	mg/kg	0.64	J		64,400	N	156	N	NMED	9.94E-11	4.10E-03	
Cadmium	7440-43-9	mg/kg	0.3			85,900	N	70.5	N	NMED	3.49E-11	4.26E-03	
Calcium	7440-70-2	mg/kg	4,100			NS	NS	13,000,000	N	NMED		3.15E-04	
Chromium (Total) (2)	7440-47-3	mg/kg	15			96.6	N	45,200	N	NMED	1.55E-06	3.32E-04	
Cobalt	7440-48-4	mg/kg	6.3			17,200	N	23.4	N	NMED	3.66E-09	2.69E-01	Endocrine
Copper	7440-50-8	mg/kg	62	J		NS	NS	3,130	N	NMED		1.98E-02	
Iron	7439-89-6	mg/kg	13,000			NS	NS	54,800	N	NMED		2.37E-01	Gastrointestinal
Lead	7439-92-1	mg/kg	9.8			NS	NS	200	N	IEUBK			
Magnesium	7439-95-4	mg/kg	9,400			NS	NS	15,600,000	N	NMED		6.03E-04	
Manganese	7439-96-5	mg/kg	270			NS	NS	10,500	N	NMED		2.57E-02	
Mercury (Elemental)	7439-97-6	mg/kg	0.017	J		NS	NS	23.8	N	NMED		7.14E-04	
Nickel	7440-02-0	mg/kg	11			595,000	N	1,560	N	NMED	1.85E-10	7.05E-03	
Potassium	7440-09-7	mg/kg	1,200			NS	NS	15,600,000	N	NMED		7.69E-05	
Selenium	7782-49-2	mg/kg	1.2			NS	NS	391	N	NMED		3.07E-03	
Silver	7440-22-4	mg/kg	0.07	J		NS	NS	391	N	NMED		1.79E-04	
Sodium	7440-23-5	mg/kg	74			NS	NS	7,820,000	N	NMED		9.46E-06	
Thallium	7440-28-0	mg/kg	0.051	J		NS	NS	0.782	N	NMED		6.52E-02	
Vanadium	7440-62-2	mg/kg	22			NS	NS	394	N	NMED		5.58E-02	
Zinc	7440-66-6	mg/kg	31			NS	NS	23,500	N	NMED		1.32E-03	
									Cumulative Risk/Hazard		**3E-06**	**1.1**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent	NA = not applicable
CAS = Chemical Abstracts Service	NS = No Standard
IEUBK = Integrated Exposure Uptake Biokinetic Model	RAG = Risk Assessment Guidance
HI = Hazard Index	SSL = soil screening level
J = Estimated	U = Nondetect
mg/kg = milligrams per kilogram	UTL = upper tolerance limit
N = no	Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. " The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	0.29
Endocrine	0.27
GI	0.24
All Others	0.29

TABLE D1-AA32-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID AA32
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		5,300	N	7,400	N	RSL		

TABLE D1-AA32-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID AA32
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	23,000			NS	NS	1,290,000	N	NMED		1.78E-02
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	519	N	NMED		
Arsenic	7440-38-2	mg/kg	1.2			36	N	208	N	NMED	3.34E-07	5.77E-03
Barium	7440-39-3	mg/kg	160			NS	NS	255,000	N	NMED		6.27E-04
Beryllium	7440-41-7	mg/kg	0.64	J		313,000	N	2,580	N	NMED	2.04E-11	2.48E-04
Cadmium	7440-43-9	mg/kg	0.3			417,000	N	1,110	N	NMED	7.19E-12	2.70E-04
Calcium	7440-70-2	mg/kg	4,100			NS	NS	32,400,000	N	NMED		1.27E-04
Chromium (Total) (2)	7440-47-3	mg/kg	15			505	N	314,000	N	NMED	2.97E-07	4.78E-05
Cobalt	7440-48-4	mg/kg	6.3			83,400	N	388	N	NMED	7.55E-10	1.62E-02
Copper	7440-50-8	mg/kg	62	J		NS	NS	51,900	N	NMED		1.19E-03
Iron	7439-89-6	mg/kg	13,000			NS	NS	908,000	N	NMED		1.43E-02
Lead	7439-92-1	mg/kg	9.8			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	9,400			NS	NS	5,680,000	N	NMED		1.65E-03
Manganese	7439-96-5	mg/kg	270			NS	NS	160,000	N	NMED		1.69E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.017	J		NS	NS	112	N	NMED		1.52E-04
Nickel	7440-02-0	mg/kg	11			2,890,000	N	25,700	N	NMED	3.81E-11	4.28E-04
Potassium	7440-09-7	mg/kg	1,200			NS	NS	76,200,000	N	NMED		1.57E-05
Selenium	7782-49-2	mg/kg	1.2			NS	NS	6,490	N	NMED		1.85E-04
Silver	7440-22-4	mg/kg	0.07	J		NS	NS	6,490	N	NMED		1.08E-05
Sodium	7440-23-5	mg/kg	74			NS	NS	37,300,000	N	NMED		1.98E-06
Thallium	7440-28-0	mg/kg	0.051	J		NS	NS	13	N	NMED		3.92E-03
Vanadium	7440-62-2	mg/kg	22			NS	NS	6,530	N	NMED		3.37E-03
Zinc	7440-66-6	mg/kg	31			NS	NS	38,900	N	NMED		7.97E-04
									Cumulative Risk/Hazard		**6E-07**	**0.07**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-AA32-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR AA32
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	8,070	N	NMEDC[2]			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	27	N	NMEDC[2]			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		626	N	2,420	N	NMEDC[2]			

TABLE D1-AA32-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR AA32
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	23,000			NS	NS	41,400	N	NMED		5.56E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	142	N	NMED			
Arsenic	7440-38-2	mg/kg	1.2			216	N	41	N	NMED	5.56E-08	2.91E-02	
Barium	7440-39-3	mg/kg	160			NS	NS	4,390	N	NMED		3.64E-02	
Beryllium	7440-41-7	mg/kg	0.64	J		2,710	N	148	N	NMED	2.36E-09	4.32E-03	
Cadmium	7440-43-9	mg/kg	0.3			3,610	N	72	N	NMED	8.31E-10	4.16E-03	
Calcium	7440-70-2	mg/kg	4,100			NS	NS	8,850,000	N	NMED		4.63E-04	
Chromium (Total) (3)	7440-47-3	mg/kg	15			468	N	134	N	NMED	3.21E-07	1.12E-01	GI, Blood
Cobalt	7440-48-4	mg/kg	6.3			722	N	37	N	NMED	8.73E-08	1.72E-01	Endocrine
Copper	7440-50-8	mg/kg	62	J		NS	NS	14,200	N	NMED		4.37E-03	
Iron	7439-89-6	mg/kg	13,000			NS	NS	248,000	N	NMED		5.24E-02	
Lead	7439-92-1	mg/kg	9.8			NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	9,400			NS	NS	1,550,000	N	NMED		6.06E-03	
Manganese	7439-96-5	mg/kg	270			NS	NS	464	N	NMED		5.82E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.017	J		NS	NS	21	N	NMED		8.21E-04	
Nickel	7440-02-0	mg/kg	11			20,500	N	753	N	NMED	5.37E-09	1.46E-02	
Potassium	7440-09-7	mg/kg	1,200			NS	NS	20,800,000	N	NMED		5.77E-05	
Selenium	7782-49-2	mg/kg	1.2			NS	NS	1,750	N	NMED		6.86E-04	
Silver	7440-22-4	mg/kg	0.07	J		NS	NS	1,770	N	NMED		3.95E-05	
Sodium	7440-23-5	mg/kg	74			NS	NS	10,200,000	N	NMED		7.25E-06	
Thallium	7440-28-0	mg/kg	0.051	J		NS	NS	4	N	NMED		1.44E-02	
Vanadium	7440-62-2	mg/kg	22			NS	NS	614	N	NMED		3.58E-02	
Zinc	7440-66-6	mg/kg	31			NS	NS	106,000	N	NMED		2.92E-04	
									Cumulative Risk/Hazard		**5E-07**	**1.6**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
IEUBK = Integrated Exposure Uptake Biokinetic Model
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	1.1
Endocrine	0.17
GI	0.11
Blood	0.11
All Others	0.20

TABLE D1-AB27-1
GRID AB27 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
INNER FENCE
FORT WINGATE DEPOT ACTIVITY

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	2,200	N	RSL			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	6.3	N	RSL			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		211	N	36	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		3.56	N	18.5	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	7.7	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		31.6	N	70.4	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	6.16	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	7.64	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		333	N	247	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		83.1	N	301	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	156	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U		60.4	N	131	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U		313	N	6.16	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	3,850	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		1,300	N	570	N	RSL			

TABLE D1-AB27-1
GRID AB27 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
INNER FENCE
FORT WINGATE DEPOT ACTIVITY

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	23,000			NS	NS	78,000	N	NMED		2.95E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	31.3	N	NMED			
Arsenic	7440-38-2	mg/kg	1.8			7.07	N	13	N	NMED	2.55E-06	1.38E-01	Heart
Barium	7440-39-3	mg/kg	400			NS	NS	15,600	N	NMED		2.56E-02	
Beryllium	7440-41-7	mg/kg	0.82	J		64,400	N	156	N	NMED	1.27E-10	5.26E-03	
Cadmium	7440-43-9	mg/kg	0.49			85,900	N	70.5	N	NMED	5.70E-11	6.95E-03	
Calcium	7440-70-2	mg/kg	22,000			NS	NS	13,000,000	N	NMED		1.69E-03	
Chromium (Total) (2)	7440-47-3	mg/kg	15			96.6	N	45,200	N	NMED	1.55E-06	3.32E-04	
Cobalt	7440-48-4	mg/kg	5.7			17,200	N	23.4	N	NMED	3.31E-09	2.44E-01	Endocrine
Copper	7440-50-8	mg/kg	79	J		NS	NS	3,130	N	NMED		2.52E-02	
Iron	7439-89-6	mg/kg	14,000			NS	NS	54,800	N	NMED		2.55E-01	GI
Lead	7439-92-1	mg/kg	13			NS	NS	200	N	IEUBK		6.50E-02	
Magnesium	7439-95-4	mg/kg	8,400			NS	NS	15,600,000	N	NMED		5.38E-04	
Manganese	7439-96-5	mg/kg	390			NS	NS	10,500	N	NMED		3.71E-02	
Mercury (Elemental)	7439-97-6	mg/kg	0.039	J		NS	NS	23.8	N	NMED		1.64E-03	
Nickel	7440-02-0	mg/kg	12			595,000	N	1,560	N	NMED	2.02E-10	7.69E-03	
Potassium	7440-09-7	mg/kg	1,300			NS	NS	15,600,000	N	NMED		8.33E-05	
Selenium	7782-49-2	mg/kg	1.4			NS	NS	391	N	NMED		3.58E-03	
Silver	7440-22-4	mg/kg	0.1			NS	NS	391	N	NMED		2.56E-04	
Sodium	7440-23-5	mg/kg	75			NS	NS	7,820,000	N	NMED		9.59E-06	
Thallium	7440-28-0	mg/kg	0.054	J		NS	NS	0.782	N	NMED		6.91E-02	
Vanadium	7440-62-2	mg/kg	21			NS	NS	394	N	NMED		5.33E-02	
Zinc	7440-66-6	mg/kg	33			NS	NS	23,500	N	NMED		1.40E-03	
									Cumulative Risk/Hazard		**4E-06**	**1.2**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	0.29
Endocrine	0.24
GI	0.26
Heart	0.14
All Others	0.30

TABLE D1-AB27-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID AB27
INNER FENCE
FORT WINGATE DEPOT ACTIVITY

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	32,000	N	RSL			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	82	N	RSL			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		1,070	N	573	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		82	N	1,820	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		17	N	276	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	127	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		165	N	1,170	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	92	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	125	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		1,600	N	3,670	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		428	N	4,890	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	2,590	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U		293	N	1,540	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U		1,510	N	92	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	63,300	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		5,300	N	7,400	N	RSL			

TABLE D1-AB27-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID AB27
INNER FENCE
FORT WINGATE DEPOT ACTIVITY

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	23,000			NS	NS	1,290,000	N	NMED		1.78E-02	
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	519	N	NMED			
Arsenic	7440-38-2	mg/kg	1.8			36	N	208	N	NMED	5.01E-07	8.65E-03	
Barium	7440-39-3	mg/kg	400			NS	NS	255,000	N	NMED		1.57E-03	
Beryllium	7440-41-7	mg/kg	0.82	J		313,000	N	2,580	N	NMED	2.62E-11	3.18E-04	
Cadmium	7440-43-9	mg/kg	0.49			417,000	N	1,110	N	NMED	1.18E-11	4.41E-04	
Calcium	7440-70-2	mg/kg	22,000			NS	NS	32,400,000	N	NMED		6.79E-04	
Chromium (Total) (2)	7440-47-3	mg/kg	15			505	N	314,000	N	NMED	2.97E-07	4.78E-05	
Cobalt	7440-48-4	mg/kg	5.7			83,400	N	388	N	NMED	6.83E-10	1.47E-02	
Copper	7440-50-8	mg/kg	79	J		NS	NS	51,900	N	NMED		1.52E-03	
Iron	7439-89-6	mg/kg	14,000			NS	NS	908,000	N	NMED		1.54E-02	
Lead	7439-92-1	mg/kg	13			NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	8,400			NS	NS	5,680,000	N	NMED		1.48E-03	
Manganese	7439-96-5	mg/kg	390			NS	NS	160,000	N	NMED		2.44E-03	
Mercury (Elemental)	7439-97-6	mg/kg	0.039	J		NS	NS	112	N	NMED		3.48E-04	
Nickel	7440-02-0	mg/kg	12			2,890,000	N	25,700	N	NMED	4.15E-11	4.67E-04	
Potassium	7440-09-7	mg/kg	1,300			NS	NS	76,200,000	N	NMED		1.71E-05	
Selenium	7782-49-2	mg/kg	1.4			NS	NS	6,490	N	NMED		2.16E-04	
Silver	7440-22-4	mg/kg	0.1			NS	NS	6,490	N	NMED		1.54E-05	
Sodium	7440-23-5	mg/kg	75			NS	NS	37,300,000	N	NMED		2.01E-06	
Thallium	7440-28-0	mg/kg	0.054	J		NS	NS	13	N	NMED		4.15E-03	
Vanadium	7440-62-2	mg/kg	21			NS	NS	6,530	N	NMED		3.22E-03	
Zinc	7440-66-6	mg/kg	33			NS	NS	38,900	N	NMED		8.48E-04	
									Cumulative Risk/Hazard		**8E-07**	**0.07**	
									Exceeds Target Level		**N**	**N**	

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
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mg/kg = milligrams per kilogram
N = no
NA = not applicable
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NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-AB27-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID AB27
INNER FENCE
FORT WINGATE DEPOT ACTIVITY

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	8,070	N	NMEDC[2]			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	27	N	NMEDC[2]			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		626	N	2,420	N	NMEDC[2]			

TABLE D1-AB27-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID AB27
INNER FENCE
FORT WINGATE DEPOT ACTIVITY

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	23,000			NS	NS	41,400	N	NMED		5.56E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	142	N	NMED			
Arsenic	7440-38-2	mg/kg	1.8			216	N	41	N	NMED	8.33E-08	4.37E-02	
Barium	7440-39-3	mg/kg	400			NS	NS	4,390	N	NMED		9.11E-02	
Beryllium	7440-41-7	mg/kg	0.82	J		2,710	N	148	N	NMED	3.03E-09	5.54E-03	
Cadmium	7440-43-9	mg/kg	0.49			3,610	N	72	N	NMED	1.36E-09	6.80E-03	
Calcium	7440-70-2	mg/kg	22,000			NS	NS	8,850,000	N	NMED		2.49E-03	
Chromium (Total) (3)	7440-47-3	mg/kg	15			468	N	134	N	NMED	3.21E-07	1.12E-01	GI, Blood
Cobalt	7440-48-4	mg/kg	5.7			722	N	37	N	NMED	7.89E-08	1.55E-01	Endocrine
Copper	7440-50-8	mg/kg	79	J		NS	NS	14,200	N	NMED		5.56E-03	
Iron	7439-89-6	mg/kg	14,000			NS	NS	248,000	N	NMED		5.65E-02	
Lead	7439-92-1	mg/kg	13			NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	8,400			NS	NS	1,550,000	N	NMED		5.42E-03	
Manganese	7439-96-5	mg/kg	390			NS	NS	464	N	NMED		8.41E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.039	J		NS	NS	21	N	NMED		1.88E-03	
Nickel	7440-02-0	mg/kg	12			20,500	N	753	N	NMED	5.85E-09	1.59E-02	
Potassium	7440-09-7	mg/kg	1,300			NS	NS	20,800,000	N	NMED		6.25E-05	
Selenium	7782-49-2	mg/kg	1.4			NS	NS	1,750	N	NMED		8.00E-04	
Silver	7440-22-4	mg/kg	0.1			NS	NS	1,770	N	NMED		5.65E-05	
Sodium	7440-23-5	mg/kg	75			NS	NS	10,200,000	N	NMED		7.35E-06	
Thallium	7440-28-0	mg/kg	0.054	J		NS	NS	4	N	NMED		1.53E-02	
Vanadium	7440-62-2	mg/kg	21			NS	NS	614	N	NMED		3.42E-02	
Zinc	7440-66-6	mg/kg	33			NS	NS	106,000	N	NMED		3.11E-04	
									Cumulative Risk/Hazard		**5E-07**	**1.9**	
									Exceeds Target Level		**N**	**Y**	

Notes:

1) NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

2) NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

3) Chromium screening value is for Total Chromium.

% = percent	NA = not applicable
CAS = Chemical Abstracts Service	NS = No Standard
HI = Hazard Index	RAG = Risk Assessment Guidance
IEUBK = Integrated Exposure Uptake Biokinetic Model	SSL = soil screening level
J = Estimated	U = Nondetect
mg/kg = milligrams per kilogram	UTL = upper tolerance limit
N = no	Y = yes
mg/kg = milligrams per kilogram	UTL = upper tolerance limit
N = no	Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	1.4
Endocrine	0.16
GI	0.11
Blood	0.11
All Others	0.29

TABLE D1-AB38-1
GRID AB38 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.15	UJ		NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.15	UJ		NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.15	UJ		211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.15	UJ		17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.15	UJ		3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.15	UJ		NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.15	UJ		31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.15	UJ		NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.15	UJ		NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.15	UJ		333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.15	UJ		83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.15	UJ		NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.15	UJ		60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.3	UJ		313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.15	UJ		NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.5	UJ		1,300	N	570	N	RSL		

TABLE D1-AB38-1
GRID AB38 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	18,000			NS	NS	78,000	N	NMED		2.31E-01
Antimony	7440-36-0	mg/kg	0.3			NS	NS	31.3	N	NMED		9.58E-03
Arsenic	7440-38-2	mg/kg	1.1			7.07	N	13	N	NMED	1.56E-06	8.46E-02
Barium	7440-39-3	mg/kg	340			NS	NS	15,600	N	NMED		2.18E-02
Beryllium	7440-41-7	mg/kg	0.94	J		64,400	N	156	N	NMED	1.46E-10	6.03E-03
Cadmium	7440-43-9	mg/kg	0.22			85,900	N	70.5	N	NMED	2.56E-11	3.12E-03
Calcium	7440-70-2	mg/kg	13,000			NS	NS	13,000,000	N	NMED		1.00E-03
Chromium (Total) (2)	7440-47-3	mg/kg	10			96.6	N	45,200	N	NMED	1.04E-06	2.21E-04
Cobalt	7440-48-4	mg/kg	5.5			17,200	N	23.4	N	NMED	3.20E-09	2.35E-01
Copper	7440-50-8	mg/kg	54			NS	NS	3,130	N	NMED		1.73E-02
Iron	7439-89-6	mg/kg	10,000			NS	NS	54,800	N	NMED		1.82E-01
Lead	7439-92-1	mg/kg	11			NS	NS	200	N	IEUBK		
Magnesium	7439-95-4	mg/kg	6,500			NS	NS	15,600,000	N	NMED		4.17E-04
Manganese	7439-96-5	mg/kg	440			NS	NS	10,500	N	NMED		4.19E-02
Mercury (Elemental)	7439-97-6	mg/kg	0.019	J		NS	NS	23.8	N	NMED		7.98E-04
Nickel	7440-02-0	mg/kg	12			595,000	N	1,560	N	NMED	2.02E-10	7.69E-03
Potassium	7440-09-7	mg/kg	1,600			NS	NS	15,600,000	N	NMED		1.03E-04
Selenium	7782-49-2	mg/kg	1.2			NS	NS	391	N	NMED		3.07E-03
Silver	7440-22-4	mg/kg	0.08	J		NS	NS	391	N	NMED		2.05E-04
Sodium	7440-23-5	mg/kg	40			NS	NS	7,820,000	N	NMED		5.12E-06
Thallium	7440-28-0	mg/kg	0.11			NS	NS	0.782	N	NMED		1.41E-01
Vanadium	7440-62-2	mg/kg	12			NS	NS	394	N	NMED		3.05E-02
Zinc	7440-66-6	mg/kg	28			NS	NS	23,500	N	NMED		1.19E-03
									Cumulative Risk/Hazard		**3E-06**	**1.0**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[3] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-AB38-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID AB38
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.15	UJ		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.15	UJ		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.15	UJ		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.15	UJ		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.15	UJ		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.15	UJ		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.15	UJ		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.15	UJ		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.15	UJ		NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.15	UJ		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.15	UJ		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.15	UJ		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.15	UJ		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.3	UJ		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.15	UJ		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.5	UJ		5,300	N	7,400	N	RSL		

TABLE D1-AB38-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID AB38
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	18,000			NS	NS	1,290,000	N	NMED		1.40E-02
Antimony	7440-36-0	mg/kg	0.3			NS	NS	519	N	NMED		5.78E-04
Arsenic	7440-38-2	mg/kg	1.1			36	N	208	N	NMED	3.06E-07	5.29E-03
Barium	7440-39-3	mg/kg	340			NS	NS	255,000	N	NMED		1.33E-03
Beryllium	7440-41-7	mg/kg	0.94	J		313,000	N	2,580	N	NMED	3.00E-11	3.64E-04
Cadmium	7440-43-9	mg/kg	0.22			417,000	N	1,110	N	NMED	5.28E-12	1.98E-04
Calcium	7440-70-2	mg/kg	13,000			NS	NS	32,400,000	N	NMED		4.01E-04
Chromium (Total) (2)	7440-47-3	mg/kg	10			505	N	314,000	N	NMED	1.98E-07	3.18E-05
Cobalt	7440-48-4	mg/kg	5.5			83,400	N	388	N	NMED	6.59E-10	1.42E-02
Copper	7440-50-8	mg/kg	54			NS	NS	51,900	N	NMED		1.04E-03
Iron	7439-89-6	mg/kg	10,000			NS	NS	908,000	N	NMED		1.10E-02
Lead	7439-92-1	mg/kg	11			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	6,500			NS	NS	5,680,000	N	NMED		1.14E-03
Manganese	7439-96-5	mg/kg	440			NS	NS	160,000	N	NMED		2.75E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.019	J		NS	NS	112	N	NMED		1.70E-04
Nickel	7440-02-0	mg/kg	12			2,890,000	N	25,700	N	NMED	4.15E-11	4.67E-04
Potassium	7440-09-7	mg/kg	1,600			NS	NS	76,200,000	N	NMED		2.10E-05
Selenium	7782-49-2	mg/kg	1.2			NS	NS	6,490	N	NMED		1.85E-04
Silver	7440-22-4	mg/kg	0.08	J		NS	NS	6,490	N	NMED		1.23E-05
Sodium	7440-23-5	mg/kg	40			NS	NS	37,300,000	N	NMED		1.07E-06
Thallium	7440-28-0	mg/kg	0.11			NS	NS	13	N	NMED		8.46E-03
Vanadium	7440-62-2	mg/kg	12			NS	NS	6,530	N	NMED		1.84E-03
Zinc	7440-66-6	mg/kg	28			NS	NS	38,900	N	NMED		7.20E-04
									Cumulative Risk/Hazard		**5E-07**	**0.064**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-AB38-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID AB38
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.15	UJ		NS	NS	8,070	N	NMEDC[2]			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.15	UJ		NS	NS	27	N	NMEDC[2]			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.15	UJ		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.15	UJ		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.15	UJ		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.15	UJ		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.15	UJ		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.15	UJ		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.15	UJ		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.15	UJ		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.15	UJ		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.15	UJ		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.15	UJ		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.3	UJ		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.15	UJ		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.5	UJ		626	N	2,420	N	NMEDC[2]			

TABLE D1-AB38-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID AB38
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	18,000			NS	NS	41,400	N	NMED		4.35E-01	Nervous
Antimony	7440-36-0	mg/kg	0.3			NS	NS	142	N	NMED		2.11E-03	
Arsenic	7440-38-2	mg/kg	1.1			216	N	41	N	NMED	5.09E-08	2.67E-02	
Barium	7440-39-3	mg/kg	340			NS	NS	4,390	N	NMED		7.74E-02	
Beryllium	7440-41-7	mg/kg	0.94	J		2,710	N	148	N	NMED	3.47E-09	6.35E-03	
Cadmium	7440-43-9	mg/kg	0.22			3,610	N	72	N	NMED	6.09E-10	3.05E-03	
Calcium	7440-70-2	mg/kg	13,000			NS	NS	8,850,000	N	NMED		1.47E-03	
Chromium (Total) (3)	7440-47-3	mg/kg	10			468	N	134	N	NMED	2.14E-07	7.46E-02	
Cobalt	7440-48-4	mg/kg	5.5			722	N	37	N	NMED	7.62E-08	1.50E-01	Endocrine
Copper	7440-50-8	mg/kg	54			NS	NS	14,200	N	NMED		3.80E-03	
Iron	7439-89-6	mg/kg	10,000			NS	NS	248,000	N	NMED		4.03E-02	
Lead	7439-92-1	mg/kg	11			NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	6,500			NS	NS	1,550,000	N	NMED		4.19E-03	
Manganese	7439-96-5	mg/kg	440			NS	NS	464	N	NMED		9.48E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.019	J		NS	NS	21	N	NMED		9.18E-04	
Nickel	7440-02-0	mg/kg	12			20,500	N	753	N	NMED	5.85E-09	1.59E-02	
Potassium	7440-09-7	mg/kg	1,600			NS	NS	20,800,000	N	NMED		7.69E-05	
Selenium	7782-49-2	mg/kg	1.2			NS	NS	1,750	N	NMED		6.86E-04	
Silver	7440-22-4	mg/kg	0.08	J		NS	NS	1,770	N	NMED		4.52E-05	
Sodium	7440-23-5	mg/kg	40			NS	NS	10,200,000	N	NMED		3.92E-06	
Thallium	7440-28-0	mg/kg	0.11			NS	NS	4	N	NMED		3.11E-02	
Vanadium	7440-62-2	mg/kg	12			NS	NS	614	N	NMED		1.95E-02	
Zinc	7440-66-6	mg/kg	28			NS	NS	106,000	N	NMED		2.64E-04	
									Cumulative Risk/Hazard		**4E-07**	**1.8**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent	NS = No Standard
CAS = Chemical Abstracts Service	RAG = Risk Assessment Guidance
HI = Hazard Index	SSL = soil screening level
J = Estimated	UJ = Estimated Nondetect
mg/kg = milligrams per kilogram	UTL = upper tolerance limit
N = no	Y = yes
NA = not applicable	
N = no	Y = yes
NA = not applicable	

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	1.4
Endocrine	0.15
All Others	0.31

TABLE D1-AC34-1
GRID AC34 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MIEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[2]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U		60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U		313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		1,300	N	570	N	RSL		

TABLE D1-AC34-1
GRID AC34 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MIEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[2]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	15,000			NS	NS	78,000	N	NMED		1.92E-01
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	31.3	N	NMED		
Arsenic	7440-38-2	mg/kg	1.4			7.07	N	13	N	NMED		1.08E-01
Barium	7440-39-3	mg/kg	150			NS	NS	15,600	N	NMED		9.62E-03
Beryllium	7440-41-7	mg/kg	0.55	J		64,400	N	156	N	NMED		3.53E-03
Cadmium	7440-43-9	mg/kg	0.16			85,900	N	70.5	N	NMED		2.27E-03
Calcium	7440-70-2	mg/kg	2,500			NS	NS	13,000,000	N	NMED		1.92E-04
Chromium (Total) (3)	7440-47-3	mg/kg	11			96.6	N	45,200	N	NMED		2.43E-04
Cobalt	7440-48-4	mg/kg	5.2			17,200	N	23.4	N	NMED		2.22E-01
Copper	7440-50-8	mg/kg	31			NS	NS	3,130	N	NMED		9.90E-03
Iron	7439-89-6	mg/kg	10,000			NS	NS	54,800	N	NMED		1.82E-01
Lead	7439-92-1	mg/kg	8.4			NS	NS	200	N	IEUBK		
Magnesium	7439-95-4	mg/kg	5,100			NS	NS	15,600,000	N	NMED		3.27E-04
Manganese	7439-96-5	mg/kg	390			NS	NS	10,500	N	NMED		3.71E-02
Mercury (Elemental)	7439-97-6	mg/kg	0.017	J		NS	NS	23.8	N	NMED		7.14E-04
Nickel	7440-02-0	mg/kg	8.4			595,000	N	1,560	N	NMED		5.38E-03
Potassium	7440-09-7	mg/kg	1,200			NS	NS	15,600,000	N	NMED		7.69E-05
Selenium	7782-49-2	mg/kg	1.1			NS	NS	391	N	NMED		2.81E-03
Silver	7440-22-4	mg/kg	0.044	J		NS	NS	391	N	NMED		1.13E-04
Sodium	7440-23-5	mg/kg	57			NS	NS	7,820,000	N	NMED		7.29E-06
Thallium	7440-28-0	mg/kg	0.19			NS	NS	0.782	N	NMED		2.43E-01
Vanadium	7440-62-2	mg/kg	22			NS	NS	394	N	NMED		5.58E-02
Zinc	7440-66-6	mg/kg	25			NS	NS	23,500	N	NMED		1.06E-03
									Cumulative Risk/Hazard		**0E+00**	**1.1**
									Exceeds Target Level		**N**	**Y**

Notes:

[1] NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System
Nervous
Endocrine
GI
Hair/Coat
Eyes
All Others

TABLE D1-AC34-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID AC34
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		5,300	N	7,400	N	RSL		

TABLE D1-AC34-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID AC34
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	15,000			NS	NS	1,290,000	N	NMED		1.16E-02
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	519	N	NMED		
Arsenic	7440-38-2	mg/kg	1.4			36	N	208	N	NMED	3.90E-07	6.73E-03
Barium	7440-39-3	mg/kg	150			NS	NS	255,000	N	NMED		5.88E-04
Beryllium	7440-41-7	mg/kg	0.55	J		313,000	N	2,580	N	NMED	1.76E-11	2.13E-04
Cadmium	7440-43-9	mg/kg	0.16			417,000	N	1,110	N	NMED	3.84E-12	1.44E-04
Calcium	7440-70-2	mg/kg	2,500			NS	NS	32,400,000	N	NMED		7.72E-05
Chromium (Total) (3)	7440-47-3	mg/kg	11			505	N	314,000	N	NMED	2.18E-07	3.50E-05
Cobalt	7440-48-4	mg/kg	5.2			83,400	N	388	N	NMED	6.24E-10	1.34E-02
Copper	7440-50-8	mg/kg	31			NS	NS	51,900	N	NMED		5.97E-04
Iron	7439-89-6	mg/kg	10,000			NS	NS	908,000	N	NMED		1.10E-02
Lead	7439-92-1	mg/kg	8.4			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	5,100			NS	NS	5,680,000	N	NMED		8.98E-04
Manganese	7439-96-5	mg/kg	390			NS	NS	160,000	N	NMED		2.44E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.017	J		NS	NS	112	N	NMED		1.52E-04
Nickel	7440-02-0	mg/kg	8.4			2,890,000	N	25,700	N	NMED	2.91E-11	3.27E-04
Potassium	7440-09-7	mg/kg	1,200			NS	NS	76,200,000	N	NMED		1.57E-05
Selenium	7782-49-2	mg/kg	1.1			NS	NS	6,490	N	NMED		1.69E-04
Silver	7440-22-4	mg/kg	0.044	J		NS	NS	6,490	N	NMED		6.78E-06
Sodium	7440-23-5	mg/kg	57			NS	NS	37,300,000	N	NMED		1.53E-06
Thallium	7440-28-0	mg/kg	0.19			NS	NS	13	N	NMED		1.46E-02
Vanadium	7440-62-2	mg/kg	22			NS	NS	6,530	N	NMED		3.37E-03
Zinc	7440-66-6	mg/kg	25			NS	NS	38,900	N	NMED		6.43E-04
									Cumulative Risk/Hazard		**6E-07**	**0.07**
									Exceeds Target Level		**N**	**N**

Notes:

[2] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-AC34-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID AC34
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	8,070	N	NMEDC[2]			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	27	N	NMEDC[2]			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		626	N	2,420	N	NMEDC[2]			

TABLE D1-AC34-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID AC34
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	15,000			NS	NS	41,400	N	NMED		3.62E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	142	N	NMED			
Arsenic	7440-38-2	mg/kg	1.4			216	N	41	N	NMED	6.48E-08	3.40E-02	
Barium	7440-39-3	mg/kg	150			NS	NS	4,390	N	NMED		3.42E-02	
Beryllium	7440-41-7	mg/kg	0.55	J		2,710	N	148	N	NMED	2.03E-09	3.72E-03	
Cadmium	7440-43-9	mg/kg	0.16			3,610	N	72	N	NMED	4.43E-10	2.22E-03	
Calcium	7440-70-2	mg/kg	2,500			NS	NS	8,850,000	N	NMED		2.82E-04	
Chromium (Total) (3)	7440-47-3	mg/kg	11			468	N	134	N	NMED	2.35E-07	8.21E-02	
Cobalt	7440-48-4	mg/kg	5.2			722	N	37	N	NMED	7.20E-08	1.42E-01	Endocrine
Copper	7440-50-8	mg/kg	31			NS	NS	14,200	N	NMED		2.18E-03	
Iron	7439-89-6	mg/kg	10,000			NS	NS	248,000	N	NMED		4.03E-02	
Lead	7439-92-1	mg/kg	8.4			NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	5,100			NS	NS	1,550,000	N	NMED		3.29E-03	
Manganese	7439-96-5	mg/kg	390			NS	NS	464	N	NMED		8.41E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.017	J		NS	NS	21	N	NMED		8.21E-04	
Nickel	7440-02-0	mg/kg	8.4			20,500	N	753	N	NMED	4.10E-09	1.12E-02	
Potassium	7440-09-7	mg/kg	1,200			NS	NS	20,800,000	N	NMED		5.77E-05	
Selenium	7782-49-2	mg/kg	1.1			NS	NS	1,750	N	NMED		6.29E-04	
Silver	7440-22-4	mg/kg	0.044	J		NS	NS	1,770	N	NMED		2.49E-05	
Sodium	7440-23-5	mg/kg	57			NS	NS	10,200,000	N	NMED		5.59E-06	
Thallium	7440-28-0	mg/kg	0.19			NS	NS	4	N	NMED		5.37E-02	
Vanadium	7440-62-2	mg/kg	22			NS	NS	614	N	NMED		3.58E-02	
Zinc	7440-66-6	mg/kg	25			NS	NS	106,000	N	NMED		2.36E-04	
									Cumulative Risk/Hazard		**4E-07**	**1.6**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2]NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent	NA = not applicable
CAS = Chemical Abstracts Service	NS = No Standard
HI = Hazard Index	RAG = Risk Assessment Guidance
IEUBK = Integrated Exposure Uptake Biokinetic Model	SSL = soil screening level
J = Estimated	U = Nondetect
mg/kg = milligrams per kilogram	UTL = upper tolerance limit
N = no	Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	1.2
Endocrine	0.14
All Others	0.22

TABLE D1-AD28-1
GRID AD28 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U		60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U		313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		1,300	N	570	N	RSL		

TABLE D1-AD28-1
GRID AD28 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	18,000			NS	NS	78,000	N	NMED		2.31E-01
Antimony	7440-36-0	mg/kg	0.16	J		NS	NS	31.3	N	NMED		5.11E-03
Arsenic	7440-38-2	mg/kg	1.1			7.07	N	13	N	NMED	1.56E-06	8.46E-02
Barium	7440-39-3	mg/kg	360			NS	NS	15,600	N	NMED		2.31E-02
Beryllium	7440-41-7	mg/kg	0.54	J		64,400	N	156	N	NMED	8.39E-11	3.46E-03
Cadmium	7440-43-9	mg/kg	1.1	J		85,900	N	70.5	N	NMED	1.28E-10	1.56E-02
Calcium	7440-70-2	mg/kg	4,000	J		NS	NS	13,000,000	N	NMED		3.08E-04
Chromium (Total) (3)	7440-47-3	mg/kg	12			96.6	N	45,200	N	NMED	1.24E-06	2.65E-04
Cobalt	7440-48-4	mg/kg	5.3			17,200	N	23.4	N	NMED	3.08E-09	2.26E-01
Copper	7440-50-8	mg/kg	69	J		NS	NS	3,130	N	NMED		2.20E-02
Iron	7439-89-6	mg/kg	9,600			NS	NS	54,800	N	NMED		1.75E-01
Lead	7439-92-1	mg/kg	9.7			NS	NS	200	N	IEUBK		
Magnesium	7439-95-4	mg/kg	6,800	J		NS	NS	15,600,000	N	NMED		4.36E-04
Manganese	7439-96-5	mg/kg	290			NS	NS	10,500	N	NMED		2.76E-02
Mercury (Elemental)	7439-97-6	mg/kg	0.049	J		NS	NS	23.8	N	NMED		2.06E-03
Nickel	7440-02-0	mg/kg	9.7			595,000	N	1,560	N	NMED	1.63E-10	6.22E-03
Potassium	7440-09-7	mg/kg	1,300	J		NS	NS	15,600,000	N	NMED		8.33E-05
Selenium	7782-49-2	mg/kg	1.1	J		NS	NS	391	N	NMED		2.81E-03
Silver	7440-22-4	mg/kg	0.074	J		NS	NS	391	N	NMED		1.89E-04
Sodium	7440-23-5	mg/kg	71			NS	NS	7,820,000	N	NMED		9.08E-06
Thallium	7440-28-0	mg/kg	0.049	J		NS	NS	0.782	N	NMED		6.27E-02
Vanadium	7440-62-2	mg/kg	18			NS	NS	394	N	NMED		4.57E-02
Zinc	7440-66-6	mg/kg	32			NS	NS	23,500	N	NMED		1.36E-03
									Cumulative Risk/Hazard		**3E-06**	**0.94**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Soil Screening Levels (SSL) (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-AD28-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID AD28
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		5,300	N	7,400	N	RSL		

TABLE D1-AD28-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID AD28
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	18,000			NS	NS	1,290,000	N	NMED		1.40E-02
Antimony	7440-36-0	mg/kg	0.16	J		NS	NS	519	N	NMED		3.08E-04
Arsenic	7440-38-2	mg/kg	1.1			36	N	208	N	NMED	3.06E-07	5.29E-03
Barium	7440-39-3	mg/kg	360			NS	NS	255,000	N	NMED		1.41E-03
Beryllium	7440-41-7	mg/kg	0.54	J		313,000	N	2,580	N	NMED	1.73E-11	2.09E-04
Cadmium	7440-43-9	mg/kg	1.1	J		417,000	N	1,110	N	NMED	2.64E-11	9.91E-04
Calcium	7440-70-2	mg/kg	4,000	J		NS	NS	32,400,000	N	NMED		1.23E-04
Chromium (Total) (2)	7440-47-3	mg/kg	12			505	N	314,000	N	NMED	2.38E-07	3.82E-05
Cobalt	7440-48-4	mg/kg	5.3			83,400	N	388	N	NMED	6.35E-10	1.37E-02
Copper	7440-50-8	mg/kg	69	J		NS	NS	51,900	N	NMED		1.33E-03
Iron	7439-89-6	mg/kg	9,600			NS	NS	908,000	N	NMED		1.06E-02
Lead	7439-92-1	mg/kg	9.7			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	6,800	J		NS	NS	5,680,000	N	NMED		1.20E-03
Manganese	7439-96-5	mg/kg	290			NS	NS	160,000	N	NMED		1.81E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.049	J		NS	NS	112	N	NMED		4.38E-04
Nickel	7440-02-0	mg/kg	9.7			2,890,000	N	25,700	N	NMED	3.36E-11	3.77E-04
Potassium	7440-09-7	mg/kg	1,300	J		NS	NS	76,200,000	N	NMED		1.71E-05
Selenium	7782-49-2	mg/kg	1.1	J		NS	NS	6,490	N	NMED		1.69E-04
Silver	7440-22-4	mg/kg	0.074	J		NS	NS	6,490	N	NMED		1.14E-05
Sodium	7440-23-5	mg/kg	71			NS	NS	37,300,000	N	NMED		1.90E-06
Thallium	7440-28-0	mg/kg	0.049	J		NS	NS	13	N	NMED		3.77E-03
Vanadium	7440-62-2	mg/kg	18			NS	NS	6,530	N	NMED		2.76E-03
Zinc	7440-66-6	mg/kg	32			NS	NS	38,900	N	NMED		8.23E-04
									Cumulative Risk/Hazard		**5E-07**	**0.06**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-AD28-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID AD28
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		626	N	2,420	N	NMEDC			

TABLE D1-AD28-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID AD28
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	18,000			NS	NS	41,400	N	NMED		4.35E-01	Nervous
Antimony	7440-36-0	mg/kg	0.16	J		NS	NS	142	N	NMED		1.13E-03	
Arsenic	7440-38-2	mg/kg	1.1			216	N	41	N	NMED		2.67E-02	
Barium	7440-39-3	mg/kg	360			NS	NS	4,390	N	NMED		8.20E-02	
Beryllium	7440-41-7	mg/kg	0.54	J		2,710	N	148	N	NMED		3.65E-03	
Cadmium	7440-43-9	mg/kg	1.1	J		3,610	N	72	N	NMED		1.53E-02	
Calcium	7440-70-2	mg/kg	4,000	J		NS	NS	8,850,000	N	NMED		4.52E-04	
Chromium (Total) (3)	7440-47-3	mg/kg	12			468	N	134	N	NMED		8.96E-02	
Cobalt	7440-48-4	mg/kg	5.3			722	N	37	N	NMED		1.44E-01	Endocrine
Copper	7440-50-8	mg/kg	69	J		NS	NS	14,200	N	NMED		4.86E-03	
Iron	7439-89-6	mg/kg	9,600			NS	NS	248,000	N	NMED		3.87E-02	
Lead	7439-92-1	mg/kg	9.7			NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	6,800	J		NS	NS	1,550,000	N	NMED		4.39E-03	
Manganese	7439-96-5	mg/kg	290			NS	NS	464	N	NMED		6.25E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.049	J		NS	NS	21	N	NMED		2.37E-03	
Nickel	7440-02-0	mg/kg	9.7			20,500	N	753	N	NMED		1.29E-02	
Potassium	7440-09-7	mg/kg	1,300	J		NS	NS	20,800,000	N	NMED		6.25E-05	
Selenium	7782-49-2	mg/kg	1.1	J		NS	NS	1,750	N	NMED		6.29E-04	
Silver	7440-22-4	mg/kg	0.074	J		NS	NS	1,770	N	NMED		4.18E-05	
Sodium	7440-23-5	mg/kg	71			NS	NS	10,200,000	N	NMED		6.96E-06	
Thallium	7440-28-0	mg/kg	0.049	J		NS	NS	4	N	NMED		1.38E-02	
Vanadium	7440-62-2	mg/kg	18			NS	NS	614	N	NMED		2.93E-02	
Zinc	7440-66-6	mg/kg	32			NS	NS	106,000	N	NMED		3.02E-04	
									Cumulative Risk/Hazard		**0E+00**	**1.5**	
									Exceeds Target Level		**N**	**Y**	

Notes:

1 NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update).

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	1.1
Endocrine	0.14
All Others	0.33

TABLE D1-AD34-1
GRID AD34 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[2]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U		60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U		313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		1,300	N	570	N	RSL		

TABLE D1-AD34-1
GRID AD34 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[2]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	16,000			NS	NS	78,000	N	NMED		2.05E-01
Antimony	7440-36-0	mg/kg	0.11	J		NS	NS	31.3	N	NMED		3.51E-03
Arsenic	7440-38-2	mg/kg	1.1			7.07	N	13	N	NMED	1.56E-06	8.46E-02
Barium	7440-39-3	mg/kg	300			NS	NS	15,600	N	NMED		1.92E-02
Beryllium	7440-41-7	mg/kg	0.73	J		64,400	N	156	N	NMED	1.13E-10	4.68E-03
Cadmium	7440-43-9	mg/kg	0.25			85,900	N	70.5	N	NMED	2.91E-11	3.55E-03
Calcium	7440-70-2	mg/kg	3,400	J		NS	NS	13,000,000	N	NMED		2.62E-04
Chromium (Total) (3)	7440-47-3	mg/kg	10	J		96.6	N	45,200	N	NMED	1.04E-06	2.21E-04
Cobalt	7440-48-4	mg/kg	4.8			17,200	N	23.4	N	NMED	2.79E-09	2.05E-01
Copper	7440-50-8	mg/kg	41	J		NS	NS	3,130	N	NMED		1.31E-02
Iron	7439-89-6	mg/kg	10,000			NS	NS	54,800	N	NMED		1.82E-01
Lead	7439-92-1	mg/kg	9.9	J		NS	NS	200	N	IEUBK		
Magnesium	7439-95-4	mg/kg	5,400	J		NS	NS	15,600,000	N	NMED		3.46E-04
Manganese	7439-96-5	mg/kg	270			NS	NS	10,500	N	NMED		2.57E-02
Mercury (Elemental)	7439-97-6	mg/kg	0.034	J		NS	NS	23.8	N	NMED		1.43E-03
Nickel	7440-02-0	mg/kg	8.6			595,000	N	1,560	N	NMED	1.45E-10	5.51E-03
Potassium	7440-09-7	mg/kg	1,100	J		NS	NS	15,600,000	N	NMED		7.05E-05
Selenium	7782-49-2	mg/kg	1	J		NS	NS	391	N	NMED		2.56E-03
Silver	7440-22-4	mg/kg	0.048	J		NS	NS	391	N	NMED		1.23E-04
Sodium	7440-23-5	mg/kg	48			NS	NS	7,820,000	N	NMED		6.14E-06
Thallium	7440-28-0	mg/kg	0.054	J		NS	NS	0.782	N	NMED		6.91E-02
Vanadium	7440-62-2	mg/kg	15			NS	NS	394	N	NMED		3.81E-02
Zinc	7440-66-6	mg/kg	24	J		NS	NS	23,500	N	NMED		1.02E-03
										Cumulative Risk/Hazard	**3E-06**	**0.87**
										Exceeds Target Level	**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Residential Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Residential Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-AD34-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID AD34
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		5,300	N	7,400	N	RSL		

TABLE D1-AD34-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID AD34
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	16,000			NS	NS	1,290,000	N	NMED		1.24E-02
Antimony	7440-36-0	mg/kg	0.11	J		NS	NS	519	N	NMED		2.12E-04
Arsenic	7440-38-2	mg/kg	1.1			36	N	208	N	NMED	3.06E-07	5.29E-03
Barium	7440-39-3	mg/kg	300			NS	NS	255,000	N	NMED		1.18E-03
Beryllium	7440-41-7	mg/kg	0.73	J		313,000	N	2,580	N	NMED	2.33E-11	2.83E-04
Cadmium	7440-43-9	mg/kg	0.25			417,000	N	1,110	N	NMED	6.00E-12	2.25E-04
Calcium	7440-70-2	mg/kg	3,400	J		NS	NS	32,400,000	N	NMED		1.05E-04
Chromium (Total) (2)	7440-47-3	mg/kg	10	J		505	N	314,000	N	NMED	1.98E-07	3.18E-05
Cobalt	7440-48-4	mg/kg	4.8			83,400	N	388	N	NMED	5.76E-10	1.24E-02
Copper	7440-50-8	mg/kg	41	J		NS	NS	51,900	N	NMED		7.90E-04
Iron	7439-89-6	mg/kg	10,000			NS	NS	908,000	N	NMED		1.10E-02
Lead	7439-92-1	mg/kg	9.9	J		NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	5,400	J		NS	NS	5,680,000	N	NMED		9.51E-04
Manganese	7439-96-5	mg/kg	270			NS	NS	160,000	N	NMED		1.69E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.034	J		NS	NS	112	N	NMED		3.04E-04
Nickel	7440-02-0	mg/kg	8.6			2,890,000	N	25,700	N	NMED	2.98E-11	3.35E-04
Potassium	7440-09-7	mg/kg	1,100	J		NS	NS	76,200,000	N	NMED		1.44E-05
Selenium	7782-49-2	mg/kg	1	J		NS	NS	6,490	N	NMED		1.54E-04
Silver	7440-22-4	mg/kg	0.048	J		NS	NS	6,490	N	NMED		7.40E-06
Sodium	7440-23-5	mg/kg	48			NS	NS	37,300,000	N	NMED		1.29E-06
Thallium	7440-28-0	mg/kg	0.054	J		NS	NS	13	N	NMED		4.15E-03
Vanadium	7440-62-2	mg/kg	15			NS	NS	6,530	N	NMED		2.30E-03
Zinc	7440-66-6	mg/kg	24	J		NS	NS	38,900	N	NMED		6.17E-04
									Cumulative Risk/Hazard		**5E-07**	**0.05**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Industrial Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent

CAS = Chemical Abstracts Service

J = Estimated

mg/kg = milligrams per kilogram

N = no

NA = not applicable

NS = No Standard

RAG = Risk Assessment Guidance

SSL = soil screening level

U = Nondetect

UTL = upper tolerance limit

Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-AD34-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID AD34
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		626	N	2,420	N	NMEDC			

TABLE D1-AD34-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID AD34
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	16,000			NS	NS	41,400	N	NMED		3.86E-01	Nervous
Antimony	7440-36-0	mg/kg	0.11	J		NS	NS	142	N	NMED		7.75E-04	
Arsenic	7440-38-2	mg/kg	1.1			216	N	41	N	NMED	5.09E-08	2.67E-02	
Barium	7440-39-3	mg/kg	300			NS	NS	4,390	N	NMED		6.83E-02	
Beryllium	7440-41-7	mg/kg	0.73	J		2,710	N	148	N	NMED	2.69E-09	4.93E-03	
Cadmium	7440-43-9	mg/kg	0.25			3,610	N	72	N	NMED	6.93E-10	3.47E-03	
Calcium	7440-70-2	mg/kg	3,400	J		NS	NS	8,850,000	N	NMED		3.84E-04	
Chromium (Total) (3)	7440-47-3	mg/kg	10	J		468	N	134	N	NMED	2.14E-07	7.46E-02	
Cobalt	7440-48-4	mg/kg	4.8			722	N	37	N	NMED	6.65E-08	1.31E-01	Endocrine
Copper	7440-50-8	mg/kg	41	J		NS	NS	14,200	N	NMED		2.89E-03	
Iron	7439-89-6	mg/kg	10,000			NS	NS	248,000	N	NMED		4.03E-02	
Lead	7439-92-1	mg/kg	9.9	J		NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	5,400	J		NS	NS	1,550,000	N	NMED		3.48E-03	
Manganese	7439-96-5	mg/kg	270			NS	NS	464	N	NMED		5.82E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.034	J		NS	NS	21	N	NMED		1.64E-03	
Nickel	7440-02-0	mg/kg	8.6			20,500	N	753	N	NMED	4.20E-09	1.14E-02	
Potassium	7440-09-7	mg/kg	1,100	J		NS	NS	20,800,000	N	NMED		5.29E-05	
Selenium	7782-49-2	mg/kg	1	J		NS	NS	1,750	N	NMED		5.71E-04	
Silver	7440-22-4	mg/kg	0.048	J		NS	NS	1,770	N	NMED		2.71E-05	
Sodium	7440-23-5	mg/kg	48			NS	NS	10,200,000	N	NMED		4.71E-06	
Thallium	7440-28-0	mg/kg	0.054	J		NS	NS	4	N	NMED		1.53E-02	
Vanadium	7440-62-2	mg/kg	15			NS	NS	614	N	NMED		2.44E-02	
Zinc	7440-66-6	mg/kg	24	J		NS	NS	106,000	N	NMED		2.26E-04	
									Cumulative Risk/Hazard		**3E-07**	**1.4**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	0.97
Endocrine	0.13
All Others	0.28

TABLE D1-AE27-1
GRID AE27 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U		60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U		313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		1,300	N	570	N	RSL		

TABLE D1-AE27-1
GRID AE27 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	17,000			NS	NS	78,000	N	NMED		2.18E-01
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	31.3	N	NMED		
Arsenic	7440-38-2	mg/kg	1.3			7.07	N	13	N	NMED	1.84E-06	1.00E-01
Barium	7440-39-3	mg/kg	280			NS	NS	15,600	N	NMED		1.79E-02
Beryllium	7440-41-7	mg/kg	0.48	J		64,400	N	156	N	NMED	7.45E-11	3.08E-03
Cadmium	7440-43-9	mg/kg	0.42			85,900	N	70.5	N	NMED	4.89E-11	5.96E-03
Calcium	7440-70-2	mg/kg	3,100			NS	NS	13,000,000	N	NMED		2.38E-04
Chromium (Total) (2)	7440-47-3	mg/kg	11			96.6	N	45,200	N	NMED	1.14E-06	2.43E-04
Cobalt	7440-48-4	mg/kg	5			17,200	N	23.4	N	NMED	2.91E-09	2.14E-01
Copper	7440-50-8	mg/kg	69			NS	NS	3,130	N	NMED		2.20E-02
Iron	7439-89-6	mg/kg	9,500			NS	NS	54,800	N	NMED		1.73E-01
Lead	7439-92-1	mg/kg	11			NS	NS	200	N	IEUBK		
Magnesium	7439-95-4	mg/kg	6,300			NS	NS	15,600,000	N	NMED		4.04E-04
Manganese	7439-96-5	mg/kg	270			NS	NS	10,500	N	NMED		2.57E-02
Mercury (Elemental)	7439-97-6	mg/kg	0.059	J		NS	NS	23.8	N	NMED		2.48E-03
Nickel	7440-02-0	mg/kg	9			595,000	N	1,560	N	NMED	1.51E-10	5.77E-03
Potassium	7440-09-7	mg/kg	1,100			NS	NS	15,600,000	N	NMED		7.05E-05
Selenium	7782-49-2	mg/kg	1.1			NS	NS	391	N	NMED		2.81E-03
Silver	7440-22-4	mg/kg	0.11			NS	NS	391	N	NMED		2.81E-04
Sodium	7440-23-5	mg/kg	66			NS	NS	7,820,000	N	NMED		8.44E-06
Thallium	7440-28-0	mg/kg	0.05	J		NS	NS	0.782	N	NMED		6.39E-02
Vanadium	7440-62-2	mg/kg	22			NS	NS	394	N	NMED		5.58E-02
Zinc	7440-66-6	mg/kg	32			NS	NS	23,500	N	NMED		1.36E-03
									Cumulative Risk/Hazard		**3E-06**	**0.91**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-AE27-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID AE27
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		5,300	N	7,400	N	RSL		

TABLE D1-AE27-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID AE27
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	17,000			NS	NS	1,290,000	N	NMED		1.32E-02
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	519	N	NMED		
Arsenic	7440-38-2	mg/kg	1.3			36	N	208	N	NMED	3.62E-07	6.25E-03
Barium	7440-39-3	mg/kg	280			NS	NS	255,000	N	NMED		1.10E-03
Beryllium	7440-41-7	mg/kg	0.48	J		313,000	N	2,580	N	NMED	1.53E-11	1.86E-04
Cadmium	7440-43-9	mg/kg	0.42			417,000	N	1,110	N	NMED	1.01E-11	3.78E-04
Calcium	7440-70-2	mg/kg	3,100			NS	NS	32,400,000	N	NMED		9.57E-05
Chromium (Total) (2)	7440-47-3	mg/kg	11			505	N	314,000	N	NMED	2.18E-07	3.50E-05
Cobalt	7440-48-4	mg/kg	5			83,400	N	388	N	NMED	6.00E-10	1.29E-02
Copper	7440-50-8	mg/kg	69			NS	NS	51,900	N	NMED		1.33E-03
Iron	7439-89-6	mg/kg	9,500			NS	NS	908,000	N	NMED		1.05E-02
Lead	7439-92-1	mg/kg	11			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	6,300			NS	NS	5,680,000	N	NMED		1.11E-03
Manganese	7439-96-5	mg/kg	270			NS	NS	160,000	N	NMED		1.69E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.059	J		NS	NS	112	N	NMED		5.27E-04
Nickel	7440-02-0	mg/kg	9			2,890,000	N	25,700	N	NMED	3.11E-11	3.50E-04
Potassium	7440-09-7	mg/kg	1,100			NS	NS	76,200,000	N	NMED		1.44E-05
Selenium	7782-49-2	mg/kg	1.1			NS	NS	6,490	N	NMED		1.69E-04
Silver	7440-22-4	mg/kg	0.11			NS	NS	6,490	N	NMED		1.69E-05
Sodium	7440-23-5	mg/kg	66			NS	NS	37,300,000	N	NMED		1.77E-06
Thallium	7440-28-0	mg/kg	0.05	J		NS	NS	13	N	NMED		3.85E-03
Vanadium	7440-62-2	mg/kg	22			NS	NS	6,530	N	NMED		3.37E-03
Zinc	7440-66-6	mg/kg	32			NS	NS	38,900	N	NMED		8.23E-04
									Cumulative Risk/Hazard		**6E-07**	**0.06**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-AE27-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID AE27
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		626	N	2,420	N	NMEDC			

TABLE D1-AE27-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID AE27
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	17,000			NS	NS	41,400	N	NMED		4.11E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	142	N	NMED			
Arsenic	7440-38-2	mg/kg	1.3			216	N	41	N	NMED	6.02E-08	3.16E-02	
Barium	7440-39-3	mg/kg	280			NS	NS	4,390	N	NMED		6.38E-02	
Beryllium	7440-41-7	mg/kg	0.48	J		2,710	N	148	N	NMED	1.77E-09	3.24E-03	
Cadmium	7440-43-9	mg/kg	0.42			3,610	N	72	N	NMED	1.16E-09	5.83E-03	
Calcium	7440-70-2	mg/kg	3,100			NS	NS	8,850,000	N	NMED		3.50E-04	
Chromium (Total) (3)	7440-47-3	mg/kg	11			468	N	134	N	NMED	2.35E-07	8.21E-02	
Cobalt	7440-48-4	mg/kg	5			722	N	37	N	NMED	6.93E-08	1.36E-01	Endocrine
Copper	7440-50-8	mg/kg	69			NS	NS	14,200	N	NMED		4.86E-03	
Iron	7439-89-6	mg/kg	9,500			NS	NS	248,000	N	NMED		3.83E-02	
Lead	7439-92-1	mg/kg	11			NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	6,300			NS	NS	1,550,000	N	NMED		4.06E-03	
Manganese	7439-96-5	mg/kg	270			NS	NS	464	N	NMED		5.82E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.059	J		NS	NS	21	N	NMED		2.85E-03	
Nickel	7440-02-0	mg/kg	9			20,500	N	753	N	NMED	4.39E-09	1.20E-02	
Potassium	7440-09-7	mg/kg	1,100			NS	NS	20,800,000	N	NMED		5.29E-05	
Selenium	7782-49-2	mg/kg	1.1			NS	NS	1,750	N	NMED		6.29E-04	
Silver	7440-22-4	mg/kg	0.11			NS	NS	1,770	N	NMED		6.21E-05	
Sodium	7440-23-5	mg/kg	66			NS	NS	10,200,000	N	NMED		6.47E-06	
Thallium	7440-28-0	mg/kg	0.05	J		NS	NS	4	N	NMED		1.41E-02	
Vanadium	7440-62-2	mg/kg	22			NS	NS	614	N	NMED		3.58E-02	
Zinc	7440-66-6	mg/kg	32			NS	NS	106,000	N	NMED		3.02E-04	
									Cumulative Risk/Hazard		**4E-07**	**1.4**	
									Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	0.99
Endocrine	0.14
All Others	0.30

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
mg/kg = milligrams per kilogram
N = no

NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-AE38-1
GRID AE38 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.15	UJ		NS	NS	2,200	N	RSL			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.15	UJ		NS	NS	6.3	N	RSL			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.15	UJ		211	N	36	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.15	UJ		17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.15	UJ		3.56	N	18.5	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.15	UJ		NS	NS	7.7	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.15	UJ		31.6	N	70.4	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.15	UJ		NS	NS	6.16	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.15	UJ		NS	NS	7.64	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.15	UJ		333	N	247	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.15	UJ		83.1	N	301	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.15	UJ		NS	NS	156	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.15	UJ		60.4	N	131	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.3	UJ		313	N	6.16	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.15	UJ		NS	NS	3,850	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.5	UJ		1,300	N	570	N	RSL			

TABLE D1-AE38-1
GRID AE38 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	22,000			NS	NS	78,000	N	NMED		2.82E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	31.3	N	NMED			
Arsenic	7440-38-2	mg/kg	1.1			7.07	N	13	N	NMED	1.56E-06	8.46E-02	
Barium	7440-39-3	mg/kg	370			NS	NS	15,600	N	NMED		2.37E-02	
Beryllium	7440-41-7	mg/kg	1.1	J		64,400	N	156	N	NMED	1.71E-10	7.05E-03	
Cadmium	7440-43-9	mg/kg	0.18			85,900	N	70.5	N	NMED	2.10E-11	2.55E-03	
Calcium	7440-70-2	mg/kg	17,000			NS	NS	13,000,000	N	NMED		1.31E-03	
Chromium (Total) (2)	7440-47-3	mg/kg	11			96.6	N	45,200	N	NMED	1.14E-06	2.43E-04	
Cobalt	7440-48-4	mg/kg	5.8			17,200	N	23.4	N	NMED	3.37E-09	2.48E-01	Endocrine
Copper	7440-50-8	mg/kg	23			NS	NS	3,130	N	NMED		7.35E-03	
Iron	7439-89-6	mg/kg	12,000			NS	NS	54,800	N	NMED		2.19E-01	GI
Lead	7439-92-1	mg/kg	10			NS	NS	200	N	IEUBK			
Magnesium	7439-95-4	mg/kg	7,600			NS	NS	15,600,000	N	NMED		4.87E-04	
Manganese	7439-96-5	mg/kg	470			NS	NS	10,500	N	NMED		4.48E-02	
Mercury (Elemental)	7439-97-6	mg/kg	0.017	J		NS	NS	23.8	N	NMED		7.14E-04	
Nickel	7440-02-0	mg/kg	12			595,000	N	1,560	N	NMED	2.02E-10	7.69E-03	
Potassium	7440-09-7	mg/kg	2,000			NS	NS	15,600,000	N	NMED		1.28E-04	
Selenium	7782-49-2	mg/kg	1.3			NS	NS	391	N	NMED		3.32E-03	
Silver	7440-22-4	mg/kg	0.059	J		NS	NS	391	N	NMED		1.51E-04	
Sodium	7440-23-5	mg/kg	39			NS	NS	7,820,000	N	NMED		4.99E-06	
Thallium	7440-28-0	mg/kg	0.08	J		NS	NS	0.782	N	NMED		1.02E-01	Hair/Coat/Eyes
Vanadium	7440-62-2	mg/kg	15			NS	NS	394	N	NMED		3.81E-02	
Zinc	7440-66-6	mg/kg	30			NS	NS	23,500	N	NMED		1.28E-03	
									Cumulative Risk/Hazard		**3E-06**	**1.1**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent

CAS = Chemical Abstracts Service

IEUBK = Integrated Exposure Uptake Biokinetic Model

J = Estimated

mg/kg = milligrams per kilogram

N = no

NA = not applicable

NS = No Standard

RAG = Risk Assessment Guidance

SSL = soil screening level

U = Nondetect

UJ = Estimated Nondetect

UTL = upper tolerance limit

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	0.28
Endocrine	0.25
GI	0.22
Hair/Coat	0.10
Eyes	0.10
All Others	0.22

TABLE D1-AE38-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID AE38
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.15	UJ		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.15	UJ		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.15	UJ		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.15	UJ		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.15	UJ		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.15	UJ		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.15	UJ		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.15	UJ		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.15	UJ		NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.15	UJ		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.15	UJ		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.15	UJ		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.15	UJ		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.3	UJ		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.15	UJ		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.5	UJ		5,300	N	7,400	N	RSL		

TABLE D1-AE38-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID AE38
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	22,000			NS	NS	1,290,000	N	NMED		1.71E-02
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	519	N	NMED		
Arsenic	7440-38-2	mg/kg	1.1			36	N	208	N	NMED	3.06E-07	5.29E-03
Barium	7440-39-3	mg/kg	370			NS	NS	255,000	N	NMED		1.45E-03
Beryllium	7440-41-7	mg/kg	1.1	J		313,000	N	2,580	N	NMED	3.51E-11	4.26E-04
Cadmium	7440-43-9	mg/kg	0.18			417,000	N	1,110	N	NMED	4.32E-12	1.62E-04
Calcium	7440-70-2	mg/kg	17,000			NS	NS	32,400,000	N	NMED		5.25E-04
Chromium (Total) (2)	7440-47-3	mg/kg	11			505	N	314,000	N	NMED	2.18E-07	3.50E-05
Cobalt	7440-48-4	mg/kg	5.8			83,400	N	388	N	NMED	6.95E-10	1.49E-02
Copper	7440-50-8	mg/kg	23			NS	NS	51,900	N	NMED		4.43E-04
Iron	7439-89-6	mg/kg	12,000			NS	NS	908,000	N	NMED		1.32E-02
Lead	7439-92-1	mg/kg	10			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	7,600			NS	NS	5,680,000	N	NMED		1.34E-03
Manganese	7439-96-5	mg/kg	470			NS	NS	160,000	N	NMED		2.94E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.017	J		NS	NS	112	N	NMED		1.52E-04
Nickel	7440-02-0	mg/kg	12			2,890,000	N	25,700	N	NMED	4.15E-11	4.67E-04
Potassium	7440-09-7	mg/kg	2,000			NS	NS	76,200,000	N	NMED		2.62E-05
Selenium	7782-49-2	mg/kg	1.3			NS	NS	6,490	N	NMED		2.00E-04
Silver	7440-22-4	mg/kg	0.059	J		NS	NS	6,490	N	NMED		9.09E-06
Sodium	7440-23-5	mg/kg	39			NS	NS	37,300,000	N	NMED		1.05E-06
Thallium	7440-28-0	mg/kg	0.08	J		NS	NS	13	N	NMED		6.15E-03
Vanadium	7440-62-2	mg/kg	15			NS	NS	6,530	N	NMED		2.30E-03
Zinc	7440-66-6	mg/kg	30			NS	NS	38,900	N	NMED		7.71E-04
									Cumulative Risk/Hazard		**5E-07**	**0.07**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-AE38-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID AE38
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[2,3]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.15	UJ		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.15	UJ		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.15	UJ		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.15	UJ		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.15	UJ		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.15	UJ		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.15	UJ		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.15	UJ		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.15	UJ		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.15	UJ		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.15	UJ		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.15	UJ		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.15	UJ		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.3	UJ		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.15	UJ		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.5	UJ		626	N	2,420	N	NMEDC			

TABLE D1-AE38-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID AE38
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[2,3]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	22,000			NS	NS	41,400	N	NMED		5.31E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	142	N	NMED			
Arsenic	7440-38-2	mg/kg	1.1			216	N	41	N	NMED	5.09E-08	2.67E-02	
Barium	7440-39-3	mg/kg	370			NS	NS	4,390	N	NMED		8.43E-02	
Beryllium	7440-41-7	mg/kg	1.1	J		2,710	N	148	N	NMED	4.06E-09	7.43E-03	
Cadmium	7440-43-9	mg/kg	0.18			3,610	N	72	N	NMED	4.99E-10	2.50E-03	
Calcium	7440-70-2	mg/kg	17,000			NS	NS	8,850,000	N	NMED		1.92E-03	
Chromium (Total) (4)	7440-47-3	mg/kg	11			468	N	134	N	NMED	2.35E-07	8.21E-02	
Cobalt	7440-48-4	mg/kg	5.8			722	N	37	N	NMED	8.03E-08	1.58E-01	Endocrine
Copper	7440-50-8	mg/kg	23			NS	NS	14,200	N	NMED		1.62E-03	
Iron	7439-89-6	mg/kg	12,000			NS	NS	248,000	N	NMED		4.84E-02	
Lead	7439-92-1	mg/kg	10			NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	7,600			NS	NS	1,550,000	N	NMED		4.90E-03	
Manganese	7439-96-5	mg/kg	470			NS	NS	464	Y	NMED		1.01E+00	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.017	J		NS	NS	21	N	NMED		8.21E-04	
Nickel	7440-02-0	mg/kg	12			20,500	N	753	N	NMED	5.85E-09	1.59E-02	
Potassium	7440-09-7	mg/kg	2,000			NS	NS	20,800,000	N	NMED		9.62E-05	
Selenium	7782-49-2	mg/kg	1.3			NS	NS	1,750	N	NMED		7.43E-04	
Silver	7440-22-4	mg/kg	0.059	J		NS	NS	1,770	N	NMED		3.33E-05	
Sodium	7440-23-5	mg/kg	39			NS	NS	10,200,000	N	NMED		3.82E-06	
Thallium	7440-28-0	mg/kg	0.08	J		NS	NS	4	N	NMED		2.26E-02	
Vanadium	7440-62-2	mg/kg	15			NS	NS	614	N	NMED		2.44E-02	
Zinc	7440-66-6	mg/kg	30			NS	NS	106,000	N	NMED		2.83E-04	
									Cumulative Risk/Hazard		**4E-07**	**2.0**	
									Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	1.5
Endocrine	0.16
All others	0.32

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-AF29-1
GRID AF25 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U		60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U		313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		1,300	N	570	N	RSL		

TABLE D1-AF29-1
GRID AF25 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	19,000			NS	NS	78,000	N	NMED		2.44E-01
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	31.3	N	NMED		
Arsenic	7440-38-2	mg/kg	1.4			7.07	N	13	N	NMED	1.98E-06	1.08E-01
Barium	7440-39-3	mg/kg	220			NS	NS	15,600	N	NMED		1.41E-02
Beryllium	7440-41-7	mg/kg	0.47	J		64,400	N	156	N	NMED	7.30E-11	3.01E-03
Cadmium	7440-43-9	mg/kg	0.29			85,900	N	70.5	N	NMED	3.38E-11	4.11E-03
Calcium	7440-70-2	mg/kg	3,000			NS	NS	13,000,000	N	NMED		2.31E-04
Chromium (Total) (2)	7440-47-3	mg/kg	12			96.6	N	45,200	N	NMED	1.24E-06	2.65E-04
Cobalt	7440-48-4	mg/kg	4.9			17,200	N	23.4	N	NMED	2.85E-09	2.09E-01
Copper	7440-50-8	mg/kg	60			NS	NS	3,130	N	NMED		1.92E-02
Iron	7439-89-6	mg/kg	9,800			NS	NS	54,800	N	NMED		1.79E-01
Lead	7439-92-1	mg/kg	11			NS	NS	200	N	IEUBK		
Magnesium	7439-95-4	mg/kg	7,900			NS	NS	15,600,000	N	NMED		5.06E-04
Manganese	7439-96-5	mg/kg	250			NS	NS	10,500	N	NMED		2.38E-02
Mercury (Elemental)	7439-97-6	mg/kg	0.027	J		NS	NS	23.8	N	NMED		1.13E-03
Nickel	7440-02-0	mg/kg	8.9			595,000	N	1,560	N	NMED	1.50E-10	5.71E-03
Potassium	7440-09-7	mg/kg	970			NS	NS	15,600,000	N	NMED		6.22E-05
Selenium	7782-49-2	mg/kg	1			NS	NS	391	N	NMED		2.56E-03
Silver	7440-22-4	mg/kg	0.09	J		NS	NS	391	N	NMED		2.30E-04
Sodium	7440-23-5	mg/kg	82			NS	NS	7,820,000	N	NMED		1.05E-05
Thallium	7440-28-0	mg/kg	0.075	J		NS	NS	0.782	N	NMED		9.59E-02
Vanadium	7440-62-2	mg/kg	19			NS	NS	394	N	NMED		4.82E-02
Zinc	7440-66-6	mg/kg	32			NS	NS	23,500	N	NMED		1.36E-03
									Cumulative Risk/Hazard		**3E-06**	**0.96**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-AF29-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID AF25
INNER FENCE
FORT WINGATE DEPOT ACTIVITY

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[2]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		5,300	N	7,400	N	RSL		

TABLE D1-AF29-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID AF25
INNER FENCE
FORT WINGATE DEPOT ACTIVITY

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[2]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	19,000			NS	NS	1,290,000	N	NMED		1.47E-02
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	519	N	NMED		
Arsenic	7440-38-2	mg/kg	1.4			36	N	208	N	NMED	3.90E-07	6.73E-03
Barium	7440-39-3	mg/kg	220			NS	NS	255,000	N	NMED		8.63E-04
Beryllium	7440-41-7	mg/kg	0.47	J		313,000	N	2,580	N	NMED	1.50E-11	1.82E-04
Cadmium	7440-43-9	mg/kg	0.29			417,000	N	1,110	N	NMED	6.95E-12	2.61E-04
Calcium	7440-70-2	mg/kg	3,000			NS	NS	32,400,000	N	NMED		9.26E-05
Chromium (Total) (3)	7440-47-3	mg/kg	12			505	N	314,000	N	NMED	2.38E-07	3.82E-05
Cobalt	7440-48-4	mg/kg	4.9			83,400	N	388	N	NMED	5.88E-10	1.26E-02
Copper	7440-50-8	mg/kg	60			NS	NS	51,900	N	NMED		1.16E-03
Iron	7439-89-6	mg/kg	9,800			NS	NS	908,000	N	NMED		1.08E-02
Lead	7439-92-1	mg/kg	11			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	7,900			NS	NS	5,680,000	N	NMED		1.39E-03
Manganese	7439-96-5	mg/kg	250			NS	NS	160,000	N	NMED		1.56E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.027	J		NS	NS	112	N	NMED		2.41E-04
Nickel	7440-02-0	mg/kg	8.9			2,890,000	N	25,700	N	NMED	3.08E-11	3.46E-04
Potassium	7440-09-7	mg/kg	970			NS	NS	76,200,000	N	NMED		1.27E-05
Selenium	7782-49-2	mg/kg	1			NS	NS	6,490	N	NMED		1.54E-04
Silver	7440-22-4	mg/kg	0.09	J		NS	NS	6,490	N	NMED		1.39E-05
Sodium	7440-23-5	mg/kg	82			NS	NS	37,300,000	N	NMED		2.20E-06
Thallium	7440-28-0	mg/kg	0.075	J		NS	NS	13	N	NMED		5.77E-03
Vanadium	7440-62-2	mg/kg	19			NS	NS	6,530	N	NMED		2.91E-03
Zinc	7440-66-6	mg/kg	32			NS	NS	38,900	N	NMED		8.23E-04
									Cumulative Risk/Hazard		**6E-07**	**0.06**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-AF29-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID AF29
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		626	N	2,420	N	NMEDC			

TABLE D1-AF29-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID AF29
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	19,000			NS	NS	41,400	N	NMED		4.59E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	142	N	NMED			
Arsenic	7440-38-2	mg/kg	1.4			216	N	41	N	NMED	6.48E-08	3.40E-02	
Barium	7440-39-3	mg/kg	220			NS	NS	4,390	N	NMED		5.01E-02	
Beryllium	7440-41-7	mg/kg	0.47	J		2,710	N	148	N	NMED	1.73E-09	3.18E-03	
Cadmium	7440-43-9	mg/kg	0.29			3,610	N	72	N	NMED	8.03E-10	4.02E-03	
Calcium	7440-70-2	mg/kg	3,000			NS	NS	8,850,000	N	NMED		3.39E-04	
Chromium (Total) (3)	7440-47-3	mg/kg	12			468	N	134	N	NMED	2.56E-07	8.96E-02	
Cobalt	7440-48-4	mg/kg	4.9			722	N	37	N	NMED	6.79E-08	1.34E-01	Endocrine
Copper	7440-50-8	mg/kg	60			NS	NS	14,200	N	NMED		4.23E-03	
Iron	7439-89-6	mg/kg	9,800			NS	NS	248,000	N	NMED		3.95E-02	
Lead	7439-92-1	mg/kg	11			NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	7,900			NS	NS	1,550,000	N	NMED		5.10E-03	
Manganese	7439-96-5	mg/kg	250			NS	NS	464	N	NMED		5.39E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.027	J		NS	NS	21	N	NMED		1.30E-03	
Nickel	7440-02-0	mg/kg	8.9			20,500	N	753	N	NMED	4.34E-09	1.18E-02	
Potassium	7440-09-7	mg/kg	970			NS	NS	20,800,000	N	NMED		4.66E-05	
Selenium	7782-49-2	mg/kg	1			NS	NS	1,750	N	NMED		5.71E-04	
Silver	7440-22-4	mg/kg	0.09	J		NS	NS	1,770	N	NMED		5.08E-05	
Sodium	7440-23-5	mg/kg	82			NS	NS	10,200,000	N	NMED		8.04E-06	
Thallium	7440-28-0	mg/kg	0.075	J		NS	NS	4	N	NMED		2.12E-02	
Vanadium	7440-62-2	mg/kg	19			NS	NS	614	N	NMED		3.09E-02	
Zinc	7440-66-6	mg/kg	32			NS	NS	106,000	N	NMED		3.02E-04	
									Cumulative Risk/Hazard		**4E-07**	**1.4**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2]NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent	NA = not applicable
CAS = Chemical Abstracts Service	NS = No Standard
HI = Hazard Index	RAG = Risk Assessment Guidance
IEUBK = Integrated Exposure Uptake Biokinetic Model	SSL = soil screening level
J = Estimated	U = Nondetect
mg/kg = milligrams per kilogram	UTL = upper tolerance limit
N = no	Y = yes
mg/kg = milligrams per kilogram	UTL = upper tolerance limit
N = no	Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	1.0
Endocrine	0.13
All Others	0.30

TABLE D1-AF30-1
GRID AF30 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.074	U		NS	NS	2,200	N	RSL			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.074	U		NS	NS	6.3	N	RSL			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.074	U		211	N	36	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.074	U		17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.074	U		3.56	N	18.5	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.22	J		NS	NS	7.7	N	NMED		2.86E-02	
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.074	U		31.6	N	70.4	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.074	U		NS	NS	6.16	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.22	J		NS	NS	7.64	N	NMED		2.88E-02	
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.074	U		333	N	247	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.074	U		83.1	N	301	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.074	UJ		NS	NS	156	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.074	U		60.4	N	131	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U		313	N	6.16	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.074	U		NS	NS	3,850	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		1,300	N	570	N	RSL			

TABLE D1-AF30-1
GRID AF30 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	21,000			NS	NS	78,000	N	NMED		2.69E-01	Nervous
Antimony	7440-36-0	mg/kg	0.62			NS	NS	31.3	N	NMED		1.98E-02	
Arsenic	7440-38-2	mg/kg	1.8			7.07	N	13	N	NMED		1.38E-01	Heart/Endocrine
Barium	7440-39-3	mg/kg	330			NS	NS	15,600	N	NMED		2.12E-02	
Beryllium	7440-41-7	mg/kg	0.51	J		64,400	N	156	N	NMED		3.27E-03	
Cadmium	7440-43-9	mg/kg	0.58			85,900	N	70.5	N	NMED		8.23E-03	
Calcium	7440-70-2	mg/kg	11,000			NS	NS	13,000,000	N	NMED		8.46E-04	
Chromium (Total) (2)	7440-47-3	mg/kg	16			96.6	N	45,200	N	NMED		3.54E-04	
Cobalt	7440-48-4	mg/kg	5.3			17,200	N	23.4	N	NMED		2.26E-01	Endocrine
Copper	7440-50-8	mg/kg	84			NS	NS	3,130	N	NMED		2.68E-02	
Iron	7439-89-6	mg/kg	13,000			NS	NS	54,800	N	NMED		2.37E-01	GI
Lead	7439-92-1	mg/kg	18			NS	NS	200	N	IEUBK			
Magnesium	7439-95-4	mg/kg	8,100			NS	NS	15,600,000	N	NMED		5.19E-04	
Manganese	7439-96-5	mg/kg	310			NS	NS	10,500	N	NMED		2.95E-02	
Mercury (Elemental)	7439-97-6	mg/kg	0.052	J		NS	NS	23.8	N	NMED		2.18E-03	
Nickel	7440-02-0	mg/kg	10			595,000	N	1,560	N	NMED		6.41E-03	
Potassium	7440-09-7	mg/kg	1,800			NS	NS	15,600,000	N	NMED		1.15E-04	
Selenium	7782-49-2	mg/kg	1.3			NS	NS	391	N	NMED		3.32E-03	
Silver	7440-22-4	mg/kg	0.12			NS	NS	391	N	NMED		3.07E-04	
Sodium	7440-23-5	mg/kg	80			NS	NS	7,820,000	N	NMED		1.02E-05	
Thallium	7440-28-0	mg/kg	0.15			NS	NS	0.782	N	NMED		1.92E-01	Hair/Coat/Eyes
Vanadium	7440-62-2	mg/kg	19			NS	NS	394	N	NMED		4.82E-02	
Zinc	7440-66-6	mg/kg	46			NS	NS	23,500	N	NMED		1.96E-03	
									Cumulative Risk/Hazard		**0E+00**	**1.3**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UJ = Estimated nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	0.27
Endocrine	0.36
GI	0.24
Heart	0.14
Hair/Coat	0.19
Eyes	0.19
All Others	0.17

TABLE D1-AF30-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID AF30
INNER FENCE
FORT WINGATE DEPOT ACTIVITY

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.074	U		NS	NS	32,000	N	RSL			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.074	U		NS	NS	82	N	RSL			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.074	U		1,070	N	573	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.074	U		82	N	1,820	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.074	U		17	N	276	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.22	J		NS	NS	127	N	NMED		1.73E-03	
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.074	U		165	N	1,170	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.074	U		NS	NS	92	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.22	J		NS	NS	125	N	NMED		1.76E-03	
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.074	U		1,600	N	3,670	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.074	U		428	N	4,890	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.074	UJ		NS	NS	2,590	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.074	U		293	N	1,540	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U		1,510	N	92	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.074	U		NS	NS	63,300	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		5,300	N	7,400	N	RSL			

TABLE D1-AF30-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID AF30
INNER FENCE
FORT WINGATE DEPOT ACTIVITY

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	21,000			NS	NS	1,290,000	N	NMED		1.63E-02	
Antimony	7440-36-0	mg/kg	0.62			NS	NS	519	N	NMED		1.19E-03	
Arsenic	7440-38-2	mg/kg	1.8			36	N	208	N	NMED	5.01E-07	8.65E-03	
Barium	7440-39-3	mg/kg	330			NS	NS	255,000	N	NMED		1.29E-03	
Beryllium	7440-41-7	mg/kg	0.51	J		313,000	N	2,580	N	NMED	1.63E-11	1.98E-04	
Cadmium	7440-43-9	mg/kg	0.58			417,000	N	1,110	N	NMED	1.39E-11	5.23E-04	
Calcium	7440-70-2	mg/kg	11,000			NS	NS	32,400,000	N	NMED		3.40E-04	
Chromium (Total) (2)	7440-47-3	mg/kg	16			505	N	314,000	N	NMED	3.17E-07	5.10E-05	
Cobalt	7440-48-4	mg/kg	5.3			83,400	N	388	N	NMED	6.35E-10	1.37E-02	
Copper	7440-50-8	mg/kg	84			NS	NS	51,900	N	NMED		1.62E-03	
Iron	7439-89-6	mg/kg	13,000			NS	NS	908,000	N	NMED		1.43E-02	
Lead	7439-92-1	mg/kg	18			NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	8,100			NS	NS	5,680,000	N	NMED		1.43E-03	
Manganese	7439-96-5	mg/kg	310			NS	NS	160,000	N	NMED		1.94E-03	
Mercury (Elemental)	7439-97-6	mg/kg	0.052	J		NS	NS	112	N	NMED		4.64E-04	
Nickel	7440-02-0	mg/kg	10			2,890,000	N	25,700	N	NMED	3.46E-11	3.89E-04	
Potassium	7440-09-7	mg/kg	1,800			NS	NS	76,200,000	N	NMED		2.36E-05	
Selenium	7782-49-2	mg/kg	1.3			NS	NS	6,490	N	NMED		2.00E-04	
Silver	7440-22-4	mg/kg	0.12			NS	NS	6,490	N	NMED		1.85E-05	
Sodium	7440-23-5	mg/kg	80			NS	NS	37,300,000	N	NMED		2.14E-06	
Thallium	7440-28-0	mg/kg	0.15			NS	NS	13	N	NMED		1.15E-02	
Vanadium	7440-62-2	mg/kg	19			NS	NS	6,530	N	NMED		2.91E-03	
Zinc	7440-66-6	mg/kg	46			NS	NS	38,900	N	NMED		1.18E-03	
									Cumulative Risk/Hazard		**8E-07**	**0.08**	
									Exceeds Target Level		**N**	**N**	

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UJ = Estimated nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-AF30-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID AF30
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.074	U		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.074	U		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.074	U		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.074	U		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.074	U		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.22	J		NS	NS	17	N	NMED		1.27E-02	
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.074	U		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.074	U		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.22	J		NS	NS	17	N	NMED		1.27E-02	
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.074	U		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.074	U		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.074	UJ		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.074	U		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.074	U		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		626	N	2,420	N	NMEDC			

TABLE D1-AF30-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID AF30
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	21,000			NS	NS	41,400	N	NMED		5.07E-01	Nervous
Antimony	7440-36-0	mg/kg	0.62			NS	NS	142	N	NMED		4.37E-03	
Arsenic	7440-38-2	mg/kg	1.8			216	N	41	N	NMED		4.37E-02	
Barium	7440-39-3	mg/kg	330			NS	NS	4,390	N	NMED		7.52E-02	
Beryllium	7440-41-7	mg/kg	0.51	J		2,710	N	148	N	NMED		3.45E-03	
Cadmium	7440-43-9	mg/kg	0.58			3,610	N	72	N	NMED		8.04E-03	
Calcium	7440-70-2	mg/kg	11,000			NS	NS	8,850,000	N	NMED		1.24E-03	
Chromium (Total) (3)	7440-47-3	mg/kg	16			468	N	134	N	NMED		1.19E-01	GI, Blood
Cobalt	7440-48-4	mg/kg	5.3			722	N	37	N	NMED		1.44E-01	Endocrine
Copper	7440-50-8	mg/kg	84			NS	NS	14,200	N	NMED		5.92E-03	
Iron	7439-89-6	mg/kg	13,000			NS	NS	248,000	N	NMED		5.24E-02	
Lead	7439-92-1	mg/kg	18			NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	8,100			NS	NS	1,550,000	N	NMED		5.23E-03	
Manganese	7439-96-5	mg/kg	310			NS	NS	464	N	NMED		6.68E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.052	J		NS	NS	21	N	NMED		2.51E-03	
Nickel	7440-02-0	mg/kg	10			20,500	N	753	N	NMED		1.33E-02	
Potassium	7440-09-7	mg/kg	1,800			NS	NS	20,800,000	N	NMED		8.65E-05	
Selenium	7782-49-2	mg/kg	1.3			NS	NS	1,750	N	NMED		7.43E-04	
Silver	7440-22-4	mg/kg	0.12			NS	NS	1,770	N	NMED		6.78E-05	
Sodium	7440-23-5	mg/kg	80			NS	NS	10,200,000	N	NMED		7.84E-06	
Thallium	7440-28-0	mg/kg	0.15			NS	NS	4	N	NMED		4.24E-02	
Vanadium	7440-62-2	mg/kg	19			NS	NS	614	N	NMED		3.09E-02	
Zinc	7440-66-6	mg/kg	46			NS	NS	106,000	N	NMED		4.34E-04	
									Cumulative Risk/Hazard		**0E+00**	**1.8**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UJ = Estimated nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	1.2
Endocrine	0.14
GI	0.12
Blood	0.12
All Others	0.29

TABLE D1-AF32-1
GRID AF32 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U		60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U		313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		1,300	N	570	N	RSL		

TABLE D1-AF32-1
GRID AF32 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	19,000			NS	NS	78,000	N	NMED		2.44E-01
Antimony	7440-36-0	mg/kg	0.12	J		NS	NS	31.3	N	NMED		3.83E-03
Arsenic	7440-38-2	mg/kg	1.2			7.07	N	13	N	NMED	1.70E-06	9.23E-02
Barium	7440-39-3	mg/kg	150			NS	NS	15,600	N	NMED		9.62E-03
Beryllium	7440-41-7	mg/kg	0.6	J		64,400	N	156	N	NMED	9.32E-11	3.85E-03
Cadmium	7440-43-9	mg/kg	0.66			85,900	N	70.5	N	NMED	7.68E-11	9.36E-03
Calcium	7440-70-2	mg/kg	3,300			NS	NS	13,000,000	N	NMED		2.54E-04
Chromium (Total) (2)	7440-47-3	mg/kg	13			96.6	N	45,200	N	NMED	1.35E-06	2.88E-04
Cobalt	7440-48-4	mg/kg	5.1			17,200	N	23.4	N	NMED	2.97E-09	2.18E-01
Copper	7440-50-8	mg/kg	67	J		NS	NS	3,130	N	NMED		2.14E-02
Iron	7439-89-6	mg/kg	11,000			NS	NS	54,800	N	NMED		2.01E-01
Lead	7439-92-1	mg/kg	13			NS	NS	200	N	IEUBK		
Magnesium	7439-95-4	mg/kg	8,100			NS	NS	15,600,000	N	NMED		5.19E-04
Manganese	7439-96-5	mg/kg	300			NS	NS	10,500	N	NMED		2.86E-02
Mercury (Elemental)	7439-97-6	mg/kg	0.035	J		NS	NS	23.8	N	NMED		1.47E-03
Nickel	7440-02-0	mg/kg	9.4			595,000	N	1,560	N	NMED	1.58E-10	6.03E-03
Potassium	7440-09-7	mg/kg	940			NS	NS	15,600,000	N	NMED		6.03E-05
Selenium	7782-49-2	mg/kg	1.1			NS	NS	391	N	NMED		2.81E-03
Silver	7440-22-4	mg/kg	0.096	J		NS	NS	391	N	NMED		2.46E-04
Sodium	7440-23-5	mg/kg	64			NS	NS	7,820,000	N	NMED		8.18E-06
Thallium	7440-28-0	mg/kg	0.062	J		NS	NS	0.782	N	NMED		7.93E-02
Vanadium	7440-62-2	mg/kg	18			NS	NS	394	N	NMED		4.57E-02
Zinc	7440-66-6	mg/kg	36			NS	NS	23,500	N	NMED		1.53E-03
									Cumulative Risk/Hazard		**3E-06**	**0.97**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

2) Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-AF32-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID AF32
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		5,300	N	7,400	N	RSL		

TABLE D1-AF32-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID AF32
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	19,000			NS	NS	1,290,000	N	NMED		1.47E-02
Antimony	7440-36-0	mg/kg	0.12	J		NS	NS	519	N	NMED		2.31E-04
Arsenic	7440-38-2	mg/kg	1.2			36	N	208	N	NMED	3.34E-07	5.77E-03
Barium	7440-39-3	mg/kg	150			NS	NS	255,000	N	NMED		5.88E-04
Beryllium	7440-41-7	mg/kg	0.6	J		313,000	N	2,580	N	NMED	1.92E-11	2.33E-04
Cadmium	7440-43-9	mg/kg	0.66			417,000	N	1,110	N	NMED	1.58E-11	5.95E-04
Calcium	7440-70-2	mg/kg	3,300			NS	NS	32,400,000	N	NMED		1.02E-04
Chromium (Total) (2)	7440-47-3	mg/kg	13			505	N	314,000	N	NMED	2.57E-07	4.14E-05
Cobalt	7440-48-4	mg/kg	5.1			83,400	N	388	N	NMED	6.12E-10	1.31E-02
Copper	7440-50-8	mg/kg	67	J		NS	NS	51,900	N	NMED		1.29E-03
Iron	7439-89-6	mg/kg	11,000			NS	NS	908,000	N	NMED		1.21E-02
Lead	7439-92-1	mg/kg	13			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	8,100			NS	NS	5,680,000	N	NMED		1.43E-03
Manganese	7439-96-5	mg/kg	300			NS	NS	160,000	N	NMED		1.88E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.035	J		NS	NS	112	N	NMED		3.13E-04
Nickel	7440-02-0	mg/kg	9.4			2,890,000	N	25,700	N	NMED	3.25E-11	3.66E-04
Potassium	7440-09-7	mg/kg	940			NS	NS	76,200,000	N	NMED		1.23E-05
Selenium	7782-49-2	mg/kg	1.1			NS	NS	6,490	N	NMED		1.69E-04
Silver	7440-22-4	mg/kg	0.096	J		NS	NS	6,490	N	NMED		1.48E-05
Sodium	7440-23-5	mg/kg	64			NS	NS	37,300,000	N	NMED		1.72E-06
Thallium	7440-28-0	mg/kg	0.062	J		NS	NS	13	N	NMED		4.77E-03
Vanadium	7440-62-2	mg/kg	18			NS	NS	6,530	N	NMED		2.76E-03
Zinc	7440-66-6	mg/kg	36			NS	NS	38,900	N	NMED		9.25E-04
									Cumulative Risk/Hazard		**6E-07**	**0.06**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-AF32-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID AF32
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		626	N	2,420	N	NMEDC			

TABLE D1-AF32-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID AF32
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	19,000			NS	NS	41,400	N	NMED		4.59E-01	Nervous
Antimony	7440-36-0	mg/kg	0.12	J		NS	NS	142	N	NMED		8.45E-04	
Arsenic	7440-38-2	mg/kg	1.2			216	N	41	N	NMED	5.56E-08	2.91E-02	
Barium	7440-39-3	mg/kg	150			NS	NS	4,390	N	NMED		3.42E-02	
Beryllium	7440-41-7	mg/kg	0.6	J		2,710	N	148	N	NMED	2.21E-09	4.05E-03	
Cadmium	7440-43-9	mg/kg	0.66			3,610	N	72	N	NMED	1.83E-09	9.15E-03	
Calcium	7440-70-2	mg/kg	3,300			NS	NS	8,850,000	N	NMED		3.73E-04	
Chromium (Total) (3)	7440-47-3	mg/kg	13			468	N	134	N	NMED	2.78E-07	9.70E-02	
Cobalt	7440-48-4	mg/kg	5.1			722	N	37	N	NMED	7.06E-08	1.39E-01	Endocrine
Copper	7440-50-8	mg/kg	67	J		NS	NS	14,200	N	NMED		4.72E-03	
Iron	7439-89-6	mg/kg	11,000			NS	NS	248,000	N	NMED		4.44E-02	
Lead	7439-92-1	mg/kg	13			NS	NS	800	N	IEUBK			
Magnesium	7439-95-4	mg/kg	8,100			NS	NS	1,550,000	N	NMED		5.23E-03	
Manganese	7439-96-5	mg/kg	300			NS	NS	464	N	NMED		6.47E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.035	J		NS	NS	21	N	NMED		1.69E-03	
Nickel	7440-02-0	mg/kg	9.4			20,500	N	753	N	NMED	4.59E-09	1.25E-02	
Potassium	7440-09-7	mg/kg	940			NS	NS	20,800,000	N	NMED		4.52E-05	
Selenium	7782-49-2	mg/kg	1.1			NS	NS	1,750	N	NMED		6.29E-04	
Silver	7440-22-4	mg/kg	0.096	J		NS	NS	1,770	N	NMED		5.42E-05	
Sodium	7440-23-5	mg/kg	64			NS	NS	10,200,000	N	NMED		6.27E-06	
Thallium	7440-28-0	mg/kg	0.062	J		NS	NS	4	N	NMED		1.75E-02	
Vanadium	7440-62-2	mg/kg	18			NS	NS	614	N	NMED		2.93E-02	
Zinc	7440-66-6	mg/kg	36			NS	NS	106,000	N	NMED		3.40E-04	
									Cumulative Risk/Hazard		**4E-07**	**1.5**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent	NA = not applicable
CAS = Chemical Abstracts Service	NS = No Standard
HI = Hazard Index	RAG = Risk Assessment Guidance
IEUBK = Integrated Exposure Uptake Biokinetic Model	SSL = soil screening level
J = Estimated	U = Nondetect
mg/kg = milligrams per kilogram	UTL = upper tolerance limit
N = no	Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	1.1
Endocrine	0.14
All Others	0.29

TABLE D1-AF34-1
GRID AF34 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	2,200	N	RSL			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	6.3	N	RSL			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		211	N	36	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		3.56	N	18.5	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	7.7	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		31.6	N	70.4	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	6.16	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	7.64	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		333	N	247	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		83.1	N	301	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	156	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U		60.4	N	131	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U		313	N	6.16	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	3,850	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		1,300	N	570	N	RSL			

TABLE D1-AF34-1
GRID AF34 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	22,000			NS	NS	78,000	N	NMED		2.82E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	31.3	N	NMED			
Arsenic	7440-38-2	mg/kg	1.4			7.07	N	13	N	NMED	1.98E-06	1.08E-01	Heart
Barium	7440-39-3	mg/kg	160			NS	NS	15,600	N	NMED		1.03E-02	
Beryllium	7440-41-7	mg/kg	0.66	J		64,400	N	156	N	NMED	1.02E-10	4.23E-03	
Cadmium	7440-43-9	mg/kg	0.28			85,900	N	70.5	N	NMED	3.26E-11	3.97E-03	
Calcium	7440-70-2	mg/kg	2,900			NS	NS	13,000,000	N	NMED		2.23E-04	
Chromium (Total) (2)	7440-47-3	mg/kg	14			96.6	N	45,200	N	NMED	1.45E-06	3.10E-04	
Cobalt	7440-48-4	mg/kg	5.5			17,200	N	23.4	N	NMED	3.20E-09	2.35E-01	Endocrine
Copper	7440-50-8	mg/kg	52	J		NS	NS	3,130	N	NMED		1.66E-02	
Iron	7439-89-6	mg/kg	12,000			NS	NS	54,800	N	NMED		2.19E-01	GI
Lead	7439-92-1	mg/kg	11			NS	NS	200	N	IEUBK			
Magnesium	7439-95-4	mg/kg	8,700			NS	NS	15,600,000	N	NMED		5.58E-04	
Manganese	7439-96-5	mg/kg	250			NS	NS	10,500	N	NMED		2.38E-02	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.022	J		NS	NS	23.8	N	NMED		9.24E-04	
Nickel	7440-02-0	mg/kg	10			595,000	N	1,560	N	NMED	1.68E-10	6.41E-03	
Potassium	7440-09-7	mg/kg	1,100			NS	NS	15,600,000	N	NMED		7.05E-05	
Selenium	7782-49-2	mg/kg	1.1			NS	NS	391	N	NMED		2.81E-03	
Silver	7440-22-4	mg/kg	0.082	J		NS	NS	391	N	NMED		2.10E-04	
Sodium	7440-23-5	mg/kg	65			NS	NS	7,820,000	N	NMED		8.31E-06	
Thallium	7440-28-0	mg/kg	0.052	J		NS	NS	0.782	N	NMED		6.65E-02	
Vanadium	7440-62-2	mg/kg	19			NS	NS	394	N	NMED		4.82E-02	
Zinc	7440-66-6	mg/kg	31			NS	NS	23,500	N	NMED		1.32E-03	
									Cumulative Risk/Hazard		**3E-06**	**1.0**	
									Exceeds Target Level		**N**	**N**	

Notes:

[1] NMED = New Mexico Environment Department Residential Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	0.31
Endocrine	0.24
GI	0.22
Heart	0.11
All Others	0.16

TABLE D1-AF34-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID AF34
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		5,300	N	7,400	N	RSL		

TABLE D1-AF34-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID AF34
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	22,000			NS	NS	1,290,000	N	NMED		1.71E-02
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	519	N	NMED		
Arsenic	7440-38-2	mg/kg	1.4			36	N	208	N	NMED	3.90E-07	6.73E-03
Barium	7440-39-3	mg/kg	160			NS	NS	255,000	N	NMED		6.27E-04
Beryllium	7440-41-7	mg/kg	0.66	J		313,000	N	2,580	N	NMED	2.11E-11	2.56E-04
Cadmium	7440-43-9	mg/kg	0.28			417,000	N	1,110	N	NMED	6.71E-12	2.52E-04
Calcium	7440-70-2	mg/kg	2,900			NS	NS	32,400,000	N	NMED		8.95E-05
Chromium (Total) (2)	7440-47-3	mg/kg	14			505	N	314,000	N	NMED	2.77E-07	4.46E-05
Cobalt	7440-48-4	mg/kg	5.5			83,400	N	388	N	NMED	6.59E-10	1.42E-02
Copper	7440-50-8	mg/kg	52	J		NS	NS	51,900	N	NMED		1.00E-03
Iron	7439-89-6	mg/kg	12,000			NS	NS	908,000	N	NMED		1.32E-02
Lead	7439-92-1	mg/kg	11			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	8,700			NS	NS	5,680,000	N	NMED		1.53E-03
Manganese	7439-96-5	mg/kg	250			NS	NS	160,000	N	NMED		1.56E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.022	J		NS	NS	112	N	NMED		1.96E-04
Nickel	7440-02-0	mg/kg	10			2,890,000	N	25,700	N	NMED	3.46E-11	3.89E-04
Potassium	7440-09-7	mg/kg	1,100			NS	NS	76,200,000	N	NMED		1.44E-05
Selenium	7782-49-2	mg/kg	1.1			NS	NS	6,490	N	NMED		1.69E-04
Silver	7440-22-4	mg/kg	0.082	J		NS	NS	6,490	N	NMED		1.26E-05
Sodium	7440-23-5	mg/kg	65			NS	NS	37,300,000	N	NMED		1.74E-06
Thallium	7440-28-0	mg/kg	0.052	J		NS	NS	13	N	NMED		4.00E-03
Vanadium	7440-62-2	mg/kg	19			NS	NS	6,530	N	NMED		2.91E-03
Zinc	7440-66-6	mg/kg	31			NS	NS	38,900	N	NMED		7.969E-04
									Cumulative Risk/Hazard		**7E-07**	**0.07**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Industrial Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLD D1-AF34-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID AF34
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[2,3]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		626	N	2,420	N	NMEDC			

TABLD D1-AF34-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID AF34
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[2,3]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	22,000			NS	NS	41,400	N	NMED		5.31E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	142	N	NMED			
Arsenic	7440-38-2	mg/kg	1.4			216	N	41	N	NMED	6.48E-08	3.40E-02	
Barium	7440-39-3	mg/kg	160			NS	NS	4,390	N	NMED		3.64E-02	
Beryllium	7440-41-7	mg/kg	0.66	J		2,710	N	148	N	NMED	2.44E-09	4.46E-03	
Cadmium	7440-43-9	mg/kg	0.28			3,610	N	72	N	NMED	7.76E-10	3.88E-03	
Calcium	7440-70-2	mg/kg	2,900			NS	NS	8,850,000	N	NMED		3.28E-04	
Chromium (Total) (3)	7440-47-3	mg/kg	14			468	N	134	N	NMED	2.99E-07	1.04E-01	GI, Blood
Cobalt	7440-48-4	mg/kg	5.5			722	N	37	N	NMED	7.62E-08	1.50E-01	Endocrine
Copper	7440-50-8	mg/kg	52	J		NS	NS	14,200	N	NMED		3.66E-03	
Iron	7439-89-6	mg/kg	12,000			NS	NS	248,000	N	NMED		4.84E-02	
Lead	7439-92-1	mg/kg	11			NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	8,700			NS	NS	1,550,000	N	NMED		5.61E-03	
Manganese	7439-96-5	mg/kg	250			NS	NS	464	N	NMED		5.39E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.022	J		NS	NS	21	N	NMED		1.06E-03	
Nickel	7440-02-0	mg/kg	10			20,500	N	753	N	NMED	4.88E-09	1.33E-02	
Potassium	7440-09-7	mg/kg	1,100			NS	NS	20,800,000	N	NMED		5.29E-05	
Selenium	7782-49-2	mg/kg	1.1			NS	NS	1,750	N	NMED		6.29E-04	
Silver	7440-22-4	mg/kg	0.082	J		NS	NS	1,770	N	NMED		4.63E-05	
Sodium	7440-23-5	mg/kg	65			NS	NS	10,200,000	N	NMED		6.37E-06	
Thallium	7440-28-0	mg/kg	0.052	J		NS	NS	4	N	NMED		1.47E-02	
Vanadium	7440-62-2	mg/kg	19			NS	NS	614	N	NMED		3.09E-02	
Zinc	7440-66-6	mg/kg	31			NS	NS	106,000	N	NMED		2.92E-04	
									Cumulative Risk/Hazard		**4E-07**	**1.5**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

3) Chromium screening value is for Total Chromium.

% = percent	NA = not applicable
CAS = Chemical Abstracts Service	NS = No Standard
HI = Hazard Index	RAG = Risk Assessment Guidance
IEUBK = Integrated Exposure Uptake Biokinetic Model	SSL = soil screening level
J = Estimated	U = Nondetect
mg/kg = milligrams per kilogram	UTL = upper tolerance limit
N = no	Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	1.1
Endocrine	0.15
GI	0.10
Blood	0.10
All Others	0.20

TABLE D1-AH28-1
GRID AH28 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		1,300	N	570	N	RSL		

TABLE D1-AH28-1
GRID AH28 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	12,000			NS	NS	78,000	N	NMED		1.54E-01
Antimony	7440-36-0	mg/kg	0.29			NS	NS	31.3	N	NMED		9.27E-03
Arsenic	7440-38-2	mg/kg	1.2			7.07	N	13	N	NMED	1.70E-06	9.23E-02
Barium	7440-39-3	mg/kg	130			NS	NS	15,600	N	NMED		8.33E-03
Beryllium	7440-41-7	mg/kg	0.36	J		64,400	N	156	N	NMED	5.59E-11	2.31E-03
Cadmium	7440-43-9	mg/kg	0.74	J		85,900	N	70.5	N	NMED	8.61E-11	1.05E-02
Calcium	7440-70-2	mg/kg	3,600			NS	NS	13,000,000	N	NMED		2.77E-04
Chromium (Total) (2)	7440-47-3	mg/kg	12			96.6	N	45,200	N	NMED	1.24E-06	2.65E-04
Cobalt	7440-48-4	mg/kg	4			17,200	N	23.4	N	NMED	2.33E-09	1.71E-01
Copper	7440-50-8	mg/kg	110	J		NS	NS	3,130	N	NMED		3.51E-02
Iron	7439-89-6	mg/kg	8,000			NS	NS	54,800	N	NMED		1.46E-01
Lead	7439-92-1	mg/kg	16			NS	NS	200	N	IEUBK		
Magnesium	7439-95-4	mg/kg	5,300			NS	NS	15,600,000	N	NMED		3.40E-04
Manganese	7439-96-5	mg/kg	220			NS	NS	10,500	N	NMED		2.10E-02
Mercury (Elemental)	7439-97-6	mg/kg	0.023	J		NS	NS	23.8	N	NMED		9.66E-04
Nickel	7440-02-0	mg/kg	8.3			595,000	N	1,560	N	NMED	1.39E-10	5.32E-03
Potassium	7440-09-7	mg/kg	830			NS	NS	15,600,000	N	NMED		5.32E-05
Selenium	7782-49-2	mg/kg	0.65			NS	NS	391	N	NMED		1.66E-03
Silver	7440-22-4	mg/kg	0.13			NS	NS	391	N	NMED		3.32E-04
Sodium	7440-23-5	mg/kg	69			NS	NS	7,820,000	N	NMED		8.82E-06
Thallium	7440-28-0	mg/kg	0.043	J		NS	NS	0.782	N	NMED		5.50E-02
Vanadium	7440-62-2	mg/kg	16			NS	NS	394	N	NMED		4.06E-02
Zinc	7440-66-6	mg/kg	40			NS	NS	23,500	N	NMED		1.70E-03
									Cumulative Risk/Hazard		**3E-06**	**0.76**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Residential Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Residential Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-AH28-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID AH28
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		5,300	N	7,400	N	RSL		

TABLE D1-AH28-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID AH28
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	12,000			NS	NS	1,290,000	N	NMED		9.30E-03
Antimony	7440-36-0	mg/kg	0.29			NS	NS	519	N	NMED		5.59E-04
Arsenic	7440-38-2	mg/kg	1.2			36	N	208	N	NMED	3.34E-07	5.77E-03
Barium	7440-39-3	mg/kg	130			NS	NS	255,000	N	NMED		5.10E-04
Beryllium	7440-41-7	mg/kg	0.36	J		313,000	N	2,580	N	NMED	1.15E-11	1.40E-04
Cadmium	7440-43-9	mg/kg	0.74	J		417,000	N	1,110	N	NMED	1.77E-11	6.67E-04
Calcium	7440-70-2	mg/kg	3,600			NS	NS	32,400,000	N	NMED		1.11E-04
Chromium (Total) (2)	7440-47-3	mg/kg	12			505	N	314,000	N	NMED	2.38E-07	3.82E-05
Cobalt	7440-48-4	mg/kg	4			83,400	N	388	N	NMED	4.80E-10	1.03E-02
Copper	7440-50-8	mg/kg	110	J		NS	NS	51,900	N	NMED		2.12E-03
Iron	7439-89-6	mg/kg	8,000			NS	NS	908,000	N	NMED		8.81E-03
Lead	7439-92-1	mg/kg	16			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	5,300			NS	NS	5,680,000	N	NMED		9.33E-04
Manganese	7439-96-5	mg/kg	220			NS	NS	160,000	N	NMED		1.38E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.023	J		NS	NS	112	N	NMED		2.05E-04
Nickel	7440-02-0	mg/kg	8.3			2,890,000	N	25,700	N	NMED	2.87E-11	3.23E-04
Potassium	7440-09-7	mg/kg	830			NS	NS	76,200,000	N	NMED		1.09E-05
Selenium	7782-49-2	mg/kg	0.65			NS	NS	6,490	N	NMED		1.00E-04
Silver	7440-22-4	mg/kg	0.13			NS	NS	6,490	N	NMED		2.00E-05
Sodium	7440-23-5	mg/kg	69			NS	NS	37,300,000	N	NMED		1.85E-06
Thallium	7440-28-0	mg/kg	0.043	J		NS	NS	13	N	NMED		3.31E-03
Vanadium	7440-62-2	mg/kg	16			NS	NS	6,530	N	NMED		2.45E-03
Zinc	7440-66-6	mg/kg	40			NS	NS	38,900	N	NMED		1.03E-03
									Cumulative Risk/Hazard		**6E-07**	**0.05**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Industrial Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-AH28-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID AH28
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		626	N	2,420	N	NMEDC			

TABLE D1-AH28-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID AH28
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	12,000			NS	NS	41,400	N	NMED		2.90E-01	Nervous
Antimony	7440-36-0	mg/kg	0.29			NS	NS	142	N	NMED		2.04E-03	
Arsenic	7440-38-2	mg/kg	1.2			216	N	41	N	NMED	5.56E-08	2.91E-02	
Barium	7440-39-3	mg/kg	130			NS	NS	4,390	N	NMED		2.96E-02	
Beryllium	7440-41-7	mg/kg	0.36	J		2,710	N	148	N	NMED	1.33E-09	2.43E-03	
Cadmium	7440-43-9	mg/kg	0.74	J		3,610	N	72	N	NMED	2.05E-09	1.03E-02	
Calcium	7440-70-2	mg/kg	3,600			NS	NS	8,850,000	N	NMED		4.07E-04	
Chromium (Total) (3)	7440-47-3	mg/kg	12			468	N	134	N	NMED	2.56E-07	8.96E-02	
Cobalt	7440-48-4	mg/kg	4			722	N	37	N	NMED	5.54E-08	1.09E-01	Endocrine
Copper	7440-50-8	mg/kg	110	J		NS	NS	14,200	N	NMED		7.75E-03	
Iron	7439-89-6	mg/kg	8,000			NS	NS	248,000	N	NMED		3.23E-02	
Lead	7439-92-1	mg/kg	16			NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	5,300			NS	NS	1,550,000	N	NMED		3.42E-03	
Manganese	7439-96-5	mg/kg	220			NS	NS	464	N	NMED		4.74E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.023	J		NS	NS	21	N	NMED		1.11E-03	
Nickel	7440-02-0	mg/kg	8.3			20,500	N	753	N	NMED	4.05E-09	1.10E-02	
Potassium	7440-09-7	mg/kg	830			NS	NS	20,800,000	N	NMED		3.99E-05	
Selenium	7782-49-2	mg/kg	0.65			NS	NS	1,750	N	NMED		3.71E-04	
Silver	7440-22-4	mg/kg	0.13			NS	NS	1,770	N	NMED		7.34E-05	
Sodium	7440-23-5	mg/kg	69			NS	NS	10,200,000	N	NMED		6.76E-06	
Thallium	7440-28-0	mg/kg	0.043	J		NS	NS	4	N	NMED		1.21E-02	
Vanadium	7440-62-2	mg/kg	16			NS	NS	614	N	NMED		2.61E-02	
Zinc	7440-66-6	mg/kg	40			NS	NS	106,000	N	NMED		3.77E-04	
									Cumulative Risk/Hazard		**4E-07**	**1.1**	
									Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	0.76
Endocrine	0.11
All others	0.26

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
mg/kg = milligrams per kilogram
N = no

NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-AH39-1
GRID AH39 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
INNER FENCE
FORT WINGATE DEPOT ACTIVITY

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.15	UJ		NS	NS	2,200	N	RSL			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.15	UJ		NS	NS	6.3	N	RSL			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.15	UJ		211	N	36	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.15	UJ		17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.15	UJ		3.56	N	18.5	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.15	UJ		NS	NS	7.7	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.15	UJ		31.6	N	70.4	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.15	UJ		NS	NS	6.16	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.15	UJ		NS	NS	7.64	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.15	UJ		333	N	247	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.15	UJ		83.1	N	301	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.15	UJ		NS	NS	156	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.15	UJ		60.4	N	131	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.3	UJ		313	N	6.16	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.15	UJ		NS	NS	3,850	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.5	UJ		1,300	N	570	N	RSL			

TABLE D1-AH39-1
GRID AH39 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
INNER FENCE
FORT WINGATE DEPOT ACTIVITY

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	21,000			NS	NS	78,000	N	NMED		2.69E-01	Nervous
Antimony	7440-36-0	mg/kg	0.22			NS	NS	31.3	N	NMED		7.03E-03	
Arsenic	7440-38-2	mg/kg	0.82			7.07	N	13	N	NMED	1.16E-06	6.31E-02	
Barium	7440-39-3	mg/kg	460			NS	NS	15,600	N	NMED		2.95E-02	
Beryllium	7440-41-7	mg/kg	1.4			64,400	N	156	N	NMED	2.17E-10	8.97E-03	
Cadmium	7440-43-9	mg/kg	0.2			85,900	N	70.5	N	NMED	2.33E-11	2.84E-03	
Calcium	7440-70-2	mg/kg	13,000			NS	NS	13,000,000	N	NMED		1.00E-03	
Chromium (Total) (2)	7440-47-3	mg/kg	11			96.6	N	45,200	N	NMED	1.14E-06	2.43E-04	
Cobalt	7440-48-4	mg/kg	5.6			17,200	N	23.4	N	NMED	3.26E-09	2.39E-01	Endocrine
Copper	7440-50-8	mg/kg	26			NS	NS	3,130	N	NMED		8.31E-03	
Iron	7439-89-6	mg/kg	11,000			NS	NS	54,800	N	NMED		2.01E-01	GI
Lead	7439-92-1	mg/kg	10			NS	NS	200	N	IEUBK			
Magnesium	7439-95-4	mg/kg	6,800			NS	NS	15,600,000	N	NMED		4.36E-04	
Manganese	7439-96-5	mg/kg	360			NS	NS	10,500	N	NMED		3.43E-02	
Mercury (Elemental)	7439-97-6	mg/kg	0.042	U		NS	NS	23.8	N	NMED			
Nickel	7440-02-0	mg/kg	13			595,000	N	1,560	N	NMED	2.18E-10	8.33E-03	
Potassium	7440-09-7	mg/kg	2,200			NS	NS	15,600,000	N	NMED		1.41E-04	
Selenium	7782-49-2	mg/kg	1.5			NS	NS	391	N	NMED		3.84E-03	
Silver	7440-22-4	mg/kg	0.049	J		NS	NS	391	N	NMED		1.25E-04	
Sodium	7440-23-5	mg/kg	34			NS	NS	7,820,000	N	NMED		4.35E-06	
Thallium	7440-28-0	mg/kg	0.092	J		NS	NS	0.782	N	NMED		1.18E-01	Hair/Coat/Eyes
Vanadium	7440-62-2	mg/kg	11			NS	NS	394	N	NMED		2.79E-02	
Zinc	7440-66-6	mg/kg	27			NS	NS	23,500	N	NMED		1.15E-03	
									Cumulative Risk/Hazard		**2E-06**	**1.0**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Residential Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Residential Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent

CAS = Chemical Abstracts Service

HI = Hazard Index

IEUBK = Integrated Exposure Uptake Biokinetic Model

J = Estimated

mg/kg = milligrams per kilogram

N = no

NA = not applicable

NS = No Standard

RAG = Risk Assessment Guidance

SSL = soil screening level

U = Nondetect

UJ = Estimated Nondetect

UTL = upper tolerance limit

Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	0.27
Endocrine	0.24
GI	0.20
Hair/Coat	0.12
Eyes	0.12
All Others	0.20

TABLE D1-AH39-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID AH39
INNER FENCE
FORT WINGATE DEPOT ACTIVITY

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.15	UJ		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.15	UJ		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.15	UJ		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.15	UJ		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.15	UJ		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.15	UJ		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.15	UJ		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.15	UJ		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.15	UJ		NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.15	UJ		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.15	UJ		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.15	UJ		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.15	UJ		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.3	UJ		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.15	UJ		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.5	UJ		5,300	N	7,400	N	RSL		

TABLE D1-AH39-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID AH39
INNER FENCE
FORT WINGATE DEPOT ACTIVITY

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	21,000			NS	NS	1,290,000	N	NMED		1.63E-02
Antimony	7440-36-0	mg/kg	0.22			NS	NS	519	N	NMED		4.24E-04
Arsenic	7440-38-2	mg/kg	0.82			36	N	208	N	NMED	2.28E-07	3.94E-03
Barium	7440-39-3	mg/kg	460			NS	NS	255,000	N	NMED		1.80E-03
Beryllium	7440-41-7	mg/kg	1.4			313,000	N	2,580	N	NMED	4.47E-11	5.43E-04
Cadmium	7440-43-9	mg/kg	0.2			417,000	N	1,110	N	NMED	4.80E-12	1.80E-04
Calcium	7440-70-2	mg/kg	13,000			NS	NS	32,400,000	N	NMED		4.01E-04
Chromium (Total) (2)	7440-47-3	mg/kg	11			505	N	314,000	N	NMED	2.18E-07	3.50E-05
Cobalt	7440-48-4	mg/kg	5.6			83,400	N	388	N	NMED	6.71E-10	1.44E-02
Copper	7440-50-8	mg/kg	26	J		NS	NS	51,900	N	NMED		5.01E-04
Iron	7439-89-6	mg/kg	11,000			NS	NS	908,000	N	NMED		1.21E-02
Lead	7439-92-1	mg/kg	10			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	6,800			NS	NS	5,680,000	N	NMED		1.20E-03
Manganese	7439-96-5	mg/kg	360			NS	NS	160,000	N	NMED		2.25E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.042	U		NS	NS	112	N	NMED		
Nickel	7440-02-0	mg/kg	13			2,890,000	N	25,700	N	NMED	4.50E-11	5.06E-04
Potassium	7440-09-7	mg/kg	2,200			NS	NS	76,200,000	N	NMED		2.89E-05
Selenium	7782-49-2	mg/kg	1.5			NS	NS	6,490	N	NMED		2.31E-04
Silver	7440-22-4	mg/kg	0.049	J		NS	NS	6,490	N	NMED		7.55E-06
Sodium	7440-23-5	mg/kg	34			NS	NS	37,300,000	N	NMED		9.12E-07
Thallium	7440-28-0	mg/kg	0.092	J		NS	NS	13	N	NMED		7.08E-03
Vanadium	7440-62-2	mg/kg	11			NS	NS	6,530	N	NMED		1.68E-03
Zinc	7440-66-6	mg/kg	27			NS	NS	38,900	N	NMED		6.94E-04
									Cumulative Risk/Hazard		**4E-07**	**0.06**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Industrial Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-AH39-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID AH39
INNER FENCE
FORT WINGATE DEPOT ACTIVITY

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.15	UJ		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.15	UJ		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.15	UJ		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.15	UJ		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.15	UJ		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.15	UJ		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.15	UJ		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.15	UJ		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.15	UJ		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.15	UJ		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.15	UJ		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.15	UJ		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.15	UJ		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.3	UJ		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.15	UJ		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.5	UJ		626	N	2,420	N	NMEDC			

TABLE D1-AH39-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID AH39
INNER FENCE
FORT WINGATE DEPOT ACTIVITY

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	21,000			NS	NS	41,400	N	NMED		5.07E-01	Nervous
Antimony	7440-36-0	mg/kg	0.22			NS	NS	142	N	NMED		1.55E-03	
Arsenic	7440-38-2	mg/kg	0.82			216	N	41	N	NMED	3.80E-08	1.99E-02	
Barium	7440-39-3	mg/kg	460			NS	NS	4,390	N	NMED		1.05E-01	Kidneys
Beryllium	7440-41-7	mg/kg	1.4			2,710	N	148	N	NMED	5.17E-09	9.46E-03	
Cadmium	7440-43-9	mg/kg	0.2			3,610	N	72	N	NMED	5.54E-10	2.77E-03	
Calcium	7440-70-2	mg/kg	13,000			NS	NS	8,850,000	N	NMED		1.47E-03	
Chromium (Total) (3)	7440-47-3	mg/kg	11			468	N	134	N	NMED	2.35E-07	8.21E-02	
Cobalt	7440-48-4	mg/kg	5.6			722	N	37	N	NMED	7.76E-08	1.53E-01	Endocrine
Copper	7440-50-8	mg/kg	26	J		NS	NS	14,200	N	NMED		1.83E-03	
Iron	7439-89-6	mg/kg	11,000			NS	NS	248,000	N	NMED		4.44E-02	
Lead	7439-92-1	mg/kg	10			NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	6,800			NS	NS	1,550,000	N	NMED		4.39E-03	
Manganese	7439-96-5	mg/kg	360			NS	NS	464	N	NMED		7.76E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.042	U		NS	NS	21	N	NMED			
Nickel	7440-02-0	mg/kg	13			20,500	N	753	N	NMED	6.34E-09	1.73E-02	
Potassium	7440-09-7	mg/kg	2,200			NS	NS	20,800,000	N	NMED		1.06E-04	
Selenium	7782-49-2	mg/kg	1.5			NS	NS	1,750	N	NMED		8.57E-04	
Silver	7440-22-4	mg/kg	0.049	J		NS	NS	1,770	N	NMED		2.77E-05	
Sodium	7440-23-5	mg/kg	34			NS	NS	10,200,000	N	NMED		3.33E-06	
Thallium	7440-28-0	mg/kg	0.092	J		NS	NS	4	N	NMED		2.60E-02	
Vanadium	7440-62-2	mg/kg	11			NS	NS	614	N	NMED		1.79E-02	
Zinc	7440-66-6	mg/kg	27			NS	NS	106,000	N	NMED		2.55E-04	
									Cumulative Risk/Hazard		**4E-07**	**1.8**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent	NS = No Standard
CAS = Chemical Abstracts Service	RAG = Risk Assessment Guidance
HI = Hazard Index	SSL = soil screening level
J = Estimated	U = Nondetect
mg/kg = milligrams per kilogram	UJ = Estimated Nondetect
N = no	UTL = upper tolerance limit
NA = not applicable	Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	1.3
Endocrine	0.15
Kidneys	0.10
All Others	0.23

TABLE D1-AI26-1
GRID AI26 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		1,300	N	570	N	RSL		

TABLE D1-AI26-1
GRID AI26 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	17,000			NS	NS	78,000	N	NMED		2.18E-01
Antimony	7440-36-0	mg/kg	0.25			NS	NS	31.3	N	NMED		7.99E-03
Arsenic	7440-38-2	mg/kg	1.3			7.07	N	13	N	NMED	1.84E-06	1.00E-01
Barium	7440-39-3	mg/kg	140			NS	NS	15,600	N	NMED		8.97E-03
Beryllium	7440-41-7	mg/kg	0.36	J		64,400	N	156	N	NMED	5.59E-11	2.31E-03
Cadmium	7440-43-9	mg/kg	1.1	J		85,900	N	70.5	N	NMED	1.28E-10	1.56E-02
Calcium	7440-70-2	mg/kg	3,000			NS	NS	13,000,000	N	NMED		2.31E-04
Chromium (Total) (2)	7440-47-3	mg/kg	14			96.6	N	45,200	N	NMED	1.45E-06	3.10E-04
Cobalt	7440-48-4	mg/kg	5.1			17,200	N	23.4	N	NMED	2.97E-09	2.18E-01
Copper	7440-50-8	mg/kg	100			NS	NS	3,130	N	NMED		3.19E-02
Iron	7439-89-6	mg/kg	11,000			NS	NS	54,800	N	NMED		2.01E-01
Lead	7439-92-1	mg/kg	17			NS	NS	200	N	IEUBK		
Magnesium	7439-95-4	mg/kg	7,400			NS	NS	15,600,000	N	NMED		4.74E-04
Manganese	7439-96-5	mg/kg	270			NS	NS	10,500	N	NMED		2.57E-02
Mercury (Elemental)	7439-97-6	mg/kg	0.035	J		NS	NS	23.8	N	NMED		1.47E-03
Nickel	7440-02-0	mg/kg	10			595,000	N	1,560	N	NMED	1.68E-10	6.41E-03
Potassium	7440-09-7	mg/kg	1,100			NS	NS	15,600,000	N	NMED		7.05E-05
Selenium	7782-49-2	mg/kg	0.87			NS	NS	391	N	NMED		2.23E-03
Silver	7440-22-4	mg/kg	0.12			NS	NS	391	N	NMED		3.07E-04
Sodium	7440-23-5	mg/kg	71			NS	NS	7,820,000	N	NMED		9.08E-06
Thallium	7440-28-0	mg/kg	0.071	J		NS	NS	0.782	N	NMED		9.08E-02
Vanadium	7440-62-2	mg/kg	20			NS	NS	394	N	NMED		5.08E-02
Zinc	7440-66-6	mg/kg	43			NS	NS	23,500	N	NMED		1.83E-03
									Cumulative Risk/Hazard		**3E-06**	**0.98**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Residential Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Residential Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-AI26-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID AI26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[2]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		5,300	N	7,400	N	RSL		

TABLE D1-AI26-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID AI26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[2]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	17,000			NS	NS	1,290,000	N	NMED		1.32E-02
Antimony	7440-36-0	mg/kg	0.25			NS	NS	519	N	NMED		4.82E-04
Arsenic	7440-38-2	mg/kg	1.3			36	N	208	N	NMED	3.62E-07	6.25E-03
Barium	7440-39-3	mg/kg	140			NS	NS	255,000	N	NMED		5.49E-04
Beryllium	7440-41-7	mg/kg	0.36	J		313,000	N	2,580	N	NMED	1.15E-11	1.40E-04
Cadmium	7440-43-9	mg/kg	1.1	J		417,000	N	1,110	N	NMED	2.64E-11	9.91E-04
Calcium	7440-70-2	mg/kg	3,000			NS	NS	32,400,000	N	NMED		
Chromium (Total) (3)	7440-47-3	mg/kg	14			505	N	314,000	N	NMED	2.77E-07	4.46E-05
Cobalt	7440-48-4	mg/kg	5.1			83,400	N	388	N	NMED	6.12E-10	1.31E-02
Copper	7440-50-8	mg/kg	100			NS	NS	51,900	N	NMED		1.93E-03
Iron	7439-89-6	mg/kg	11,000			NS	NS	908,000	N	NMED		1.21E-02
Lead	7439-92-1	mg/kg	17			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	7,400			NS	NS	5,680,000	N	NMED		
Manganese	7439-96-5	mg/kg	270			NS	NS	160,000	N	NMED		1.69E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.035	J		NS	NS	112	N	NMED		3.13E-04
Nickel	7440-02-0	mg/kg	10			2,890,000	N	25,700	N	NMED	3.46E-11	3.89E-04
Potassium	7440-09-7	mg/kg	1,100			NS	NS	76,200,000	N	NMED		
Selenium	7782-49-2	mg/kg	0.87			NS	NS	6,490	N	NMED		1.34E-04
Silver	7440-22-4	mg/kg	0.12			NS	NS	6,490	N	NMED		1.85E-05
Sodium	7440-23-5	mg/kg	71			NS	NS	37,300,000	N	NMED		1.90E-06
Thallium	7440-28-0	mg/kg	0.071	J		NS	NS	13	N	NMED		5.46E-03
Vanadium	7440-62-2	mg/kg	20			NS	NS	6,530	N	NMED		3.06E-03
Zinc	7440-66-6	mg/kg	43			NS	NS	38,900	N	NMED		1.11E-03
									Cumulative Risk/Hazard		**6E-07**	**0.06**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Industrial Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-AI26-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID AI26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		626	N	2,420	N	NMEDC			

TABLE D1-AI26-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID AI26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	17,000			NS	NS	41,400	N	NMED		4.11E-01	Nervous
Antimony	7440-36-0	mg/kg	0.25			NS	NS	142	N	NMED		1.76E-03	
Arsenic	7440-38-2	mg/kg	1.3			216	N	41	N	NMED	6.02E-08	3.16E-02	
Barium	7440-39-3	mg/kg	140			NS	NS	4,390	N	NMED		3.19E-02	
Beryllium	7440-41-7	mg/kg	0.36	J		2,710	N	148	N	NMED	1.33E-09	2.43E-03	
Cadmium	7440-43-9	mg/kg	1.1	J		3,610	N	72	N	NMED	3.05E-09	1.53E-02	
Calcium	7440-70-2	mg/kg	3,000			NS	NS	8,850,000	N	NMED		3.39E-04	
Chromium (Total) (3)	7440-47-3	mg/kg	14			468	N	134	N	NMED	2.99E-07	1.04E-01	GI, Blood
Cobalt	7440-48-4	mg/kg	5.1			722	N	37	N	NMED	7.06E-08	1.39E-01	Endocrine
Copper	7440-50-8	mg/kg	100			NS	NS	14,200	N	NMED		7.04E-03	
Iron	7439-89-6	mg/kg	11,000			NS	NS	248,000	N	NMED		4.44E-02	
Lead	7439-92-1	mg/kg	17			NS	NS	800	N	IEUBK			
Magnesium	7439-95-4	mg/kg	7,400			NS	NS	1,550,000	N	NMED		4.77E-03	
Manganese	7439-96-5	mg/kg	270			NS	NS	464	N	NMED		5.82E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.035	J		NS	NS	21	N	NMED		1.69E-03	
Nickel	7440-02-0	mg/kg	10			20,500	N	753	N	NMED	4.88E-09	1.33E-02	
Potassium	7440-09-7	mg/kg	1,100			NS	NS	20,800,000	N	NMED		5.29E-05	
Selenium	7782-49-2	mg/kg	0.87			NS	NS	1,750	N	NMED		4.97E-04	
Silver	7440-22-4	mg/kg	0.12			NS	NS	1,770	N	NMED		6.78E-05	
Sodium	7440-23-5	mg/kg	71			NS	NS	10,200,000	N	NMED		6.96E-06	
Thallium	7440-28-0	mg/kg	0.071	J		NS	NS	4	N	NMED		2.01E-02	
Vanadium	7440-62-2	mg/kg	20			NS	NS	614	N	NMED		3.26E-02	
Zinc	7440-66-6	mg/kg	43			NS	NS	106,000	N	NMED		4.06E-04	
									Cumulative Risk/Hazard		**4E-07**	**1.4**	
									Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	0.99
Endocrine	0.14
GI	0.10
Blood	0.10
All Others	0.21

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-AI29-1
GRID AI29 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	2,200	N	RSL			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	6.3	N	RSL			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		211	N	36	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		3.56	N	18.5	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	7.7	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		31.6	N	70.4	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	6.16	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	7.64	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		333	N	247	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		83.1	N	301	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	156	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		60.4	N	131	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		313	N	6.16	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	3,850	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		1,300	N	570	N	RSL			

TABLE D1-AI29-1
GRID AI29 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	23,000	J		NS	NS	78,000	N	NMED		2.95E-01	Nervous
Antimony	7440-36-0	mg/kg	0.082	J		NS	NS	31.3	N	NMED		2.62E-03	
Arsenic	7440-38-2	mg/kg	1.1			7.07	N	13	N	NMED	1.56E-06	8.46E-02	
Barium	7440-39-3	mg/kg	290			NS	NS	15,600	N	NMED		1.86E-02	
Beryllium	7440-41-7	mg/kg	0.66	J		64,400	N	156	N	NMED	1.02E-10	4.23E-03	
Cadmium	7440-43-9	mg/kg	0.33			85,900	N	70.5	N	NMED	3.84E-11	4.68E-03	
Calcium	7440-70-2	mg/kg	5,800	J		NS	NS	13,000,000	N	NMED		4.46E-04	
Chromium (Total) (2)	7440-47-3	mg/kg	15			96.6	N	45,200	N	NMED	1.55E-06	3.32E-04	
Cobalt	7440-48-4	mg/kg	6			17,200	N	23.4	N	NMED	3.49E-09	2.56E-01	Endocrine
Copper	7440-50-8	mg/kg	54	J		NS	NS	3,130	N	NMED		1.73E-02	
Iron	7439-89-6	mg/kg	14,000	J		NS	NS	54,800	N	NMED		2.55E-01	GI
Lead	7439-92-1	mg/kg	13			NS	NS	200	N	IEUBK			
Magnesium	7439-95-4	mg/kg	8,300	J		NS	NS	15,600,000	N	NMED		5.32E-04	
Manganese	7439-96-5	mg/kg	420			NS	NS	10,500	N	NMED		4.00E-02	
Mercury (Elemental)	7439-97-6	mg/kg	0.07	J		NS	NS	23.8	N	NMED		2.94E-03	
Nickel	7440-02-0	mg/kg	12			595,000	N	1,560	N	NMED	2.02E-10	7.69E-03	
Potassium	7440-09-7	mg/kg	1,800	J		NS	NS	15,600,000	N	NMED		1.15E-04	
Selenium	7782-49-2	mg/kg	1.4	J		NS	NS	391	N	NMED		3.58E-03	
Silver	7440-22-4	mg/kg	0.078	J		NS	NS	391	N	NMED		1.99E-04	
Sodium	7440-23-5	mg/kg	54			NS	NS	7,820,000	N	NMED		6.91E-06	
Thallium	7440-28-0	mg/kg	0.072	J		NS	NS	0.782	N	NMED		9.21E-02	
Vanadium	7440-62-2	mg/kg	23	J		NS	NS	394	N	NMED		5.84E-02	
Zinc	7440-66-6	mg/kg	32			NS	NS	23,500	N	NMED		1.36E-03	
									Cumulative Risk/Hazard		**3E-06**	**1.1**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Residential Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Residential Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	0.29
Endocrine	0.26
GI	0.26
All Others	0.34

TABLE D1-AI29-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID AI29
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		5,300	N	7,400	N	RSL		

TABLE D1-AI29-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID AI29
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	23,000	J		NS	NS	1,290,000	N	NMED		1.78E-02
Antimony	7440-36-0	mg/kg	0.082	J		NS	NS	519	N	NMED		1.58E-04
Arsenic	7440-38-2	mg/kg	1.1			36	N	208	N	NMED	3.06E-07	5.29E-03
Barium	7440-39-3	mg/kg	290			NS	NS	255,000	N	NMED		1.14E-03
Beryllium	7440-41-7	mg/kg	0.66	J		313,000	N	2,580	N	NMED	2.11E-11	2.56E-04
Cadmium	7440-43-9	mg/kg	0.33			417,000	N	1,110	N	NMED	7.91E-12	2.97E-04
Calcium	7440-70-2	mg/kg	5,800	J		NS	NS	32,400,000	N	NMED		1.79E-04
Chromium (Total) (2)	7440-47-3	mg/kg	15			505	N	314,000	N	NMED	2.97E-07	4.78E-05
Cobalt	7440-48-4	mg/kg	6			83,400	N	388	N	NMED	7.19E-10	1.55E-02
Copper	7440-50-8	mg/kg	54	J		NS	NS	51,900	N	NMED		1.04E-03
Iron	7439-89-6	mg/kg	14,000	J		NS	NS	908,000	N	NMED		1.54E-02
Lead	7439-92-1	mg/kg	13			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	8,300	J		NS	NS	5,680,000	N	NMED		1.46E-03
Manganese	7439-96-5	mg/kg	420			NS	NS	160,000	N	NMED		2.63E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.07	J		NS	NS	112	N	NMED		6.25E-04
Nickel	7440-02-0	mg/kg	12			2,890,000	N	25,700	N	NMED	4.15E-11	4.67E-04
Potassium	7440-09-7	mg/kg	1,800	J		NS	NS	76,200,000	N	NMED		2.36E-05
Selenium	7782-49-2	mg/kg	1.4	J		NS	NS	6,490	N	NMED		2.16E-04
Silver	7440-22-4	mg/kg	0.078	J		NS	NS	6,490	N	NMED		1.20E-05
Sodium	7440-23-5	mg/kg	54			NS	NS	37,300,000	N	NMED		1.45E-06
Thallium	7440-28-0	mg/kg	0.072	J		NS	NS	13	N	NMED		5.54E-03
Vanadium	7440-62-2	mg/kg	23	J		NS	NS	6,530	N	NMED		3.52E-03
Zinc	7440-66-6	mg/kg	32			NS	NS	38,900	N	NMED		8.23E-04
									Cumulative Risk/Hazard		**6E-07**	**0.07**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Industrial Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-AI29-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID AI29
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[2,3]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		626	N	2,420	N	NMEDC			

TABLE D1-AI29-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID AI29
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[2,3]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	23,000	J		NS	NS	41,400	N	NMED		5.56E-01	Nervous
Antimony	7440-36-0	mg/kg	0.082	J		NS	NS	142	N	NMED		5.77E-04	
Arsenic	7440-38-2	mg/kg	1.1			216	N	41	N	NMED	5.09E-08	2.67E-02	
Barium	7440-39-3	mg/kg	290			NS	NS	4,390	N	NMED		6.61E-02	
Beryllium	7440-41-7	mg/kg	0.66	J		2,710	N	148	N	NMED	2.44E-09	4.46E-03	
Cadmium	7440-43-9	mg/kg	0.33			3,610	N	72	N	NMED	9.14E-10	4.58E-03	
Calcium	7440-70-2	mg/kg	5,800	J		NS	NS	8,850,000	N	NMED		6.55E-04	
Chromium (Total) (3)	7440-47-3	mg/kg	15			468	N	134	N	NMED	3.21E-07	1.12E-01	GI, Blood
Cobalt	7440-48-4	mg/kg	6			722	N	37	N	NMED	8.31E-08	1.63E-01	Endocrine
Copper	7440-50-8	mg/kg	54	J		NS	NS	14,200	N	NMED		3.80E-03	
Iron	7439-89-6	mg/kg	14,000	J		NS	NS	248,000	N	NMED		5.65E-02	
Lead	7439-92-1	mg/kg	13			NS	NS	800	N	IEUBK			
Magnesium	7439-95-4	mg/kg	8,300	J		NS	NS	1,550,000	N	NMED		5.35E-03	
Manganese	7439-96-5	mg/kg	420			NS	NS	464	N	NMED		9.05E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.07	J		NS	NS	21	N	NMED		3.38E-03	
Nickel	7440-02-0	mg/kg	12			20,500	N	753	N	NMED	5.85E-09	1.59E-02	
Potassium	7440-09-7	mg/kg	1,800	J		NS	NS	20,800,000	N	NMED		8.65E-05	
Selenium	7782-49-2	mg/kg	1.4	J		NS	NS	1,750	N	NMED		8.00E-04	
Silver	7440-22-4	mg/kg	0.078	J		NS	NS	1,770	N	NMED		4.41E-05	
Sodium	7440-23-5	mg/kg	54			NS	NS	10,200,000	N	NMED		5.29E-06	
Thallium	7440-28-0	mg/kg	0.072	J		NS	NS	4	N	NMED		2.03E-02	
Vanadium	7440-62-2	mg/kg	23	J		NS	NS	614	N	NMED		3.75E-02	
Zinc	7440-66-6	mg/kg	32			NS	NS	106,000	N	NMED		3.02E-04	
									Cumulative Risk/Hazard		**5E-07**	**2.0**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent	NA = not applicable
CAS = Chemical Abstracts Service	NS = No Standard
HI = Hazard Index	RAG = Risk Assessment Guidance
IEUBK = Integrated Exposure Uptake Biokinetic Model	SSL = soil screening level
J = Estimated	UJ = Estimated Nondetect
mg/kg = milligrams per kilogram	UTL = upper tolerance limit
N = no	Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	1.5
Endocrine	0.16
GI	0.11
Blood	0.11
All Others	0.25

TABLE D1-AI31-1
GRID AI31 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	2,200	N	RSL			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	6.3	N	RSL			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		211	N	36	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		3.56	N	18.5	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	7.7	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		31.6	N	70.4	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	6.16	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	7.64	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		333	N	247	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		83.1	N	301	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	156	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		60.4	N	131	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		313	N	6.16	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	3,850	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		1,300	N	570	N	RSL			

TABLE D1-AI31-1
GRID AI31 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	26,000			NS	NS	78,000	N	NMED		3.33E-01	Nervous
Antimony	7440-36-0	mg/kg	0.13	J		NS	NS	31.3	N	NMED		4.15E-03	
Arsenic	7440-38-2	mg/kg	1.2			7.07	N	13	N	NMED	1.70E-06	9.23E-02	
Barium	7440-39-3	mg/kg	330			NS	NS	15,600	N	NMED		2.12E-02	
Beryllium	7440-41-7	mg/kg	0.89	J		64,400	N	156	N	NMED	1.38E-10	5.71E-03	
Cadmium	7440-43-9	mg/kg	0.34			85,900	N	70.5	N	NMED	3.96E-11	4.82E-03	
Calcium	7440-70-2	mg/kg	23,000			NS	NS	13,000,000	N	NMED		1.77E-03	
Chromium (Total) (2)	7440-47-3	mg/kg	16			96.6	N	45,200	N	NMED	1.66E-06	3.54E-04	
Cobalt	7440-48-4	mg/kg	6.1			17,200	N	23.4	N	NMED	3.55E-09	2.61E-01	Endocrine
Copper	7440-50-8	mg/kg	52	J		NS	NS	3,130	N	NMED		1.66E-02	
Iron	7439-89-6	mg/kg	19,000			NS	NS	54,800	N	NMED		3.47E-01	GI
Lead	7439-92-1	mg/kg	17			NS	NS	200	N	IEUBK			
Magnesium	7439-95-4	mg/kg	8,000			NS	NS	15,600,000	N	NMED		5.13E-04	
Manganese	7439-96-5	mg/kg	350			NS	NS	10,500	N	NMED		3.33E-02	
Mercury (Elemental)	7439-97-6	mg/kg	0.026	J		NS	NS	23.8	N	NMED		1.09E-03	
Nickel	7440-02-0	mg/kg	14			595,000	N	1,560	N	NMED	2.35E-10	8.97E-03	
Potassium	7440-09-7	mg/kg	2,100			NS	NS	15,600,000	N	NMED		1.35E-04	
Selenium	7782-49-2	mg/kg	1.5			NS	NS	391	N	NMED		3.84E-03	
Silver	7440-22-4	mg/kg	0.092	J		NS	NS	391	N	NMED		2.35E-04	
Sodium	7440-23-5	mg/kg	69			NS	NS	7,820,000	N	NMED		8.82E-06	
Thallium	7440-28-0	mg/kg	0.1			NS	NS	0.782	N	NMED		1.28E-01	Hair/Coat/Eyes
Vanadium	7440-62-2	mg/kg	23			NS	NS	394	N	NMED		5.84E-02	
Zinc	7440-66-6	mg/kg	37			NS	NS	23,500	N	NMED		1.57E-03	
									Cumulative Risk/Hazard		**3E-06**	**1.3**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Residential Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Residential Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	0.33
Endocrine	0.26
GI	0.35
Hair/Coat	0.13
Eyes	0.13
All Others	0.25

TABLE D1-AI31-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID AI31
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		5,300	N	7,400	N	RSL		

TABLE D1-AI31-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID AI31
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	26,000			NS	NS	1,290,000	N	NMED		2.02E-02
Antimony	7440-36-0	mg/kg	0.13	J		NS	NS	519	N	NMED		2.50E-04
Arsenic	7440-38-2	mg/kg	1.2			36	N	208	N	NMED	3.34E-07	5.77E-03
Barium	7440-39-3	mg/kg	330			NS	NS	255,000	N	NMED		1.29E-03
Beryllium	7440-41-7	mg/kg	0.89	J		313,000	N	2,580	N	NMED	2.84E-11	3.45E-04
Cadmium	7440-43-9	mg/kg	0.34			417,000	N	1,110	N	NMED	8.15E-12	3.06E-04
Calcium	7440-70-2	mg/kg	23,000			NS	NS	32,400,000	N	NMED		7.10E-04
Chromium (Total) (2)	7440-47-3	mg/kg	16			505	N	314,000	N	NMED	3.17E-07	5.10E-05
Cobalt	7440-48-4	mg/kg	6.1			83,400	N	388	N	NMED	7.31E-10	1.57E-02
Copper	7440-50-8	mg/kg	52	J		NS	NS	51,900	N	NMED		1.00E-03
Iron	7439-89-6	mg/kg	19,000			NS	NS	908,000	N	NMED		2.09E-02
Lead	7439-92-1	mg/kg	17			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	8,000			NS	NS	5,680,000	N	NMED		1.41E-03
Manganese	7439-96-5	mg/kg	350			NS	NS	160,000	N	NMED		2.19E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.026	J		NS	NS	112	N	NMED		2.32E-04
Nickel	7440-02-0	mg/kg	14			2,890,000	N	25,700	N	NMED	4.84E-11	5.45E-04
Potassium	7440-09-7	mg/kg	2,100			NS	NS	76,200,000	N	NMED		2.76E-05
Selenium	7782-49-2	mg/kg	1.5			NS	NS	6,490	N	NMED		2.31E-04
Silver	7440-22-4	mg/kg	0.092	J		NS	NS	6,490	N	NMED		1.42E-05
Sodium	7440-23-5	mg/kg	69			NS	NS	37,300,000	N	NMED		1.85E-06
Thallium	7440-28-0	mg/kg	0.1			NS	NS	13	N	NMED		7.69E-03
Vanadium	7440-62-2	mg/kg	23			NS	NS	6,530	N	NMED		3.52E-03
Zinc	7440-66-6	mg/kg	37			NS	NS	38,900	N	NMED		9.51E-04
									Cumulative Risk/Hazard		**7E-07**	**0.08**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Industrial Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-AI31-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID AI31
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		626	N	2,420	N	NMEDC			

TABLE D1-AI31-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID AI31
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	26,000			NS	NS	41,400	N	NMED		6.28E-01	Nervous
Antimony	7440-36-0	mg/kg	0.13	J		NS	NS	142	N	NMED		9.15E-04	
Arsenic	7440-38-2	mg/kg	1.2			216	N	41	N	NMED	5.56E-08	2.91E-02	
Barium	7440-39-3	mg/kg	330			NS	NS	4,390	N	NMED		7.52E-02	
Beryllium	7440-41-7	mg/kg	0.89	J		2,710	N	148	N	NMED	3.28E-09	6.01E-03	
Cadmium	7440-43-9	mg/kg	0.34			3,610	N	72	N	NMED	9.42E-10	4.72E-03	
Calcium	7440-70-2	mg/kg	23,000			NS	NS	8,850,000	N	NMED		2.60E-03	
Chromium (Total) (3)	7440-47-3	mg/kg	16			468	N	134	N	NMED	3.42E-07	1.19E-01	GI, Blood
Cobalt	7440-48-4	mg/kg	6.1			722	N	37	N	NMED	8.45E-08	1.66E-01	Endocrine
Copper	7440-50-8	mg/kg	52	J		NS	NS	14,200	N	NMED		3.66E-03	
Iron	7439-89-6	mg/kg	19,000			NS	NS	248,000	N	NMED		7.66E-02	
Lead	7439-92-1	mg/kg	17			NS	NS	800	N	IEUBK			
Magnesium	7439-95-4	mg/kg	8,000			NS	NS	1,550,000	N	NMED		5.16E-03	
Manganese	7439-96-5	mg/kg	350			NS	NS	464	N	NMED		7.54E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.026	J		NS	NS	21	N	NMED		1.26E-03	
Nickel	7440-02-0	mg/kg	14			20,500	N	753	N	NMED	6.83E-09	1.86E-02	
Potassium	7440-09-7	mg/kg	2,100			NS	NS	20,800,000	N	NMED		1.01E-04	
Selenium	7782-49-2	mg/kg	1.5			NS	NS	1,750	N	NMED		8.57E-04	
Silver	7440-22-4	mg/kg	0.092	J		NS	NS	1,770	N	NMED		5.20E-05	
Sodium	7440-23-5	mg/kg	69			NS	NS	10,200,000	N	NMED		6.76E-06	
Thallium	7440-28-0	mg/kg	0.1			NS	NS	4	N	NMED		2.82E-02	
Vanadium	7440-62-2	mg/kg	23			NS	NS	614	N	NMED		3.75E-02	
Zinc	7440-66-6	mg/kg	37			NS	NS	106,000	N	NMED		3.49E-04	
									Cumulative Risk/Hazard		**5E-07**	**2.0**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent	NA = not applicable
CAS = Chemical Abstracts Service	NS = No Standard
HI = Hazard Index	RAG = Risk Assessment Guidance
IEUBK = Integrated Exposure Uptake Biokinetic Model	SSL = soil screening level
J = Estimated	UJ = Estimated Nondetect
mg/kg = milligrams per kilogram	UTL = upper tolerance limit
N = no	Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	1.4
Endocrine	0.17
GI	0.12
Blood	0.12
All Others	0.29

TABLE D1-AJ26-1
GRID AJ26 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	2,200	N	RSL			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	6.3	N	RSL			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		211	N	36	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		3.56	N	18.5	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	7.7	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		31.6	N	70.4	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	6.16	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	7.64	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		333	N	247	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		83.1	N	301	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	156	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U		60.4	N	131	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U		313	N	6.16	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	3,850	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		1,300	N	570	N	RSL			

TABLE D1-AJ26-1
GRID AJ26 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	22,000			NS	NS	78,000	N	NMED		2.82E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	31.3	N	NMED			
Arsenic	7440-38-2	mg/kg	1.3			7.07	N	13	N	NMED	1.84E-06	1.00E-01	Heart/Endocrine
Barium	7440-39-3	mg/kg	360			NS	NS	15,600	N	NMED		2.31E-02	
Beryllium	7440-41-7	mg/kg	1.1			64,400	N	156	N	NMED	1.71E-10	7.05E-03	
Cadmium	7440-43-9	mg/kg	0.71	J		85,900	N	70.5	N	NMED	8.27E-11	1.01E-02	
Calcium	7440-70-2	mg/kg	16,000			NS	NS	13,000,000	N	NMED		1.23E-03	
Chromium (Total) (2)	7440-47-3	mg/kg	14			96.6	N	45,200	N	NMED	1.45E-06	3.10E-04	
Cobalt	7440-48-4	mg/kg	5.7			17,200	N	23.4	N	NMED	3.31E-09	2.44E-01	Endocrine
Copper	7440-50-8	mg/kg	65			NS	NS	3,130	N	NMED		2.08E-02	
Iron	7439-89-6	mg/kg	11,000			NS	NS	54,800	N	NMED		2.01E-01	GI
Lead	7439-92-1	mg/kg	13			NS	NS	200	N	IEUBK			
Magnesium	7439-95-4	mg/kg	7,800			NS	NS	15,600,000	N	NMED		5.00E-04	
Manganese	7439-96-5	mg/kg	360			NS	NS	10,500	N	NMED		3.43E-02	
Mercury (Elemental)	7439-97-6	mg/kg	0.023	J		NS	NS	23.8	N	NMED		9.66E-04	
Nickel	7440-02-0	mg/kg	14			595,000	N	1,560	N	NMED	2.35E-10	8.97E-03	
Potassium	7440-09-7	mg/kg	2,100			NS	NS	15,600,000	N	NMED		1.35E-04	
Selenium	7782-49-2	mg/kg	1.5			NS	NS	391	N	NMED		3.84E-03	
Silver	7440-22-4	mg/kg	0.084	J		NS	NS	391	N	NMED		2.15E-04	
Sodium	7440-23-5	mg/kg	60			NS	NS	7,820,000	N	NMED		7.67E-06	
Thallium	7440-28-0	mg/kg	0.17			NS	NS	0.782	N	NMED		2.17E-01	Hair/Coat/Eyes
Vanadium	7440-62-2	mg/kg	11			NS	NS	394	N	NMED		2.79E-02	
Zinc	7440-66-6	mg/kg	32			NS	NS	23,500	N	NMED		1.36E-03	
									Cumulative Risk/Hazard		**3E-06**	**1.2**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Residential Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Residential Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	0.28
Endocrine	0.34
GI	0.20
Hair/Coat	0.22
Eyes	0.22
All Others	0.14

TABLE D1-AJ26-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID AJ26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		5,300	N	7,400	N	RSL		

TABLE D1-AJ26-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID AJ26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	22,000			NS	NS	1,290,000	N	NMED		1.71E-02
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	519	N	NMED		
Arsenic	7440-38-2	mg/kg	1.3			36	N	208	N	NMED	3.62E-07	6.25E-03
Barium	7440-39-3	mg/kg	360			NS	NS	255,000	N	NMED		1.41E-03
Beryllium	7440-41-7	mg/kg	1.1			313,000	N	2,580	N	NMED	3.51E-11	4.26E-04
Cadmium	7440-43-9	mg/kg	0.71	J		417,000	N	1,110	N	NMED	1.70E-11	6.40E-04
Calcium	7440-70-2	mg/kg	16,000			NS	NS	32,400,000	N	NMED		4.94E-04
Chromium (Total) (2)	7440-47-3	mg/kg	14			505	N	314,000	N	NMED	2.77E-07	4.46E-05
Cobalt	7440-48-4	mg/kg	5.7			83,400	N	388	N	NMED	6.83E-10	1.47E-02
Copper	7440-50-8	mg/kg	65			NS	NS	51,900	N	NMED		1.25E-03
Iron	7439-89-6	mg/kg	11,000			NS	NS	908,000	N	NMED		1.21E-02
Lead	7439-92-1	mg/kg	13			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	7,800			NS	NS	5,680,000	N	NMED		1.37E-03
Manganese	7439-96-5	mg/kg	360			NS	NS	160,000	N	NMED		2.25E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.023	J		NS	NS	112	N	NMED		2.05E-04
Nickel	7440-02-0	mg/kg	14			2,890,000	N	25,700	N	NMED	4.84E-11	5.45E-04
Potassium	7440-09-7	mg/kg	2,100			NS	NS	76,200,000	N	NMED		2.76E-05
Selenium	7782-49-2	mg/kg	1.5			NS	NS	6,490	N	NMED		2.31E-04
Silver	7440-22-4	mg/kg	0.084	J		NS	NS	6,490	N	NMED		1.29E-05
Sodium	7440-23-5	mg/kg	60			NS	NS	37,300,000	N	NMED		1.61E-06
Thallium	7440-28-0	mg/kg	0.17			NS	NS	13	N	NMED		1.31E-02
Vanadium	7440-62-2	mg/kg	11			NS	NS	6,530	N	NMED		1.68E-03
Zinc	7440-66-6	mg/kg	32			NS	NS	38,900	N	NMED		8.23E-04
									Cumulative Risk/Hazard		**6E-07**	**0.075**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Industrial Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-AJ26-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID AJ26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		626	N	2,420	N	NMEDC			

TABLE D1-AJ26-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID AJ26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	22,000			NS	NS	41,400	N	NMED		5.31E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	142	N	NMED			
Arsenic	7440-38-2	mg/kg	1.3			216	N	41	N	NMED	6.02E-08	3.16E-02	
Barium	7440-39-3	mg/kg	360			NS	NS	4,390	N	NMED		8.20E-02	
Beryllium	7440-41-7	mg/kg	1.1			2,710	N	148	N	NMED	4.06E-09	7.43E-03	
Cadmium	7440-43-9	mg/kg	0.71	J		3,610	N	72	N	NMED	1.97E-09	9.85E-03	
Calcium	7440-70-2	mg/kg	16,000			NS	NS	8,850,000	N	NMED		1.81E-03	
Chromium (Total) (3)	7440-47-3	mg/kg	14			468	N	134	N	NMED	2.99E-07	1.04E-01	GI, Blood
Cobalt	7440-48-4	mg/kg	5.7			722	N	37	N	NMED	7.89E-08	1.55E-01	Endocrine
Copper	7440-50-8	mg/kg	65			NS	NS	14,200	N	NMED		4.58E-03	
Iron	7439-89-6	mg/kg	11,000			NS	NS	248,000	N	NMED		4.44E-02	
Lead	7439-92-1	mg/kg	13			NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	7,800			NS	NS	1,550,000	N	NMED		5.03E-03	
Manganese	7439-96-5	mg/kg	360			NS	NS	464	N	NMED		7.76E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.023	J		NS	NS	21	N	NMED		1.11E-03	
Nickel	7440-02-0	mg/kg	14			20,500	N	753	N	NMED	6.83E-09	1.86E-02	
Potassium	7440-09-7	mg/kg	2,100			NS	NS	20,800,000	N	NMED		1.01E-04	
Selenium	7782-49-2	mg/kg	1.5			NS	NS	1,750	N	NMED		8.57E-04	
Silver	7440-22-4	mg/kg	0.084	J		NS	NS	1,770	N	NMED		4.75E-05	
Sodium	7440-23-5	mg/kg	60			NS	NS	10,200,000	N	NMED		5.88E-06	
Thallium	7440-28-0	mg/kg	0.17			NS	NS	4	N	NMED		4.80E-02	
Vanadium	7440-62-2	mg/kg	11			NS	NS	614	N	NMED		1.79E-02	
Zinc	7440-66-6	mg/kg	32			NS	NS	106,000	N	NMED		3.02E-04	
									Cumulative Risk/Hazard		**5E-07**	**1.8**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent	NA = not applicable
CAS = Chemical Abstracts Service	NS = No Standard
HI = Hazard Index	RAG = Risk Assessment Guidance
IEUBK = Integrated Exposure Uptake Biokinetic Model	SSL = soil screening level
J = Estimated	U = Nondetect
mg/kg = milligrams per kilogram	UTL = upper tolerance limit
N = no	Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	1.3
Endocrine	0.16
GI	0.10
Blood	0.10
All Others	0.27

TABLE D1-AJ27-1
GRID AJ27 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	2,200	N	RSL			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	6.3	N	RSL			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		211	N	36	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		3.56	N	18.5	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	7.7	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		31.6	N	70.4	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	6.16	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	7.64	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		333	N	247	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		83.1	N	301	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	156	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		60.4	N	131	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		313	N	6.16	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	3,850	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		1,300	N	570	N	RSL			

TABLE D1-AJ27-1
GRID AJ27 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	23,000			NS	NS	78,000	N	NMED		2.95E-01	Nervous
Antimony	7440-36-0	mg/kg	0.087	J		NS	NS	31.3	N	NMED		2.78E-03	
Arsenic	7440-38-2	mg/kg	1.8			7.07	N	13	N	NMED	2.55E-06	1.38E-01	Heart/Endocrine
Barium	7440-39-3	mg/kg	260			NS	NS	15,600	N	NMED		1.67E-02	
Beryllium	7440-41-7	mg/kg	0.66	J		64,400	N	156	N	NMED	1.02E-10	4.23E-03	
Cadmium	7440-43-9	mg/kg	0.22			85,900	N	70.5	N	NMED	2.56E-11	3.12E-03	
Calcium	7440-70-2	mg/kg	6,300			NS	NS	13,000,000	N	NMED		4.85E-04	
Chromium (Total) (3)	7440-47-3	mg/kg	15			96.6	N	45,200	N	NMED	1.55E-06	3.32E-04	
Cobalt	7440-48-4	mg/kg	5.8			17,200	N	23.4	N	NMED	3.37E-09	2.48E-01	Endocrine
Copper	7440-50-8	mg/kg	37			NS	NS	3,130	N	NMED		1.18E-02	
Iron	7439-89-6	mg/kg	14,000			NS	NS	54,800	N	NMED		2.55E-01	GI
Lead	7439-92-1	mg/kg	12			NS	NS	200	N	IEUBK			
Magnesium	7439-95-4	mg/kg	8,200			NS	NS	15,600,000	N	NMED		5.26E-04	
Manganese	7439-96-5	mg/kg	320			NS	NS	10,500	N	NMED		3.05E-02	
Mercury (Elemental)	7439-97-6	mg/kg	0.025	J		NS	NS	23.8	N	NMED		1.05E-03	
Nickel	7440-02-0	mg/kg	12			595,000	N	1,560	N	NMED	2.02E-10	7.69E-03	
Potassium	7440-09-7	mg/kg	2,000			NS	NS	15,600,000	N	NMED		1.28E-04	
Selenium	7782-49-2	mg/kg	1.4			NS	NS	391	N	NMED		3.58E-03	
Silver	7440-22-4	mg/kg	0.064	J		NS	NS	391	N	NMED		1.64E-04	
Sodium	7440-23-5	mg/kg	56			NS	NS	7,820,000	N	NMED		7.16E-06	
Thallium	7440-28-0	mg/kg	0.1			NS	NS	0.782	N	NMED		1.28E-01	Hair/Coat/Eyes
Vanadium	7440-62-2	mg/kg	29			NS	NS	394	N	NMED		7.36E-02	
Zinc	7440-66-6	mg/kg	31			NS	NS	23,500	N	NMED		1.32E-03	
									Cumulative Risk/Hazard		**4E-06**	**1.2**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Residential Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Residential Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	0.29
Endocrine	0.39
GI	0.26
Hair/Coat	0.13
Eyes	0.13
All Others	0.16

TABLE D1-AJ27-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID AJ27
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[2]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		5,300	N	7,400	N	RSL		

TABLE D1-AJ27-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID AJ27
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[2]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	23,000			NS	NS	1,290,000	N	NMED		1.78E-02
Antimony	7440-36-0	mg/kg	0.087	J		NS	NS	519	N	NMED		1.68E-04
Arsenic	7440-38-2	mg/kg	1.8			36	N	208	N	NMED	5.01E-07	8.65E-03
Barium	7440-39-3	mg/kg	260			NS	NS	255,000	N	NMED		1.02E-03
Beryllium	7440-41-7	mg/kg	0.66	J		313,000	N	2,580	N	NMED	2.11E-11	2.56E-04
Cadmium	7440-43-9	mg/kg	0.22			417,000	N	1,110	N	NMED	5.28E-12	1.98E-04
Calcium	7440-70-2	mg/kg	6,300			NS	NS	32,400,000	N	NMED		1.94E-04
Chromium (Total) (3)	7440-47-3	mg/kg	15			505	N	314,000	N	NMED	2.97E-07	4.78E-05
Cobalt	7440-48-4	mg/kg	5.8			83,400	N	388	N	NMED	6.95E-10	1.49E-02
Copper	7440-50-8	mg/kg	37			NS	NS	51,900	N	NMED		7.13E-04
Iron	7439-89-6	mg/kg	14,000			NS	NS	908,000	N	NMED		1.54E-02
Lead	7439-92-1	mg/kg	12			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	8,200			NS	NS	5,680,000	N	NMED		1.44E-03
Manganese	7439-96-5	mg/kg	320			NS	NS	160,000	N	NMED		2.00E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.025	J		NS	NS	112	N	NMED		2.23E-04
Nickel	7440-02-0	mg/kg	12			2,890,000	N	25,700	N	NMED	4.15E-11	4.67E-04
Potassium	7440-09-7	mg/kg	2,000			NS	NS	76,200,000	N	NMED		2.62E-05
Selenium	7782-49-2	mg/kg	1.4			NS	NS	6,490	N	NMED		2.16E-04
Silver	7440-22-4	mg/kg	0.064	J		NS	NS	6,490	N	NMED		9.86E-06
Sodium	7440-23-5	mg/kg	56			NS	NS	37,300,000	N	NMED		1.50E-06
Thallium	7440-28-0	mg/kg	0.1			NS	NS	13	N	NMED		7.69E-03
Vanadium	7440-62-2	mg/kg	29			NS	NS	6,530	N	NMED		4.44E-03
Zinc	7440-66-6	mg/kg	31			NS	NS	38,900	N	NMED		7.97E-04
									Cumulative Risk/Hazard		**8E-07**	**0.077**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Industrial Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-AJ27-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID AJ27
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		626	N	2,420	N	NMEDC			

TABLE D1-AJ27-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID AJ27
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	23,000			NS	NS	41,400	N	NMED		5.56E-01	Nervous
Antimony	7440-36-0	mg/kg	0.087	J		NS	NS	142	N	NMED		6.13E-04	
Arsenic	7440-38-2	mg/kg	1.8			216	N	41	N	NMED	8.33E-08	4.37E-02	
Barium	7440-39-3	mg/kg	260			NS	NS	4,390	N	NMED		5.92E-02	
Beryllium	7440-41-7	mg/kg	0.66	J		2,710	N	148	N	NMED	2.44E-09	4.46E-03	
Cadmium	7440-43-9	mg/kg	0.22			3,610	N	72	N	NMED	6.09E-10	3.05E-03	
Calcium	7440-70-2	mg/kg	6,300			NS	NS	8,850,000	N	NMED		7.12E-04	
Chromium (Total) (3)	7440-47-3	mg/kg	15			468	N	134	N	NMED	3.21E-07	1.12E-01	GI, Blood
Cobalt	7440-48-4	mg/kg	5.8			722	N	37	N	NMED	8.03E-08	1.58E-01	Endocrine
Copper	7440-50-8	mg/kg	37			NS	NS	14,200	N	NMED		2.61E-03	
Iron	7439-89-6	mg/kg	14,000			NS	NS	248,000	N	NMED		5.65E-02	
Lead	7439-92-1	mg/kg	12			NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	8,200			NS	NS	1,550,000	N	NMED		5.29E-03	
Manganese	7439-96-5	mg/kg	320			NS	NS	464	N	NMED		6.90E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.025	J		NS	NS	21	N	NMED		1.21E-03	
Nickel	7440-02-0	mg/kg	12			20,500	N	753	N	NMED	5.85E-09	1.59E-02	
Potassium	7440-09-7	mg/kg	2,000			NS	NS	20,800,000	N	NMED		9.62E-05	
Selenium	7782-49-2	mg/kg	1.4			NS	NS	1,750	N	NMED		8.00E-04	
Silver	7440-22-4	mg/kg	0.064	J		NS	NS	1,770	N	NMED		3.62E-05	
Sodium	7440-23-5	mg/kg	56			NS	NS	10,200,000	N	NMED		5.49E-06	
Thallium	7440-28-0	mg/kg	0.1			NS	NS	4	N	NMED		2.82E-02	
Vanadium	7440-62-2	mg/kg	29			NS	NS	614	N	NMED		4.72E-02	
Zinc	7440-66-6	mg/kg	31			NS	NS	106,000	N	NMED		2.92E-04	
									Cumulative Risk/Hazard		**5E-07**	**1.79**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent	NA = not applicable
CAS = Chemical Abstracts Service	NS = No Standard
HI = Hazard Index	RAG = Risk Assessment Guidance
IEUBK = Integrated Exposure Uptake Biokinetic Model	SSL = soil screening level
J = Estimated	UJ = Estimated Nondetect
mg/kg = milligrams per kilogram	UTL = upper tolerance limit
N = no	Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	1.2
Endocrine	0.16
GI	GI, Blood
Blood	0.11
All Others	0.38

TABLE D1-AJ31-1
GRID AJ31 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[2,3]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	2,200	N	RSL			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	6.3	N	RSL			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		211	N	36	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		3.56	N	18.5	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	7.7	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		31.6	N	70.4	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	6.16	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	7.64	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		333	N	247	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		83.1	N	301	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	156	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		60.4	N	131	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		313	N	6.16	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	3,850	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		1,300	N	570	N	RSL			

TABLE D1-AJ31-1
GRID AJ31 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[2,3]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	29,000			NS	NS	78,000	N	NMED		3.72E-01	Nervous
Antimony	7440-36-0	mg/kg	0.11	J		NS	NS	31.3	N	NMED		3.51E-03	
Arsenic	7440-38-2	mg/kg	1.3			7.07	N	13	N	NMED	1.84E-06	1.00E-01	Heart/Endocrine
Barium	7440-39-3	mg/kg	340			NS	NS	15,600	N	NMED		2.18E-02	
Beryllium	7440-41-7	mg/kg	0.78	J		64,400	N	156	N	NMED	1.21E-10	5.00E-03	
Cadmium	7440-43-9	mg/kg	0.27			85,900	N	70.5	N	NMED	3.14E-11	3.83E-03	
Calcium	7440-70-2	mg/kg	7,600			NS	NS	13,000,000	N	NMED		5.85E-04	
Chromium (Total) (3)	7440-47-3	mg/kg	17			96.6	N	45,200	N	NMED	1.76E-06	3.76E-04	
Cobalt	7440-48-4	mg/kg	6.9			17,200	N	23.4	N	NMED	4.01E-09	2.95E-01	Endocrine
Copper	7440-50-8	mg/kg	47			NS	NS	3,130	N	NMED		1.50E-02	
Iron	7439-89-6	mg/kg	17,000			NS	NS	54,800	N	NMED		3.10E-01	GI
Lead	7439-92-1	mg/kg	13			NS	NS	200	N	IEUBK			
Magnesium	7439-95-4	mg/kg	9,800			NS	NS	15,600,000	N	NMED		6.28E-04	
Manganese	7439-96-5	mg/kg	490			NS	NS	10,500	N	NMED		4.67E-02	
Mercury (Elemental)	7439-97-6	mg/kg	0.035	J		NS	NS	23.8	N	NMED		1.47E-03	
Nickel	7440-02-0	mg/kg	14			595,000	N	1,560	N	NMED	2.35E-10	8.97E-03	
Potassium	7440-09-7	mg/kg	2,300			NS	NS	15,600,000	N	NMED		1.47E-04	
Selenium	7782-49-2	mg/kg	1.6			NS	NS	391	N	NMED		4.09E-03	
Silver	7440-22-4	mg/kg	0.1			NS	NS	391	N	NMED		2.56E-04	
Sodium	7440-23-5	mg/kg	62			NS	NS	7,820,000	N	NMED		7.93E-06	
Thallium	7440-28-0	mg/kg	0.091	J		NS	NS	0.782	N	NMED		1.16E-01	Hair/Coat/Eyes
Vanadium	7440-62-2	mg/kg	28			NS	NS	394	N	NMED		7.11E-02	
Zinc	7440-66-6	mg/kg	35			NS	NS	23,500	N	NMED		1.49E-03	
									Cumulative Risk/Hazard		**4E-06**	**1.4**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Residential Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Residential Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	0.37
Endocrine	0.39
GI	0.31
Hair/Coat	0.12
Eyes	0.12
All Others	0.18

TABLE D1-AJ31-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID AJ31
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		5,300	N	7,400	N	RSL		

TABLE D1-AJ31-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID AJ31
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	29,000			NS	NS	1,290,000	N	NMED		2.25E-02
Antimony	7440-36-0	mg/kg	0.11	J		NS	NS	519	N	NMED		2.12E-04
Arsenic	7440-38-2	mg/kg	1.3			36	N	208	N	NMED	3.62E-07	6.25E-03
Barium	7440-39-3	mg/kg	340			NS	NS	255,000	N	NMED		1.33E-03
Beryllium	7440-41-7	mg/kg	0.78	J		313,000	N	2,580	N	NMED	2.49E-11	3.02E-04
Cadmium	7440-43-9	mg/kg	0.27			417,000	N	1,110	N	NMED	6.47E-12	2.43E-04
Calcium	7440-70-2	mg/kg	7,600			NS	NS	32,400,000	N	NMED		2.35E-04
Chromium (Total) (2)	7440-47-3	mg/kg	17			505	N	314,000	N	NMED	3.37E-07	5.41E-05
Cobalt	7440-48-4	mg/kg	6.9			83,400	N	388	N	NMED	8.27E-10	1.78E-02
Copper	7440-50-8	mg/kg	47			NS	NS	51,900	N	NMED		9.06E-04
Iron	7439-89-6	mg/kg	17,000			NS	NS	908,000	N	NMED		1.87E-02
Lead	7439-92-1	mg/kg	13			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	9,800			NS	NS	5,680,000	N	NMED		1.73E-03
Manganese	7439-96-5	mg/kg	490			NS	NS	160,000	N	NMED		3.06E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.035	J		NS	NS	112	N	NMED		3.13E-04
Nickel	7440-02-0	mg/kg	14			2,890,000	N	25,700	N	NMED	4.84E-11	5.45E-04
Potassium	7440-09-7	mg/kg	2,300			NS	NS	76,200,000	N	NMED		3.02E-05
Selenium	7782-49-2	mg/kg	1.6			NS	NS	6,490	N	NMED		2.47E-04
Silver	7440-22-4	mg/kg	0.1			NS	NS	6,490	N	NMED		1.54E-05
Sodium	7440-23-5	mg/kg	62			NS	NS	37,300,000	N	NMED		1.66E-06
Thallium	7440-28-0	mg/kg	0.091	J		NS	NS	13	N	NMED		7.00E-03
Vanadium	7440-62-2	mg/kg	28			NS	NS	6,530	N	NMED		4.29E-03
Zinc	7440-66-6	mg/kg	35			NS	NS	38,900	N	NMED		9.00E-04
									Cumulative Risk/Hazard		**7E-07**	**0.09**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Industrial Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-AJ31-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID AJ31
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		626	N	2,420	N	NMEDC			

TABLE D1-AJ31-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID AJ31
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	29,000			NS	NS	41,400	N	NMED		7.00E-01	Nervous
Antimony	7440-36-0	mg/kg	0.11	J		NS	NS	142	N	NMED		7.75E-04	
Arsenic	7440-38-2	mg/kg	1.3			216	N	41	N	NMED	6.02E-08	3.16E-02	
Barium	7440-39-3	mg/kg	340			NS	NS	4,390	N	NMED		7.74E-02	
Beryllium	7440-41-7	mg/kg	0.78	J		2,710	N	148	N	NMED	2.88E-09	5.27E-03	
Cadmium	7440-43-9	mg/kg	0.27			3,610	N	72	N	NMED	7.48E-10	3.74E-03	
Calcium	7440-70-2	mg/kg	7,600			NS	NS	8,850,000	N	NMED		8.59E-04	
Chromium (Total) (3)	7440-47-3	mg/kg	17			468	N	134	N	NMED	3.63E-07	1.27E-01	GI, Blood
Cobalt	7440-48-4	mg/kg	6.9			722	N	37	N	NMED	9.56E-08	1.88E-01	Endocrine
Copper	7440-50-8	mg/kg	47			NS	NS	14,200	N	NMED		3.31E-03	
Iron	7439-89-6	mg/kg	17,000			NS	NS	248,000	N	NMED		6.85E-02	
Lead	7439-92-1	mg/kg	13			NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	9,800			NS	NS	1,550,000	N	NMED		6.32E-03	
Manganese	7439-96-5	mg/kg	490			NS	NS	464	Y	NMED		1.06E+00	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.035	J		NS	NS	21	N	NMED		1.69E-03	
Nickel	7440-02-0	mg/kg	14			20,500	N	753	N	NMED	6.83E-09	1.86E-02	
Potassium	7440-09-7	mg/kg	2,300			NS	NS	20,800,000	N	NMED		1.11E-04	
Selenium	7782-49-2	mg/kg	1.6			NS	NS	1,750	N	NMED		9.14E-04	
Silver	7440-22-4	mg/kg	0.1			NS	NS	1,770	N	NMED		5.65E-05	
Sodium	7440-23-5	mg/kg	62			NS	NS	10,200,000	N	NMED		6.08E-06	
Thallium	7440-28-0	mg/kg	0.091	J		NS	NS	4	N	NMED		2.57E-02	
Vanadium	7440-62-2	mg/kg	28			NS	NS	614	N	NMED		4.56E-02	
Zinc	7440-66-6	mg/kg	35			NS	NS	106,000	N	NMED		3.30E-04	
									Cumulative Risk/Hazard		**5E-07**	**2.4**	
									Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	1.8
Endocrine	0.19
GI	0.13
Blood	0.13
All Others	0.29

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-AJ33-1
GRID AJ33 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	2,200	N	RSL			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	6.3	N	RSL			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		211	N	36	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		3.56	N	18.5	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	7.7	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		31.6	N	70.4	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	6.16	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	7.64	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		333	N	247	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		83.1	N	301	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	156	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		60.4	N	131	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		313	N	6.16	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	3,850	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		1,300	N	570	N	RSL			

TABLE D1-AJ33-1
GRID AJ33 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	21,000			NS	NS	78,000	N	NMED		2.69E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	J		NS	NS	31.3	N	NMED		4.79E-03	
Arsenic	7440-38-2	mg/kg	1.5			7.07	N	13	N	NMED	2.12E-06	1.15E-01	Heart/Endocrine
Barium	7440-39-3	mg/kg	220			NS	NS	15,600	N	NMED		1.41E-02	
Beryllium	7440-41-7	mg/kg	0.55	J		64,400	N	156	N	NMED	8.54E-11	3.53E-03	
Cadmium	7440-43-9	mg/kg	0.33			85,900	N	70.5	N	NMED	3.84E-11	4.68E-03	
Calcium	7440-70-2	mg/kg	4,700			NS	NS	13,000,000	N	NMED		3.62E-04	
Chromium (Total) (2)	7440-47-3	mg/kg	13			96.6	N	45,200	N	NMED	1.35E-06	2.88E-04	
Cobalt	7440-48-4	mg/kg	5.3			17,200	N	23.4	N	NMED	3.08E-09	2.26E-01	Endocrine
Copper	7440-50-8	mg/kg	54			NS	NS	3,130	N	NMED		1.73E-02	
Iron	7439-89-6	mg/kg	13,000			NS	NS	54,800	N	NMED		2.37E-01	GI
Lead	7439-92-1	mg/kg	14			NS	NS	200	N	IEUBK			
Magnesium	7439-95-4	mg/kg	8,400			NS	NS	15,600,000	N	NMED		5.38E-04	
Manganese	7439-96-5	mg/kg	400			NS	NS	10,500	N	NMED		3.81E-02	
Mercury (Elemental)	7439-97-6	mg/kg	0.059	J		NS	NS	23.8	N	NMED		2.48E-03	
Nickel	7440-02-0	mg/kg	10			595,000	N	1,560	N	NMED	1.68E-10	6.41E-03	
Potassium	7440-09-7	mg/kg	1,300			NS	NS	15,600,000	N	NMED		8.33E-05	
Selenium	7782-49-2	mg/kg	1.2			NS	NS	391	N	NMED		3.07E-03	
Silver	7440-22-4	mg/kg	0.097	J		NS	NS	391	N	NMED		2.48E-04	
Sodium	7440-23-5	mg/kg	60			NS	NS	7,820,000	N	NMED		7.67E-06	
Thallium	7440-28-0	mg/kg	0.17			NS	NS	0.782	N	NMED		2.17E-01	Hair/Coat/Eyes
Vanadium	7440-62-2	mg/kg	21			NS	NS	394	N	NMED		5.33E-02	
Zinc	7440-66-6	mg/kg	36			NS	NS	23,500	N	NMED		1.53E-03	
									Cumulative Risk/Hazard		**3E-06**	**1.2**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Residential Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Residential Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	0.27
Endocrine	0.34
GI	0.24
Hair/Coat	0.22
Eyes	0.22
All Others	0.15

TABLE D1-AJ33-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID AJ33
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		5,300	N	7,400	N	RSL		

TABLE D1-AJ33-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID AJ33
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	21,000			NS	NS	1,290,000	N	NMED		1.63E-02
Antimony	7440-36-0	mg/kg	0.15	J		NS	NS	519	N	NMED		2.89E-04
Arsenic	7440-38-2	mg/kg	1.5			36	N	208	N	NMED	4.18E-07	7.21E-03
Barium	7440-39-3	mg/kg	220			NS	NS	255,000	N	NMED		8.63E-04
Beryllium	7440-41-7	mg/kg	0.55	J		313,000	N	2,580	N	NMED	1.76E-11	2.13E-04
Cadmium	7440-43-9	mg/kg	0.33			417,000	N	1,110	N	NMED	7.91E-12	2.97E-04
Calcium	7440-70-2	mg/kg	4,700			NS	NS	32,400,000	N	NMED		1.45E-04
Chromium (Total) (2)	7440-47-3	mg/kg	13			505	N	314,000	N	NMED	2.57E-07	4.14E-05
Cobalt	7440-48-4	mg/kg	5.3			83,400	N	388	N	NMED	6.35E-10	1.37E-02
Copper	7440-50-8	mg/kg	54			NS	NS	51,900	N	NMED		1.04E-03
Iron	7439-89-6	mg/kg	13,000			NS	NS	908,000	N	NMED		1.43E-02
Lead	7439-92-1	mg/kg	14			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	8,400			NS	NS	5,680,000	N	NMED		1.48E-03
Manganese	7439-96-5	mg/kg	400			NS	NS	160,000	N	NMED		2.50E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.059	J		NS	NS	112	N	NMED		5.27E-04
Nickel	7440-02-0	mg/kg	10			2,890,000	N	25,700	N	NMED	3.46E-11	3.89E-04
Potassium	7440-09-7	mg/kg	1,300			NS	NS	76,200,000	N	NMED		1.71E-05
Selenium	7782-49-2	mg/kg	1.2			NS	NS	6,490	N	NMED		1.85E-04
Silver	7440-22-4	mg/kg	0.097	J		NS	NS	6,490	N	NMED		1.49E-05
Sodium	7440-23-5	mg/kg	60			NS	NS	37,300,000	N	NMED		1.61E-06
Thallium	7440-28-0	mg/kg	0.17			NS	NS	13	N	NMED		1.31E-02
Vanadium	7440-62-2	mg/kg	21			NS	NS	6,530	N	NMED		3.22E-03
Zinc	7440-66-6	mg/kg	36			NS	NS	38,900	N	NMED		9.25E-04
									Cumulative Risk/Hazard		**7E-07**	**0.077**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Industrial Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-AJ33-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID AJ33
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		626	N	2,420	N	NMEDC			

TABLE D1-AJ33-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID AJ33
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	21,000			NS	NS	41,400	N	NMED		5.07E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	J		NS	NS	142	N	NMED		1.06E-03	
Arsenic	7440-38-2	mg/kg	1.5			216	N	41	N	NMED	6.94E-08	3.64E-02	
Barium	7440-39-3	mg/kg	220			NS	NS	4,390	N	NMED		5.01E-02	
Beryllium	7440-41-7	mg/kg	0.55	J		2,710	N	148	N	NMED	2.03E-09	3.72E-03	
Cadmium	7440-43-9	mg/kg	0.33			3,610	N	72	N	NMED	9.14E-10	4.58E-03	
Calcium	7440-70-2	mg/kg	4,700			NS	NS	8,850,000	N	NMED		5.31E-04	
Chromium (Total) (3)	7440-47-3	mg/kg	13			468	N	134	N	NMED	2.78E-07	9.70E-02	
Cobalt	7440-48-4	mg/kg	5.3			722	N	37	N	NMED	7.34E-08	1.44E-01	Endocrine
Copper	7440-50-8	mg/kg	54			NS	NS	14,200	N	NMED		3.80E-03	
Iron	7439-89-6	mg/kg	13,000			NS	NS	248,000	N	NMED		5.24E-02	
Lead	7439-92-1	mg/kg	14			NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	8,400			NS	NS	1,550,000	N	NMED		5.42E-03	
Manganese	7439-96-5	mg/kg	400			NS	NS	464	N	NMED		8.62E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.059	J		NS	NS	21	N	NMED		2.85E-03	
Nickel	7440-02-0	mg/kg	10			20,500	N	753	N	NMED	4.88E-09	1.33E-02	
Potassium	7440-09-7	mg/kg	1,300			NS	NS	20,800,000	N	NMED		6.25E-05	
Selenium	7782-49-2	mg/kg	1.2			NS	NS	1,750	N	NMED		6.86E-04	
Silver	7440-22-4	mg/kg	0.097	J		NS	NS	1,770	N	NMED		5.48E-05	
Sodium	7440-23-5	mg/kg	60			NS	NS	10,200,000	N	NMED		5.88E-06	
Thallium	7440-28-0	mg/kg	0.17			NS	NS	4	N	NMED		4.80E-02	
Vanadium	7440-62-2	mg/kg	21			NS	NS	614	N	NMED		3.42E-02	
Zinc	7440-66-6	mg/kg	36			NS	NS	106,000	N	NMED		3.40E-04	
									Cumulative Risk/Hazard		**4E-07**	**1.9**	
									Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	1.4
Endocrine	0.14
All Others	0.35

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

mg/kg = milligrams per kilogram
N = no
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-AK28-1
GRID AK28 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	2,200	N	RSL			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	6.3	N	RSL			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		211	N	36	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		3.56	N	18.5	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	7.7	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		31.6	N	70.4	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	6.16	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	7.64	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		333	N	247	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		83.1	N	301	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	156	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		60.4	N	131	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		313	N	6.16	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	3,850	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		1,300	N	570	N	RSL			

TABLE D1-AK28-1
GRID AK28 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	20,000			NS	NS	78,000	N	NMED		2.56E-01	Nervous
Antimony	7440-36-0	mg/kg	0.08	J		NS	NS	31.3	N	NMED		2.56E-03	
Arsenic	7440-38-2	mg/kg	1.4			7.07	N	13	N	NMED	1.98E-06	1.08E-01	Heart/Endocrine
Barium	7440-39-3	mg/kg	210			NS	NS	15,600	N	NMED		1.35E-02	
Beryllium	7440-41-7	mg/kg	0.52	J		64,400	N	156	N	NMED	8.07E-11	3.33E-03	
Cadmium	7440-43-9	mg/kg	0.33			85,900	N	70.5	N	NMED	3.84E-11	4.68E-03	
Calcium	7440-70-2	mg/kg	3,200			NS	NS	13,000,000	N	NMED		2.46E-04	
Chromium (Total) (2)	7440-47-3	mg/kg	15			96.6	N	45,200	N	NMED	1.55E-06	3.32E-04	
Cobalt	7440-48-4	mg/kg	5.6			17,200	N	23.4	N	NMED	3.26E-09	2.39E-01	Endocrine
Copper	7440-50-8	mg/kg	62			NS	NS	3,130	N	NMED		1.98E-02	
Iron	7439-89-6	mg/kg	12,000			NS	NS	54,800	N	NMED		2.19E-01	GI
Lead	7439-92-1	mg/kg	12			NS	NS	200	N	IEUBK			
Magnesium	7439-95-4	mg/kg	7,400			NS	NS	15,600,000	N	NMED		4.74E-04	
Manganese	7439-96-5	mg/kg	320			NS	NS	10,500	N	NMED		3.05E-02	
Mercury (Elemental)	7439-97-6	mg/kg	0.022	J		NS	NS	23.8	N	NMED		9.24E-04	
Nickel	7440-02-0	mg/kg	11			595,000	N	1,560	N	NMED	1.85E-10	7.05E-03	
Potassium	7440-09-7	mg/kg	1,500			NS	NS	15,600,000	N	NMED		9.62E-05	
Selenium	7782-49-2	mg/kg	1.3			NS	NS	391	N	NMED		3.32E-03	
Silver	7440-22-4	mg/kg	0.083	J		NS	NS	391	N	NMED		2.12E-04	
Sodium	7440-23-5	mg/kg	58			NS	NS	7,820,000	N	NMED		7.42E-06	
Thallium	7440-28-0	mg/kg	0.068	J		NS	NS	0.782	N	NMED		8.70E-02	
Vanadium	7440-62-2	mg/kg	26			NS	NS	394	N	NMED		6.60E-02	
Zinc	7440-66-6	mg/kg	30			NS	NS	23,500	N	NMED		1.28E-03	
									Cumulative Risk/Hazard		**4E-06**	**1.1**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Residential Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Residential Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	0.26
Endocrine	0.35
GI	0.22
Heart	0.11
All Others	0.24

TABLE D1-AK28-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID AK28
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		5,300	N	7,400	N	RSL		

TABLE D1-AK28-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID AK28
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	20,000			NS	NS	1,290,000	N	NMED		1.55E-02
Antimony	7440-36-0	mg/kg	0.08	J		NS	NS	519	N	NMED		1.54E-04
Arsenic	7440-38-2	mg/kg	1.4			36	N	208	N	NMED	3.90E-07	6.73E-03
Barium	7440-39-3	mg/kg	210			NS	NS	255,000	N	NMED		8.24E-04
Beryllium	7440-41-7	mg/kg	0.52	J		313,000	N	2,580	N	NMED	1.66E-11	2.02E-04
Cadmium	7440-43-9	mg/kg	0.33			417,000	N	1,110	N	NMED	7.91E-12	2.97E-04
Calcium	7440-70-2	mg/kg	3,200			NS	NS	32,400,000	N	NMED		9.88E-05
Chromium (Total) (2)	7440-47-3	mg/kg	15			505	N	314,000	N	NMED		4.78E-05
Cobalt	7440-48-4	mg/kg	5.6			83,400	N	388	N	NMED	6.71E-10	1.44E-02
Copper	7440-50-8	mg/kg	62			NS	NS	51,900	N	NMED		1.19E-03
Iron	7439-89-6	mg/kg	12,000			NS	NS	908,000	N	NMED		1.32E-02
Lead	7439-92-1	mg/kg	12			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	7,400			NS	NS	5,680,000	N	NMED		1.30E-03
Manganese	7439-96-5	mg/kg	320			NS	NS	160,000	N	NMED		2.00E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.022	J		NS	NS	112	N	NMED		1.96E-04
Nickel	7440-02-0	mg/kg	11			2,890,000	N	25,700	N	NMED	3.81E-11	4.28E-04
Potassium	7440-09-7	mg/kg	1,500			NS	NS	76,200,000	N	NMED		1.97E-05
Selenium	7782-49-2	mg/kg	1.3			NS	NS	6,490	N	NMED		2.00E-04
Silver	7440-22-4	mg/kg	0.083	J		NS	NS	6,490	N	NMED		1.28E-05
Sodium	7440-23-5	mg/kg	58			NS	NS	37,300,000	N	NMED		1.55E-06
Thallium	7440-28-0	mg/kg	0.068	J		NS	NS	13	N	NMED		5.23E-03
Vanadium	7440-62-2	mg/kg	26			NS	NS	6,530	N	NMED		3.98E-03
Zinc	7440-66-6	mg/kg	30			NS	NS	38,900	N	NMED		7.71E-04
									Cumulative Risk/Hazard		**4E-07**	**0.067**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Industrial Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-AK28-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID AK28
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		626	N	2,420	N	NMEDC			

TABLE D1-AK28-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID AK28
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	20,000			NS	NS	41,400	N	NMED		4.83E-01	Nervous
Antimony	7440-36-0	mg/kg	0.08	J		NS	NS	142	N	NMED		5.63E-04	
Arsenic	7440-38-2	mg/kg	1.4			216	N	41	N	NMED	6.48E-08	3.40E-02	
Barium	7440-39-3	mg/kg	210			NS	NS	4,390	N	NMED		4.78E-02	
Beryllium	7440-41-7	mg/kg	0.52	J		2,710	N	148	N	NMED	1.92E-09	3.51E-03	
Cadmium	7440-43-9	mg/kg	0.33			3,610	N	72	N	NMED	9.14E-10	4.58E-03	
Calcium	7440-70-2	mg/kg	3,200			NS	NS	8,850,000	N	NMED		3.62E-04	
Chromium (Total) (3)	7440-47-3	mg/kg	15			468	N	134	N	NMED	3.21E-07	1.12E-01	GI, Blood
Cobalt	7440-48-4	mg/kg	5.6			722	N	37	N	NMED	7.76E-08	1.53E-01	Endocrine
Copper	7440-50-8	mg/kg	62			NS	NS	14,200	N	NMED		4.37E-03	
Iron	7439-89-6	mg/kg	12,000			NS	NS	248,000	N	NMED		4.84E-02	
Lead	7439-92-1	mg/kg	12			NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	7,400			NS	NS	1,550,000	N	NMED		4.77E-03	
Manganese	7439-96-5	mg/kg	320			NS	NS	464	N	NMED		6.90E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.022	J		NS	NS	21	N	NMED		1.06E-03	
Nickel	7440-02-0	mg/kg	11			20,500	N	753	N	NMED	5.37E-09	1.46E-02	
Potassium	7440-09-7	mg/kg	1,500			NS	NS	20,800,000	N	NMED		7.21E-05	
Selenium	7782-49-2	mg/kg	1.3			NS	NS	1,750	N	NMED		7.43E-04	
Silver	7440-22-4	mg/kg	0.083	J		NS	NS	1,770	N	NMED		4.69E-05	
Sodium	7440-23-5	mg/kg	58			NS	NS	10,200,000	N	NMED		5.69E-06	
Thallium	7440-28-0	mg/kg	0.068	J		NS	NS	4	N	NMED		1.92E-02	
Vanadium	7440-62-2	mg/kg	26			NS	NS	614	N	NMED		4.23E-02	
Zinc	7440-66-6	mg/kg	30			NS	NS	106,000	N	NMED		2.83E-04	
									Cumulative Risk/Hazard		**5E-07**	**1.7**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent	NA = not applicable
CAS = Chemical Abstracts Service	NS = No Standard
HI = Hazard Index	RAG = Risk Assessment Guidance
IEUBK = Integrated Exposure Uptake Biokinetic Model	SSL = soil screening level
J = Estimated	UJ = Estimated Nondetect
mg/kg = milligrams per kilogram	UTL = upper tolerance limit
N = no	Y = yes
mg/kg = milligrams per kilogram	UTL = upper tolerance limit
N = no	Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	1.2
Endocrine	0.15
GI	0.11
Blood	0.11
All Others	0.23

TABLE D1-AK36-1
GRID AK36 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	2,200	N	RSL			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	6.3	N	RSL			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		211	N	36	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		3.56	N	18.5	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	7.7	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		31.6	N	70.4	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	6.16	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	7.64	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		333	N	247	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		83.1	N	301	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	156	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		60.4	N	131	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		313	N	6.16	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	3,850	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		1,300	N	570	N	RSL			

TABLE D1-AK36-1
GRID AK36 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	25,000			NS	NS	78,000	N	NMED		3.21E-01	Nervous
Antimony	7440-36-0	mg/kg	0.13	J		NS	NS	31.3	N	NMED		4.15E-03	
Arsenic	7440-38-2	mg/kg	1.3			7.07	N	13	N	NMED	1.84E-06	1.00E-01	Heart/Endocrine
Barium	7440-39-3	mg/kg	270			NS	NS	15,600	N	NMED		1.73E-02	
Beryllium	7440-41-7	mg/kg	0.74	J		64,400	N	156	N	NMED	1.15E-10	4.74E-03	
Cadmium	7440-43-9	mg/kg	0.33			85,900	N	70.5	N	NMED	3.84E-11	4.68E-03	
Calcium	7440-70-2	mg/kg	6,800			NS	NS	13,000,000	N	NMED		5.23E-04	
Chromium (Total) (2)	7440-47-3	mg/kg	15			96.6	N	45,200	N	NMED	1.55E-06	3.32E-04	
Cobalt	7440-48-4	mg/kg	5.8			17,200	N	23.4	N	NMED	3.37E-09	2.48E-01	Endocrine
Copper	7440-50-8	mg/kg	52			NS	NS	3,130	N	NMED		1.66E-02	
Iron	7439-89-6	mg/kg	14,000			NS	NS	54,800	N	NMED		2.55E-01	GI
Lead	7439-92-1	mg/kg	14			NS	NS	200	N	IEUBK			
Magnesium	7439-95-4	mg/kg	9,300			NS	NS	15,600,000	N	NMED		5.96E-04	
Manganese	7439-96-5	mg/kg	470			NS	NS	10,500	N	NMED		4.48E-02	
Mercury (Elemental)	7439-97-6	mg/kg	0.033	J		NS	NS	23.8	N	NMED		1.39E-03	
Nickel	7440-02-0	mg/kg	12			595,000	N	1,560	N	NMED	2.02E-10	7.69E-03	
Potassium	7440-09-7	mg/kg	1,500			NS	NS	15,600,000	N	NMED		9.62E-05	
Selenium	7782-49-2	mg/kg	1.6			NS	NS	391	N	NMED		4.09E-03	
Silver	7440-22-4	mg/kg	0.099	J		NS	NS	391	N	NMED		2.53E-04	
Sodium	7440-23-5	mg/kg	60			NS	NS	7,820,000	N	NMED		7.67E-06	
Thallium	7440-28-0	mg/kg	0.17			NS	NS	0.782	N	NMED		2.17E-01	Hair/Coat/Eyes
Vanadium	7440-62-2	mg/kg	23			NS	NS	394	N	NMED		5.84E-02	
Zinc	7440-66-6	mg/kg	34			NS	NS	23,500	N	NMED		1.45E-03	
									Cumulative Risk/Hazard		**3E-06**	**1.3**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Residential Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Residential Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	0.32
Endocrine	0.35
GI	0.26
Hair/Coat	0.22
Eyes	0.22
All Others	0.17

TABLE D1-AK36-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID AK36
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		5,300	N	7,400	N	RSL		

TABLE D1-AK36-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID AK36
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	25,000			NS	NS	1,290,000	N	NMED		1.94E-02
Antimony	7440-36-0	mg/kg	0.13	J		NS	NS	519	N	NMED		2.50E-04
Arsenic	7440-38-2	mg/kg	1.3			36	N	208	N	NMED	3.62E-07	6.25E-03
Barium	7440-39-3	mg/kg	270			NS	NS	255,000	N	NMED		1.06E-03
Beryllium	7440-41-7	mg/kg	0.74	J		313,000	N	2,580	N	NMED	2.36E-11	2.87E-04
Cadmium	7440-43-9	mg/kg	0.33			417,000	N	1,110	N	NMED	7.91E-12	2.97E-04
Calcium	7440-70-2	mg/kg	6,800			NS	NS	32,400,000	N	NMED		2.10E-04
Chromium (Total) (2)	7440-47-3	mg/kg	15			505	N	314,000	N	NMED	2.97E-07	4.78E-05
Cobalt	7440-48-4	mg/kg	5.8			83,400	N	388	N	NMED	6.95E-10	1.49E-02
Copper	7440-50-8	mg/kg	52			NS	NS	51,900	N	NMED		1.00E-03
Iron	7439-89-6	mg/kg	14,000			NS	NS	908,000	N	NMED		1.54E-02
Lead	7439-92-1	mg/kg	14			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	9,300			NS	NS	5,680,000	N	NMED		1.64E-03
Manganese	7439-96-5	mg/kg	470			NS	NS	160,000	N	NMED		2.94E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.033	J		NS	NS	112	N	NMED		2.95E-04
Nickel	7440-02-0	mg/kg	12			2,890,000	N	25,700	N	NMED	4.15E-11	4.67E-04
Potassium	7440-09-7	mg/kg	1,500			NS	NS	76,200,000	N	NMED		1.97E-05
Selenium	7782-49-2	mg/kg	1.6			NS	NS	6,490	N	NMED		2.47E-04
Silver	7440-22-4	mg/kg	0.099	J		NS	NS	6,490	N	NMED		1.53E-05
Sodium	7440-23-5	mg/kg	60			NS	NS	37,300,000	N	NMED		1.61E-06
Thallium	7440-28-0	mg/kg	0.17			NS	NS	13	N	NMED		1.31E-02
Vanadium	7440-62-2	mg/kg	23			NS	NS	6,530	N	NMED		3.52E-03
Zinc	7440-66-6	mg/kg	34			NS	NS	38,900	N	NMED		8.74E-04
									Cumulative Risk/Hazard		**7E-07**	**0.08**
									Exceeds Target Level		**N**	**N**

Notes:

[2] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Industrial Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-AK36-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID AK36
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		626	N	2,420	N	NMEDC			

TABLE D1-AK36-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID AK36
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	25,000			NS	NS	41,400	N	NMED		6.04E-01	Nervous
Antimony	7440-36-0	mg/kg	0.13	J		NS	NS	142	N	NMED		9.15E-04	
Arsenic	7440-38-2	mg/kg	1.3			216	N	41	N	NMED	6.02E-08	3.16E-02	
Barium	7440-39-3	mg/kg	270			NS	NS	4,390	N	NMED		6.15E-02	
Beryllium	7440-41-7	mg/kg	0.74	J		2,710	N	148	N	NMED	2.73E-09	5.00E-03	
Cadmium	7440-43-9	mg/kg	0.33			3,610	N	72	N	NMED	9.14E-10	4.58E-03	
Calcium	7440-70-2	mg/kg	6,800			NS	NS	8,850,000	N	NMED		7.68E-04	
Chromium (Total) (3)	7440-47-3	mg/kg	15			468	N	134	N	NMED	3.21E-07	1.12E-01	GI, Blood
Cobalt	7440-48-4	mg/kg	5.8			722	N	37	N	NMED	8.03E-08	1.58E-01	Endocrine
Copper	7440-50-8	mg/kg	52			NS	NS	14,200	N	NMED		3.66E-03	
Iron	7439-89-6	mg/kg	14,000			NS	NS	248,000	N	NMED		5.65E-02	
Lead	7439-92-1	mg/kg	14			NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	9,300			NS	NS	1,550,000	N	NMED		6.00E-03	
Manganese	7439-96-5	mg/kg	470			NS	NS	464	Y	NMED		1.01E+00	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.033	J		NS	NS	21	N	NMED		1.59E-03	
Nickel	7440-02-0	mg/kg	12			20,500	N	753	N	NMED	5.85E-09	1.59E-02	
Potassium	7440-09-7	mg/kg	1,500			NS	NS	20,800,000	N	NMED		7.21E-05	
Selenium	7782-49-2	mg/kg	1.6			NS	NS	1,750	N	NMED		9.14E-04	
Silver	7440-22-4	mg/kg	0.099	J		NS	NS	1,770	N	NMED		5.59E-05	
Sodium	7440-23-5	mg/kg	60			NS	NS	10,200,000	N	NMED		5.88E-06	
Thallium	7440-28-0	mg/kg	0.17			NS	NS	4	N	NMED		4.80E-02	
Vanadium	7440-62-2	mg/kg	23			NS	NS	614	N	NMED		3.75E-02	
Zinc	7440-66-6	mg/kg	34			NS	NS	106,000	N	NMED		3.21E-04	
									Cumulative Risk/Hazard		**5E-07**	**2.2**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent	NA = not applicable
CAS = Chemical Abstracts Service	NS = No Standard
HI = Hazard Index	RAG = Risk Assessment Guidance
IEUBK = Integrated Exposure Uptake Biokinetic Model	SSL = soil screening level
J = Estimated	UJ = Estimated Nondetect
mg/kg = milligrams per kilogram	UTL = upper tolerance limit
N = no	Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	1.6
Endocrine	0.16
GI	0.11
Blood	0.11
All Others	0.27

TABLE D1-AL27-1
GRID AL27 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	2,200	N	RSL			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	6.3	N	RSL			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		211	N	36	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		3.56	N	18.5	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	7.7	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		31.6	N	70.4	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	6.16	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	7.64	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		333	N	247	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		83.1	N	301	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	156	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		60.4	N	131	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		313	N	6.16	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	3,850	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		1,300	N	570	N	RSL			

TABLE D1-AL27-1
GRID AL27 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	23,000			NS	NS	78,000	N	NMED		2.95E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	31.3	N	NMED			
Arsenic	7440-38-2	mg/kg	1			7.07	N	13	N	NMED	1.41E-06	7.69E-02	
Barium	7440-39-3	mg/kg	360			NS	NS	15,600	N	NMED		2.31E-02	
Beryllium	7440-41-7	mg/kg	0.75	J		64,400	N	156	N	NMED	1.16E-10	4.81E-03	
Cadmium	7440-43-9	mg/kg	0.28			85,900	N	70.5	N	NMED	3.26E-11	3.97E-03	
Calcium	7440-70-2	mg/kg	13,000			NS	NS	13,000,000	N	NMED		1.00E-03	
Chromium (Total) (2)	7440-47-3	mg/kg	14			96.6	N	45,200	N	NMED	1.45E-06	3.10E-04	
Cobalt	7440-48-4	mg/kg	6.1			17,200	N	23.4	N	NMED	3.55E-09	2.61E-01	Endocrine
Copper	7440-50-8	mg/kg	35			NS	NS	3,130	N	NMED		1.12E-02	
Iron	7439-89-6	mg/kg	14,000			NS	NS	54,800	N	NMED		2.55E-01	GI
Lead	7439-92-1	mg/kg	14			NS	NS	200	N	IEUBK			
Magnesium	7439-95-4	mg/kg	9,200			NS	NS	15,600,000	N	NMED		5.90E-04	
Manganese	7439-96-5	mg/kg	230			NS	NS	10,500	N	NMED		2.19E-02	
Mercury (Elemental)	7439-97-6	mg/kg	0.032	J		NS	NS	23.8	N	NMED		1.34E-03	
Nickel	7440-02-0	mg/kg	13			595,000	N	1,560	N	NMED	2.18E-10	8.33E-03	
Potassium	7440-09-7	mg/kg	1,500			NS	NS	15,600,000	N	NMED		9.62E-05	
Selenium	7782-49-2	mg/kg	1.5			NS	NS	391	N	NMED		3.84E-03	
Silver	7440-22-4	mg/kg	0.069	J		NS	NS	391	N	NMED		1.76E-04	
Sodium	7440-23-5	mg/kg	49			NS	NS	7,820,000	N	NMED		6.27E-06	
Thallium	7440-28-0	mg/kg	0.071	J		NS	NS	0.782	N	NMED		9.08E-02	
Vanadium	7440-62-2	mg/kg	32			NS	NS	394	N	NMED		8.12E-02	
Zinc	7440-66-6	mg/kg	33			NS	NS	23,500	N	NMED		1.40E-03	
									Cumulative Risk/Hazard		**3E-06**	**1.1**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Residential Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Residential Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

NA = not applicable

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	0.29
Endocrine	0.26
GI	0.26
All Others	0.33

TABLE D1-AL27-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID AL27
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Background Value[1]	Exceeds Background (Y/N)	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NA	NA	NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NA	NA	NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		NA	NA	1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		NA	NA	82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		NA	NA	17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NA	NA	NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		NA	NA	165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NA	NA	NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NA	NA	NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		NA	NA	1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		NA	NA	428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NA	NA	NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		NA	NA	293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		NA	NA	1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NA	NA	NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		NA	NA	5,300	N	7,400	N	RSL		

TABLE D1-AL27-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID AL27
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Background Value[1]	Exceeds Background (Y/N)	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	23,000				NA	NS	NS	1,290,000	N	NMED		1.78E-02
Antimony	7440-36-0	mg/kg	0.15	U			NA	NS	NS	519	N	NMED		
Arsenic	7440-38-2	mg/kg	1				NA	36	N	208	N	NMED	2.79E-07	4.81E-03
Barium	7440-39-3	mg/kg	360				NA	NS	NS	255,000	N	NMED		1.41E-03
Beryllium	7440-41-7	mg/kg	0.75	J			NA	313,000	N	2,580	N	NMED	2.40E-11	2.91E-04
Cadmium	7440-43-9	mg/kg	0.28				NA	417,000	N	1,110	N	NMED	6.71E-12	2.52E-04
Calcium	7440-70-2	mg/kg	13,000				NA	NS	NS	32,400,000	N	NMED		4.01E-04
Chromium (Total) (2)	7440-47-3	mg/kg	14				NA	505	N	314,000	N	NMED	2.77E-07	4.46E-05
Cobalt	7440-48-4	mg/kg	6.1				NA	83,400	N	388	N	NMED	7.31E-10	1.57E-02
Copper	7440-50-8	mg/kg	35				NA	NS	NS	51,900	N	NMED		6.74E-04
Iron	7439-89-6	mg/kg	14,000				NA	NS	NS	908,000	N	NMED		1.54E-02
Lead	7439-92-1	mg/kg	14				NA	NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	9,200				NA	NS	NS	5,680,000	N	NMED		1.62E-03
Manganese	7439-96-5	mg/kg	230				NA	NS	NS	160,000	N	NMED		1.44E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.032	J			NA	NS	NS	112	N	NMED		2.86E-04
Nickel	7440-02-0	mg/kg	13				NA	2,890,000	N	25,700	N	NMED	4.50E-11	5.06E-04
Potassium	7440-09-7	mg/kg	1,500				NA	NS	NS	76,200,000	N	NMED		1.97E-05
Selenium	7782-49-2	mg/kg	1.5				NA	NS	NS	6,490	N	NMED		2.31E-04
Silver	7440-22-4	mg/kg	0.069	J			NA	NS	NS	6,490	N	NMED		1.06E-05
Sodium	7440-23-5	mg/kg	49				NA	NS	NS	37,300,000	N	NMED		1.31E-06
Thallium	7440-28-0	mg/kg	0.071	J			NA	NS	NS	13	N	NMED		5.46E-03
Vanadium	7440-62-2	mg/kg	32				NA	NS	NS	6,530	N	NMED		4.90E-03
Zinc	7440-66-6	mg/kg	33				NA	NS	NS	38,900	N	NMED		8.48E-04
											Cumulative Risk/Hazard		**6E-07**	**0.07**
											Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Industrial Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-AL27-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID AL27
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		626	N	2,420	N	NMEDC			

TABLE D1-AL27-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID AL27
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	23,000			NS	NS	41,400	N	NMED		5.56E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	142	N	NMED			
Arsenic	7440-38-2	mg/kg	1			216	N	41	N	NMED	4.63E-08	2.43E-02	
Barium	7440-39-3	mg/kg	360			NS	NS	4,390	N	NMED		8.20E-02	
Beryllium	7440-41-7	mg/kg	0.75	J		2,710	N	148	N	NMED	2.77E-09	5.07E-03	
Cadmium	7440-43-9	mg/kg	0.28			3,610	N	72	N	NMED	7.76E-10	3.88E-03	
Calcium	7440-70-2	mg/kg	13,000			NS	NS	8,850,000	N	NMED		1.47E-03	
Chromium (Total) (3)	7440-47-3	mg/kg	14			468	N	134	N	NMED	2.99E-07	1.04E-01	GI, Blood
Cobalt	7440-48-4	mg/kg	6.1			722	N	37	N	NMED	8.45E-08	1.66E-01	Endocrine
Copper	7440-50-8	mg/kg	35			NS	NS	14,200	N	NMED		2.46E-03	
Iron	7439-89-6	mg/kg	14,000			NS	NS	248,000	N	NMED		5.65E-02	
Lead	7439-92-1	mg/kg	14			NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	9,200			NS	NS	1,550,000	N	NMED		5.94E-03	
Manganese	7439-96-5	mg/kg	230			NS	NS	464	N	NMED		4.96E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.032	J		NS	NS	21	N	NMED		1.55E-03	
Nickel	7440-02-0	mg/kg	13			20,500	N	753	N	NMED	6.34E-09	1.73E-02	
Potassium	7440-09-7	mg/kg	1,500			NS	NS	20,800,000	N	NMED		7.21E-05	
Selenium	7782-49-2	mg/kg	1.5			NS	NS	1,750	N	NMED		8.57E-04	
Silver	7440-22-4	mg/kg	0.069	J		NS	NS	1,770	N	NMED		3.90E-05	
Sodium	7440-23-5	mg/kg	49			NS	NS	10,200,000	N	NMED		4.80E-06	
Thallium	7440-28-0	mg/kg	0.071	J		NS	NS	4	N	NMED		2.01E-02	
Vanadium	7440-62-2	mg/kg	32			NS	NS	614	N	NMED		5.21E-02	
Zinc	7440-66-6	mg/kg	33			NS	NS	106,000	N	NMED		3.11E-04	
									Cumulative Risk/Hazard		**4E-07**	**1.60**	
									Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	1.1
Endocrine	0.17
GI	0.10
Blood	0.10
All Others	0.27

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-AL34-1
GRID AL34 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.21			NS	NS	7.64	N	NMED		2.75E-02
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		1,300	N	570	N	RSL		

TABLE D1-AL34-1
GRID AL34 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	17,000			NS	NS	78,000	N	NMED		2.18E-01
Antimony	7440-36-0	mg/kg	0.14	J		NS	NS	31.3	N	NMED		4.47E-03
Arsenic	7440-38-2	mg/kg	2.4			7.07	N	13	N	NMED		1.85E-01
Barium	7440-39-3	mg/kg	210			NS	NS	15,600	N	NMED		1.35E-02
Beryllium	7440-41-7	mg/kg	0.63	J		64,400	N	156	N	NMED		4.04E-03
Cadmium	7440-43-9	mg/kg	0.23			85,900	N	70.5	N	NMED		3.26E-03
Calcium	7440-70-2	mg/kg	5,700			NS	NS	13,000,000	N	NMED		4.38E-04
Chromium (Total) (2)	7440-47-3	mg/kg	13			96.6	N	45,200	N	NMED		2.88E-04
Cobalt	7440-48-4	mg/kg	4.9			17,200	N	23.4	N	NMED		2.09E-01
Copper	7440-50-8	mg/kg	36			NS	NS	3,130	N	NMED		1.15E-02
Iron	7439-89-6	mg/kg	13,000			NS	NS	54,800	N	NMED		2.37E-01
Lead	7439-92-1	mg/kg	12			NS	NS	200	N	IEUBK		
Magnesium	7439-95-4	mg/kg	5,100			NS	NS	15,600,000	N	NMED		3.27E-04
Manganese	7439-96-5	mg/kg	280			NS	NS	10,500	N	NMED		2.67E-02
Mercury (Elemental)	7439-97-6	mg/kg	0.095	J		NS	NS	23.8	N	NMED		3.99E-03
Nickel	7440-02-0	mg/kg	9.6			595,000	N	1,560	N	NMED		6.15E-03
Potassium	7440-09-7	mg/kg	2,200			NS	NS	15,600,000	N	NMED		1.41E-04
Selenium	7782-49-2	mg/kg	1.2			NS	NS	391	N	NMED		3.07E-03
Silver	7440-22-4	mg/kg	0.088	J		NS	NS	391	N	NMED		2.25E-04
Sodium	7440-23-5	mg/kg	50			NS	NS	7,820,000	N	NMED		6.39E-06
Thallium	7440-28-0	mg/kg	0.11			NS	NS	0.782	N	NMED		1.41E-01
Vanadium	7440-62-2	mg/kg	26			NS	NS	394	N	NMED		6.60E-02
Zinc	7440-66-6	mg/kg	30			NS	NS	23,500	N	NMED		1.28E-03
									Cumulative Risk/Hazard		**0E+00**	**1.16**
									Exceeds Target Level		**N**	**Y**

Notes:

[1] NMED = New Mexico Environment Department Residential Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Residential Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System
Nervous
Endocrine
GI
Hair/Coat
Eyes
All Others

TABLE D1-AL34-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID AL34
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.21			NS	NS	125	N	NMED		1.68E-03
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		5,300	N	7,400	N	RSL		

TABLE D1-AL34-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID AL34
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	17,000			NS	NS	1,290,000	N	NMED		1.32E-02
Antimony	7440-36-0	mg/kg	0.14	J		NS	NS	519	N	NMED		2.70E-04
Arsenic	7440-38-2	mg/kg	2.4			36	N	208	N	NMED		1.15E-02
Barium	7440-39-3	mg/kg	210			NS	NS	255,000	N	NMED		8.24E-04
Beryllium	7440-41-7	mg/kg	0.63	J		313,000	N	2,580	N	NMED		2.44E-04
Cadmium	7440-43-9	mg/kg	0.23			417,000	N	1,110	N	NMED		2.07E-04
Calcium	7440-70-2	mg/kg	5,700			NS	NS	32,400,000	N	NMED		1.76E-04
Chromium (Total) (2)	7440-47-3	mg/kg	13			505	N	314,000	N	NMED		4.14E-05
Cobalt	7440-48-4	mg/kg	4.9			83,400	N	388	N	NMED		1.26E-02
Copper	7440-50-8	mg/kg	36			NS	NS	51,900	N	NMED		6.94E-04
Iron	7439-89-6	mg/kg	13,000			NS	NS	908,000	N	NMED		1.43E-02
Lead	7439-92-1	mg/kg	12			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	5,100			NS	NS	5,680,000	N	NMED		8.98E-04
Manganese	7439-96-5	mg/kg	280			NS	NS	160,000	N	NMED		1.75E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.095	J		NS	NS	112	N	NMED		8.48E-04
Nickel	7440-02-0	mg/kg	9.6			2,890,000	N	25,700	N	NMED		3.74E-04
Potassium	7440-09-7	mg/kg	2,200			NS	NS	76,200,000	N	NMED		2.89E-05
Selenium	7782-49-2	mg/kg	1.2			NS	NS	6,490	N	NMED		1.85E-04
Silver	7440-22-4	mg/kg	0.088	J		NS	NS	6,490	N	NMED		1.36E-05
Sodium	7440-23-5	mg/kg	50			NS	NS	37,300,000	N	NMED		1.34E-06
Thallium	7440-28-0	mg/kg	0.11			NS	NS	13	N	NMED		8.46E-03
Vanadium	7440-62-2	mg/kg	26			NS	NS	6,530	N	NMED		3.98E-03
Zinc	7440-66-6	mg/kg	30			NS	NS	38,900	N	NMED		7.71E-04
									Cumulative Risk/Hazard		**0E+00**	**0.073**
									Exceeds Target Level		**N**	**N**

Notes:

[1]NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Industrial Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-AL34-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID AL34
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	8,070	N	NMEDC		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	27	N	NMEDC		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		7,500	N	161	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		600	N	536	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		165	N	81	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	17	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		1,130	N	319	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	27	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.21			NS	NS	17	N	NMED		1.21E-02
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		11,800	N	1,080	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		2,960	N	1,350	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	706	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		1,350	N	353	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		11,100	N	27	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	17,400	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		626	N	2,420	N	NMEDC		

TABLE D1-AL34-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID AL34
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	17,000			NS	NS	41,400	N	NMED		4.11E-01
Antimony	7440-36-0	mg/kg	0.14	J		NS	NS	142	N	NMED		9.86E-04
Arsenic	7440-38-2	mg/kg	2.4			216	N	41	N	NMED		5.83E-02
Barium	7440-39-3	mg/kg	210			NS	NS	4,390	N	NMED		4.78E-02
Beryllium	7440-41-7	mg/kg	0.63	J		2,710	N	148	N	NMED		4.26E-03
Cadmium	7440-43-9	mg/kg	0.23			3,610	N	72	N	NMED		3.19E-03
Calcium	7440-70-2	mg/kg	5,700			NS	NS	8,850,000	N	NMED		6.44E-04
Chromium (Total) (3)	7440-47-3	mg/kg	13			468	N	134	N	NMED		9.70E-02
Cobalt	7440-48-4	mg/kg	4.9			722	N	37	N	NMED		1.34E-01
Copper	7440-50-8	mg/kg	36			NS	NS	14,200	N	NMED		2.54E-03
Iron	7439-89-6	mg/kg	13,000			NS	NS	248,000	N	NMED		5.24E-02
Lead	7439-92-1	mg/kg	12			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	5,100			NS	NS	1,550,000	N	NMED		3.29E-03
Manganese	7439-96-5	mg/kg	280			NS	NS	464	N	NMED		6.03E-01
Mercury (Elemental)	7439-97-6	mg/kg	0.095	J		NS	NS	21	N	NMED		4.59E-03
Nickel	7440-02-0	mg/kg	9.6			20,500	N	753	N	NMED		1.27E-02
Potassium	7440-09-7	mg/kg	2,200			NS	NS	20,800,000	N	NMED		1.06E-04
Selenium	7782-49-2	mg/kg	1.2			NS	NS	1,750	N	NMED		6.86E-04
Silver	7440-22-4	mg/kg	0.088	J		NS	NS	1,770	N	NMED		4.97E-05
Sodium	7440-23-5	mg/kg	50			NS	NS	10,200,000	N	NMED		4.90E-06
Thallium	7440-28-0	mg/kg	0.11			NS	NS	4	N	NMED		3.11E-02
Vanadium	7440-62-2	mg/kg	26			NS	NS	614	N	NMED		4.23E-02
Zinc	7440-66-6	mg/kg	30			NS	NS	106,000	N	NMED		2.83E-04
									Cumulative Risk/Hazard		**0E+00**	**1.52**
									Exceeds Target Level		**N**	**Y**

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent	NA = not applicable
CAS = Chemical Abstracts Service	NS = No Standard
HI = Hazard Index	RAG = Risk Assessment Guidance
IEUBK = Integrated Exposure Uptake Biokinetic Model	SSL = soil screening level
J = Estimated	UJ = Estimated Nondetect
mg/kg = milligrams per kilogram	UTL = upper tolerance limit
N = no	Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System
Nervous
Endocrine
All Others

TABLE D1-AL39-1
GRID AL39 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	2,200	N	RSL			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	6.3	N	RSL			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		211	N	36	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		3.56	N	18.5	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	7.7	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		31.6	N	70.4	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	6.16	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	7.64	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		333	N	247	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		83.1	N	301	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	156	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		60.4	N	131	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		313	N	6.16	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	3,850	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		1,300	N	570	N	RSL			

TABLE D1-AL39-1
GRID AL39 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	15,000			NS	NS	78,000	N	NMED		1.92E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	31.3	N	NMED			
Arsenic	7440-38-2	mg/kg	8.6			7.07	Y	13	N	NMED	1.2E-05	6.62E-01	Heart/Endocrine
Barium	7440-39-3	mg/kg	250			NS	NS	15,600	N	NMED		1.60E-02	
Beryllium	7440-41-7	mg/kg	0.69	J		64,400	N	156	N	NMED	1.1E-10	4.42E-03	
Cadmium	7440-43-9	mg/kg	0.25			85,900	N	70.5	N	NMED	2.9E-11	3.55E-03	
Calcium	7440-70-2	mg/kg	17,000			NS	NS	13,000,000	N	NMED		1.31E-03	
Chromium (Total) (2)	7440-47-3	mg/kg	12			96.6	N	45,200	N	NMED	1.2E-06	2.65E-04	
Cobalt	7440-48-4	mg/kg	5.6			17,200	N	23.4	N	NMED	3.3E-09	2.39E-01	Endocrine
Copper	7440-50-8	mg/kg	32			NS	NS	3,130	N	NMED		1.02E-02	
Iron	7439-89-6	mg/kg	11,000			NS	NS	54,800	N	NMED		2.01E-01	Gastrointestinal
Lead	7439-92-1	mg/kg	11			NS	NS	200	N	IEUBK			
Magnesium	7439-95-4	mg/kg	4,800			NS	NS	15,600,000	N	NMED		3.08E-04	
Manganese	7439-96-5	mg/kg	550			NS	NS	10,500	N	NMED		5.24E-02	
Mercury (Elemental)	7439-97-6	mg/kg	0.032	J		NS	NS	23.8	N	NMED		1.34E-03	
Nickel	7440-02-0	mg/kg	9.2			595,000	N	1,560	N	NMED	1.5E-10	5.90E-03	
Potassium	7440-09-7	mg/kg	1,800			NS	NS	15,600,000	N	NMED		1.15E-04	
Selenium	7782-49-2	mg/kg	1.1			NS	NS	391	N	NMED		2.81E-03	
Silver	7440-22-4	mg/kg	0.059	J		NS	NS	391	N	NMED		1.51E-04	
Sodium	7440-23-5	mg/kg	53			NS	NS	7,820,000	N	NMED		6.78E-06	
Thallium	7440-28-0	mg/kg	0.19			NS	NS	0.782	N	NMED		2.43E-01	Hair/Coat/Eyes
Vanadium	7440-62-2	mg/kg	18			NS	NS	394	N	NMED		4.57E-02	
Zinc	7440-66-6	mg/kg	27			NS	NS	23,500	N	NMED		1.15E-03	
									Cumulative Risk/Hazard		**1E-05**	**1.7**	
									Exceeds Target Level		**Y**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Residential Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Residential Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	0.19
Endocrine	0.90
GI	0.20
Hair/Coat	0.24
Eyes	0.24
All Others	0.15

TABLE D1-AL39-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID AL39
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		5,300	N	7,400	N	RSL		

TABLE D1-AL39-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID AL39
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	15,000			NS	NS	1,290,000	N	NMED		1.16E-02
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	519	N	NMED		
Arsenic	7440-38-2	mg/kg	8.6			36	N	208	N	NMED	2.4E-06	4.13E-02
Barium	7440-39-3	mg/kg	250			NS	NS	255,000	N	NMED		9.80E-04
Beryllium	7440-41-7	mg/kg	0.69	J		313,000	N	2,580	N	NMED	2.2E-11	2.67E-04
Cadmium	7440-43-9	mg/kg	0.25			417,000	N	1,110	N	NMED	6.0E-12	2.25E-04
Calcium	7440-70-2	mg/kg	17,000			NS	NS	32,400,000	N	NMED		5.25E-04
Chromium (Total) (2)	7440-47-3	mg/kg	12			505	N	314,000	N	NMED	2.4E-07	3.82E-05
Cobalt	7440-48-4	mg/kg	5.6			83,400	N	388	N	NMED	6.7E-10	1.44E-02
Copper	7440-50-8	mg/kg	32			NS	NS	51,900	N	NMED		6.17E-04
Iron	7439-89-6	mg/kg	11,000			NS	NS	908,000	N	NMED		1.21E-02
Lead	7439-92-1	mg/kg	11			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	4,800			NS	NS	5,680,000	N	NMED		8.45E-04
Manganese	7439-96-5	mg/kg	550			NS	NS	160,000	N	NMED		3.44E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.032	J		NS	NS	112	N	NMED		2.86E-04
Nickel	7440-02-0	mg/kg	9.2			2,890,000	N	25,700	N	NMED	3.2E-11	3.58E-04
Potassium	7440-09-7	mg/kg	1,800			NS	NS	76,200,000	N	NMED		2.36E-05
Selenium	7782-49-2	mg/kg	1.1			NS	NS	6,490	N	NMED		1.69E-04
Silver	7440-22-4	mg/kg	0.059	J		NS	NS	6,490	N	NMED		9.09E-06
Sodium	7440-23-5	mg/kg	53			NS	NS	37,300,000	N	NMED		1.42E-06
Thallium	7440-28-0	mg/kg	0.19			NS	NS	13	N	NMED		1.46E-02
Vanadium	7440-62-2	mg/kg	18			NS	NS	6,530	N	NMED		2.76E-03
Zinc	7440-66-6	mg/kg	27			NS	NS	38,900	N	NMED		6.94E-04
									Cumulative Risk/Hazard		**3E-06**	**0.11**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Industrial Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-AL39-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID AL39
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	8,070	N	NMEDC		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	27	N	NMEDC		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		7,500	N	161	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		600	N	536	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		165	N	81	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	17	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		1,130	N	319	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	27	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	17	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		11,800	N	1,080	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		2,960	N	1,350	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	706	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		1,350	N	353	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		11,100	N	27	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	17,400	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		626	N	2,420	N	NMEDC		

TABLE D1-AL39-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID AL39
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	15,000			NS	NS	41,400	N	NMED		3.62E-01
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	142	N	NMED		
Arsenic	7440-38-2	mg/kg	8.6			216	N	41	N	NMED	4.0E-07	2.09E-01
Barium	7440-39-3	mg/kg	250			NS	NS	4,390	N	NMED		5.69E-02
Beryllium	7440-41-7	mg/kg	0.69	J		2,710	N	148	N	NMED	2.5E-09	4.66E-03
Cadmium	7440-43-9	mg/kg	0.25			3,610	N	72	N	NMED	6.9E-10	3.47E-03
Calcium	7440-70-2	mg/kg	17,000			NS	NS	8,850,000	N	NMED		1.92E-03
Chromium (Total) (3)	7440-47-3	mg/kg	12			468	N	134	N	NMED	2.6E-07	8.96E-02
Cobalt	7440-48-4	mg/kg	5.6			722	N	37	N	NMED	7.8E-08	1.53E-01
Copper	7440-50-8	mg/kg	32			NS	NS	14,200	N	NMED		2.25E-03
Iron	7439-89-6	mg/kg	11,000			NS	NS	248,000	N	NMED		4.44E-02
Lead	7439-92-1	mg/kg	11			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	4,800			NS	NS	1,550,000	N	NMED		3.10E-03
Manganese	7439-96-5	mg/kg	550			NS	NS	464	Y	NMED		1.19E+00
Mercury (Elemental)	7439-97-6	mg/kg	0.032	J		NS	NS	21	N	NMED		1.55E-03
Nickel	7440-02-0	mg/kg	9.2			20,500	N	753	N	NMED	4.5E-09	1.22E-02
Potassium	7440-09-7	mg/kg	1,800			NS	NS	20,800,000	N	NMED		8.65E-05
Selenium	7782-49-2	mg/kg	1.1			NS	NS	1,750	N	NMED		6.29E-04
Silver	7440-22-4	mg/kg	0.059	J		NS	NS	1,770	N	NMED		3.33E-05
Sodium	7440-23-5	mg/kg	53			NS	NS	10,200,000	N	NMED		5.20E-06
Thallium	7440-28-0	mg/kg	0.19			NS	NS	4	N	NMED		5.37E-02
Vanadium	7440-62-2	mg/kg	18			NS	NS	614	N	NMED		2.93E-02
Zinc	7440-66-6	mg/kg	27			NS	NS	106,000	N	NMED		2.55E-04
									Cumulative Risk/Hazard		**7E-07**	**2.2**
									Exceeds Target Level		**N**	**Y**

System
Nervous
Endocrine
Heart
All Others

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-AM29-1
GRID AM29 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	2,200	N	RSL			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	6.3	N	RSL			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		211	N	36	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		3.56	N	18.5	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	7.7	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		31.6	N	70.4	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	6.16	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	7.64	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		333	N	247	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		83.1	N	301	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	156	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U		60.4	N	131	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U		313	N	6.16	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	3,850	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		1,300	N	570	N	RSL			

TABLE D1-AM29-1
GRID AM29 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	24,000			NS	NS	78,000	N	NMED		3.08E-01	Nervous
Antimony	7440-36-0	mg/kg	0.095	J		NS	NS	31.3	N	NMED		3.04E-03	
Arsenic	7440-38-2	mg/kg	1.2			7.07	N	13	N	NMED	1.70E-06	9.23E-02	
Barium	7440-39-3	mg/kg	280			NS	NS	15,600	N	NMED		1.79E-02	
Beryllium	7440-41-7	mg/kg	1.1			64,400	N	156	N	NMED	1.71E-10	7.05E-03	
Cadmium	7440-43-9	mg/kg	0.15			85,900	N	70.5	N	NMED	1.75E-11	2.13E-03	
Calcium	7440-70-2	mg/kg	6,300			NS	NS	13,000,000	N	NMED		4.85E-04	
Chromium (Total) (2)	7440-47-3	mg/kg	13			96.6	N	45,200	N	NMED	1.35E-06	2.88E-04	
Cobalt	7440-48-4	mg/kg	5.8			17,200	N	23.4	N	NMED	3.37E-09	2.48E-01	Endocrine
Copper	7440-50-8	mg/kg	18			NS	NS	3,130	N	NMED		5.75E-03	
Iron	7439-89-6	mg/kg	13,000			NS	NS	54,800	N	NMED		2.37E-01	Gastrointestinal
Lead	7439-92-1	mg/kg	11			NS	NS	200	N	IEUBK			
Magnesium	7439-95-4	mg/kg	8,200			NS	NS	15,600,000	N	NMED		5.26E-04	
Manganese	7439-96-5	mg/kg	360			NS	NS	10,500	N	NMED		3.43E-02	
Mercury (Elemental)	7439-97-6	mg/kg	0.016	J		NS	NS	23.8	N	NMED		6.72E-04	
Nickel	7440-02-0	mg/kg	14			595,000	N	1,560	N	NMED	2.35E-10	8.97E-03	
Potassium	7440-09-7	mg/kg	2,100			NS	NS	15,600,000	N	NMED		1.35E-04	
Selenium	7782-49-2	mg/kg	1.9			NS	NS	391	N	NMED		4.86E-03	
Silver	7440-22-4	mg/kg	0.035	J		NS	NS	391	N	NMED		8.95E-05	
Sodium	7440-23-5	mg/kg	20			NS	NS	7,820,000	N	NMED		2.56E-06	
Thallium	7440-28-0	mg/kg	0.083	J		NS	NS	0.782	N	NMED		1.06E-01	Hair/Coat/Eyes
Vanadium	7440-62-2	mg/kg	18			NS	NS	394	N	NMED		4.57E-02	
Zinc	7440-66-6	mg/kg	37			NS	NS	23,500	N	NMED		1.57E-03	
									Cumulative Risk/Hazard		**3E-06**	**1.1**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Residential Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Residential Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	0.31
Endocrine	0.25
GI	0.24
Hair/Coat	0.11
Eyes	0.11
All Others	0.23

TABLE D1-AM29-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID AM29
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		5,300	N	7,400	N	RSL		

TABLE D1-AM29-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID AM29
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	24,000			NS	NS	1,290,000	N	NMED		1.86E-02
Antimony	7440-36-0	mg/kg	0.095	J		NS	NS	519	N	NMED		1.83E-04
Arsenic	7440-38-2	mg/kg	1.2			36	N	208	N	NMED	3.34E-07	5.77E-03
Barium	7440-39-3	mg/kg	280			NS	NS	255,000	N	NMED		1.10E-03
Beryllium	7440-41-7	mg/kg	1.1			313,000	N	2,580	N	NMED	3.51E-11	4.26E-04
Cadmium	7440-43-9	mg/kg	0.15			417,000	N	1,110	N	NMED	3.60E-12	1.35E-04
Calcium	7440-70-2	mg/kg	6,300			NS	NS	32,400,000	N	NMED		
Chromium (Total) (2)	7440-47-3	mg/kg	13			505	N	314,000	N	NMED	2.57E-07	4.14E-05
Cobalt	7440-48-4	mg/kg	5.8			83,400	N	388	N	NMED	6.95E-10	1.49E-02
Copper	7440-50-8	mg/kg	18			NS	NS	51,900	N	NMED		3.47E-04
Iron	7439-89-6	mg/kg	13,000			NS	NS	908,000	N	NMED		1.43E-02
Lead	7439-92-1	mg/kg	11			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	8,200			NS	NS	5,680,000	N	NMED		
Manganese	7439-96-5	mg/kg	360			NS	NS	160,000	N	NMED		2.25E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.016	J		NS	NS	112	N	NMED		1.43E-04
Nickel	7440-02-0	mg/kg	14			2,890,000	N	25,700	N	NMED	4.84E-11	5.45E-04
Potassium	7440-09-7	mg/kg	2,100			NS	NS	76,200,000	N	NMED		
Selenium	7782-49-2	mg/kg	1.9			NS	NS	6,490	N	NMED		2.93E-04
Silver	7440-22-4	mg/kg	0.035	J		NS	NS	6,490	N	NMED		5.39E-06
Sodium	7440-23-5	mg/kg	20			NS	NS	37,300,000	N	NMED		5.36E-07
Thallium	7440-28-0	mg/kg	0.083	J		NS	NS	13	N	NMED		6.38E-03
Vanadium	7440-62-2	mg/kg	18			NS	NS	6,530	N	NMED		2.76E-03
Zinc	7440-66-6	mg/kg	37			NS	NS	38,900	N	NMED		9.51E-04
									Cumulative Risk/Hazard		**6E-07**	**0.07**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Industrial Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-AM29-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID AM29
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		626	N	2,420	N	NMEDC			

TABLE D1-AM29-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID AM29
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	24,000			NS	NS	41,400	N	NMED		5.80E-01	Nervous
Antimony	7440-36-0	mg/kg	0.095	J		NS	NS	142	N	NMED		6.69E-04	
Arsenic	7440-38-2	mg/kg	1.2			216	N	41	N	NMED	5.56E-08	2.91E-02	
Barium	7440-39-3	mg/kg	280			NS	NS	4,390	N	NMED		6.38E-02	
Beryllium	7440-41-7	mg/kg	1.1			2,710	N	148	N	NMED	4.06E-09	7.43E-03	
Cadmium	7440-43-9	mg/kg	0.15			3,610	N	72	N	NMED	4.16E-10	2.08E-03	
Calcium	7440-70-2	mg/kg	6,300			NS	NS	8,850,000	N	NMED		7.12E-04	
Chromium (Total) (3)	7440-47-3	mg/kg	13			468	N	134	N	NMED	2.78E-07	9.70E-02	
Cobalt	7440-48-4	mg/kg	5.8			722	N	37	N	NMED	8.03E-08	1.58E-01	Endocrine
Copper	7440-50-8	mg/kg	18			NS	NS	14,200	N	NMED		1.27E-03	
Iron	7439-89-6	mg/kg	13,000			NS	NS	248,000	N	NMED		5.24E-02	
Lead	7439-92-1	mg/kg	11			NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	8,200			NS	NS	1,550,000	N	NMED		5.29E-03	
Manganese	7439-96-5	mg/kg	360			NS	NS	464	N	NMED		7.76E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.016	J		NS	NS	21	N	NMED		7.73E-04	
Nickel	7440-02-0	mg/kg	14			20,500	N	753	N	NMED	6.83E-09	1.86E-02	
Potassium	7440-09-7	mg/kg	2,100			NS	NS	20,800,000	N	NMED		1.01E-04	
Selenium	7782-49-2	mg/kg	1.9			NS	NS	1,750	N	NMED		1.09E-03	
Silver	7440-22-4	mg/kg	0.035	J		NS	NS	1,770	N	NMED		1.98E-05	
Sodium	7440-23-5	mg/kg	20			NS	NS	10,200,000	N	NMED		1.96E-06	
Thallium	7440-28-0	mg/kg	0.083	J		NS	NS	4	N	NMED		2.34E-02	
Vanadium	7440-62-2	mg/kg	18			NS	NS	614	N	NMED		2.93E-02	
Zinc	7440-66-6	mg/kg	37			NS	NS	106,000	N	NMED		3.49E-04	
									Cumulative Risk/Hazard		**4E-07**	**1.8**	
									Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	1.4
Endocrine	0.16
All Others	0.33

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-AM33-1
GRID AM33 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	2,200	N	RSL			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	6.3	N	RSL			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		211	N	36	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		3.56	N	18.5	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	7.7	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		31.6	N	70.4	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	6.16	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	7.64	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		333	N	247	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		83.1	N	301	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	156	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		60.4	N	131	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		313	N	6.16	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	3,850	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		1,300	N	570	N	RSL			

TABLE D1-AM33-1
GRID AM33 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	24,000			NS	NS	78,000	N	NMED		3.08E-01	Nervous
Antimony	7440-36-0	mg/kg	0.13	J		NS	NS	31.3	N	NMED		4.15E-03	
Arsenic	7440-38-2	mg/kg	2.5			7.07	N	13	N	NMED	3.54E-06	1.92E-01	Heart/Endocrine
Barium	7440-39-3	mg/kg	460			NS	NS	15,600	N	NMED		2.95E-02	
Beryllium	7440-41-7	mg/kg	0.67	J		64,400	N	156	N	NMED	1.04E-10	4.29E-03	
Cadmium	7440-43-9	mg/kg	0.41			85,900	N	70.5	N	NMED	4.77E-11	5.82E-03	
Calcium	7440-70-2	mg/kg	17,000			NS	NS	13,000,000	N	NMED		1.31E-03	
Chromium (Total) (2)	7440-47-3	mg/kg	17			96.6	N	45,200	N	NMED	1.76E-06	3.76E-04	
Cobalt	7440-48-4	mg/kg	6.3			17,200	N	23.4	N	NMED	3.66E-09	2.69E-01	Endocrine
Copper	7440-50-8	mg/kg	66			NS	NS	3,130	N	NMED		2.11E-02	
Iron	7439-89-6	mg/kg	14,000			NS	NS	54,800	N	NMED		2.55E-01	Gastrointestinal
Lead	7439-92-1	mg/kg	14			NS	NS	200	N	IEUBK			
Magnesium	7439-95-4	mg/kg	7,300			NS	NS	15,600,000	N	NMED		4.68E-04	
Manganese	7439-96-5	mg/kg	310			NS	NS	10,500	N	NMED		2.95E-02	
Mercury (Elemental)	7439-97-6	mg/kg	0.034	J		NS	NS	23.8	N	NMED		1.43E-03	
Nickel	7440-02-0	mg/kg	13			595,000	N	1,560	N	NMED	2.18E-10	8.33E-03	
Potassium	7440-09-7	mg/kg	2,100			NS	NS	15,600,000	N	NMED		1.35E-04	
Selenium	7782-49-2	mg/kg	1.4			NS	NS	391	N	NMED		3.58E-03	
Silver	7440-22-4	mg/kg	0.14			NS	NS	391	N	NMED		3.58E-04	
Sodium	7440-23-5	mg/kg	57			NS	NS	7,820,000	N	NMED		7.29E-06	
Thallium	7440-28-0	mg/kg	0.11			NS	NS	0.782	N	NMED		1.41E-01	Hair/Coat/Eyes
Vanadium	7440-62-2	mg/kg	27			NS	NS	394	N	NMED		6.85E-02	
Zinc	7440-66-6	mg/kg	38			NS	NS	23,500	N	NMED		1.62E-03	
									Cumulative Risk/Hazard		**5E-06**	**1.3**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Residential Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Residential Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	0.31
Endocrine	0.46
Heart	0.19
Hair/Coat	0.14
Eyes	0.14
All Others	1.90

TABLE D1-AM33-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID AM33
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		5,300	N	7,400	N	RSL		

TABLE D1-AM33-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID AM33
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	24,000			NS	NS	1,290,000	N	NMED		1.86E-02
Antimony	7440-36-0	mg/kg	0.13	J		NS	NS	519	N	NMED		2.50E-04
Arsenic	7440-38-2	mg/kg	2.5			36	N	208	N	NMED	6.96E-07	1.20E-02
Barium	7440-39-3	mg/kg	460			NS	NS	255,000	N	NMED		1.80E-03
Beryllium	7440-41-7	mg/kg	0.67	J		313,000	N	2,580	N	NMED	2.14E-11	2.60E-04
Cadmium	7440-43-9	mg/kg	0.41			417,000	N	1,110	N	NMED	9.83E-12	3.69E-04
Calcium	7440-70-2	mg/kg	17,000			NS	NS	32,400,000	N	NMED		5.25E-04
Chromium (Total) (2)	7440-47-3	mg/kg	17			505	N	314,000	N	NMED	3.37E-07	5.41E-05
Cobalt	7440-48-4	mg/kg	6.3			83,400	N	388	N	NMED	7.55E-10	1.62E-02
Copper	7440-50-8	mg/kg	66			NS	NS	51,900	N	NMED		1.27E-03
Iron	7439-89-6	mg/kg	14,000			NS	NS	908,000	N	NMED		1.54E-02
Lead	7439-92-1	mg/kg	14			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	7,300			NS	NS	5,680,000	N	NMED		1.29E-03
Manganese	7439-96-5	mg/kg	310			NS	NS	160,000	N	NMED		1.94E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.034	J		NS	NS	112	N	NMED		3.04E-04
Nickel	7440-02-0	mg/kg	13			2,890,000	N	25,700	N	NMED	4.50E-11	5.06E-04
Potassium	7440-09-7	mg/kg	2,100			NS	NS	76,200,000	N	NMED		2.76E-05
Selenium	7782-49-2	mg/kg	1.4			NS	NS	6,490	N	NMED		2.16E-04
Silver	7440-22-4	mg/kg	0.14			NS	NS	6,490	N	NMED		2.16E-05
Sodium	7440-23-5	mg/kg	57			NS	NS	37,300,000	N	NMED		1.53E-06
Thallium	7440-28-0	mg/kg	0.11			NS	NS	13	N	NMED		8.46E-03
Vanadium	7440-62-2	mg/kg	27			NS	NS	6,530	N	NMED		4.13E-03
Zinc	7440-66-6	mg/kg	38			NS	NS	38,900	N	NMED		9.77E-04
									Cumulative Risk/Hazard		**1E-06**	**0.08**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Industrial Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-AM33-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID AM33
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		626	N	2,420	N	NMEDC			

TABLE D1-AM33-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID AM33
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	24,000			NS	NS	41,400	N	NMED		5.80E-01	Nervous
Antimony	7440-36-0	mg/kg	0.13	J		NS	NS	142	N	NMED		9.15E-04	
Arsenic	7440-38-2	mg/kg	2.5			216	N	41	N	NMED	1.16E-07	6.07E-02	
Barium	7440-39-3	mg/kg	460			NS	NS	4,390	N	NMED		1.05E-01	Kidneys
Beryllium	7440-41-7	mg/kg	0.67	J		2,710	N	148	N	NMED	2.47E-09	4.53E-03	
Cadmium	7440-43-9	mg/kg	0.41			3,610	N	72	N	NMED	1.14E-09	5.69E-03	
Calcium	7440-70-2	mg/kg	17,000			NS	NS	8,850,000	N	NMED		1.92E-03	
Chromium (Total) (3)	7440-47-3	mg/kg	17			468	N	134	N	NMED	3.63E-07	1.27E-01	GI, Blood
Cobalt	7440-48-4	mg/kg	6.3			722	N	37	N	NMED	8.73E-08	1.72E-01	Endocrine
Copper	7440-50-8	mg/kg	66			NS	NS	14,200	N	NMED		4.65E-03	
Iron	7439-89-6	mg/kg	14,000			NS	NS	248,000	N	NMED		5.65E-02	
Lead	7439-92-1	mg/kg	14			NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	7,300			NS	NS	1,550,000	N	NMED		4.71E-03	
Manganese	7439-96-5	mg/kg	310			NS	NS	464	N	NMED		6.68E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.034	J		NS	NS	21	N	NMED		1.64E-03	
Nickel	7440-02-0	mg/kg	13			20,500	N	753	N	NMED	6.34E-09	1.73E-02	
Potassium	7440-09-7	mg/kg	2,100			NS	NS	20,800,000	N	NMED		1.01E-04	
Selenium	7782-49-2	mg/kg	1.4			NS	NS	1,750	N	NMED		8.00E-04	
Silver	7440-22-4	mg/kg	0.14			NS	NS	1,770	N	NMED		7.91E-05	
Sodium	7440-23-5	mg/kg	57			NS	NS	10,200,000	N	NMED		5.59E-06	
Thallium	7440-28-0	mg/kg	0.11			NS	NS	4	N	NMED		3.11E-02	
Vanadium	7440-62-2	mg/kg	27			NS	NS	614	N	NMED		4.40E-02	
Zinc	7440-66-6	mg/kg	38			NS	NS	106,000	N	NMED		3.58E-04	
									Cumulative Risk/Hazard		**6E-07**	**1.9**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	1.2
Endocrine	0.17
GI	0.13
Blood	0.13
Kidneys	0.10
All Others	0.23

TABLE D1-AN27-1
GRID AN27 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	2,200	N	RSL			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	6.3	N	RSL			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		211	N	36	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		3.56	N	18.5	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	7.7	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		31.6	N	70.4	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	6.16	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	7.64	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		333	N	247	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		83.1	N	301	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	156	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U		60.4	N	131	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U		313	N	6.16	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	3,850	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		1,300	N	570	N	RSL			

TABLE D1-AN27-1
GRID AN27 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	30,000			NS	NS	78,000	N	NMED		3.85E-01	Nervous
Antimony	7440-36-0	mg/kg	0.16	J		NS	NS	31.3	N	NMED		5.11E-03	
Arsenic	7440-38-2	mg/kg	1.2			7.07	N	13	N	NMED	1.70E-06	9.23E-02	
Barium	7440-39-3	mg/kg	440			NS	NS	15,600	N	NMED		2.82E-02	
Beryllium	7440-41-7	mg/kg	1.4			64,400	N	156	N	NMED	2.17E-10	8.97E-03	
Cadmium	7440-43-9	mg/kg	0.2			85,900	N	70.5	N	NMED	2.33E-11	2.84E-03	
Calcium	7440-70-2	mg/kg	20,000			NS	NS	13,000,000	N	NMED		1.54E-03	
Chromium (Total) (2)	7440-47-3	mg/kg	16			96.6	N	45,200	N	NMED	1.66E-06	3.54E-04	
Cobalt	7440-48-4	mg/kg	6.2			17,200	N	23.4	N	NMED	3.60E-09	2.65E-01	Endocrine
Copper	7440-50-8	mg/kg	23			NS	NS	3,130	N	NMED		7.35E-03	
Iron	7439-89-6	mg/kg	17,000			NS	NS	54,800	N	NMED		3.10E-01	GI
Lead	7439-92-1	mg/kg	13			NS	NS	200	N	IEUBK			
Magnesium	7439-95-4	mg/kg	10,000			NS	NS	15,600,000	N	NMED		6.41E-04	
Manganese	7439-96-5	mg/kg	340			NS	NS	10,500	N	NMED		3.24E-02	
Mercury (Elemental)	7439-97-6	mg/kg	0.04	J		NS	NS	23.8	N	NMED		1.68E-03	
Nickel	7440-02-0	mg/kg	17			595,000	N	1,560	N	NMED	2.86E-10	1.09E-02	
Potassium	7440-09-7	mg/kg	2,500			NS	NS	15,600,000	N	NMED		1.60E-04	
Selenium	7782-49-2	mg/kg	1.8			NS	NS	391	N	NMED		4.60E-03	
Silver	7440-22-4	mg/kg	0.066	J		NS	NS	391	N	NMED		1.69E-04	
Sodium	7440-23-5	mg/kg	44			NS	NS	7,820,000	N	NMED		5.63E-06	
Thallium	7440-28-0	mg/kg	0.11			NS	NS	0.782	N	NMED		1.41E-01	Hair/Coat/Eyes
Vanadium	7440-62-2	mg/kg	22			NS	NS	394	N	NMED		5.58E-02	
Zinc	7440-66-6	mg/kg	41			NS	NS	23,500	N	NMED		1.74E-03	
									Cumulative Risk/Hazard		**3E-06**	**1.4**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Residential Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Residential Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	0.4
Endocrine	0.26
GI	0.31
Hair/Coat	0.14
Eyes	0.14
All Others	0.25

TABLE D1-AN27-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID AN27
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		5,300	N	7,400	N	RSL		

TABLE D1-AN27-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID AN27
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	30,000			NS	NS	1,290,000	N	NMED		2.33E-02
Antimony	7440-36-0	mg/kg	0.16	J		NS	NS	519	N	NMED		3.08E-04
Arsenic	7440-38-2	mg/kg	1.2			36	N	208	N	NMED	3.34E-07	5.77E-03
Barium	7440-39-3	mg/kg	440			NS	NS	255,000	N	NMED		1.73E-03
Beryllium	7440-41-7	mg/kg	1.4			313,000	N	2,580	N	NMED	4.47E-11	5.43E-04
Cadmium	7440-43-9	mg/kg	0.2			417,000	N	1,110	N	NMED	4.80E-12	1.80E-04
Calcium	7440-70-2	mg/kg	20,000			NS	NS	32,400,000	N	NMED		6.17E-04
Chromium (Total) (2)	7440-47-3	mg/kg	16			505	N	314,000	N	NMED	3.17E-07	5.10E-05
Cobalt	7440-48-4	mg/kg	6.2			83,400	N	388	N	NMED	7.43E-10	1.60E-02
Copper	7440-50-8	mg/kg	23			NS	NS	51,900	N	NMED		4.43E-04
Iron	7439-89-6	mg/kg	17,000			NS	NS	908,000	N	NMED		1.87E-02
Lead	7439-92-1	mg/kg	13			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	10,000			NS	NS	5,680,000	N	NMED		1.76E-03
Manganese	7439-96-5	mg/kg	340			NS	NS	160,000	N	NMED		2.13E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.04	J		NS	NS	112	N	NMED		3.57E-04
Nickel	7440-02-0	mg/kg	17			2,890,000	N	25,700	N	NMED	5.88E-11	6.61E-04
Potassium	7440-09-7	mg/kg	2,500			NS	NS	76,200,000	N	NMED		3.28E-05
Selenium	7782-49-2	mg/kg	1.8			NS	NS	6,490	N	NMED		2.77E-04
Silver	7440-22-4	mg/kg	0.066	J		NS	NS	6,490	N	NMED		1.02E-05
Sodium	7440-23-5	mg/kg	44			NS	NS	37,300,000	N	NMED		1.18E-06
Thallium	7440-28-0	mg/kg	0.11			NS	NS	13	N	NMED		8.46E-03
Vanadium	7440-62-2	mg/kg	22			NS	NS	6,530	N	NMED		3.37E-03
Zinc	7440-66-6	mg/kg	41			NS	NS	38,900	N	NMED		1.05E-03
									Cumulative Risk/Hazard		**7E-07**	**0.09**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Industrial Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-AN27-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID AN27
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		626	N	2,420	N	NMEDC			

TABLE D1-AN27-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID AN27
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	30,000			NS	NS	41,400	N	NMED		7.25E-01	Nervous
Antimony	7440-36-0	mg/kg	0.16	J		NS	NS	142	N	NMED		1.13E-03	
Arsenic	7440-38-2	mg/kg	1.2			216	N	41	N	NMED	5.56E-08	2.91E-02	
Barium	7440-39-3	mg/kg	440			NS	NS	4,390	N	NMED		1.00E-01	Kidneys
Beryllium	7440-41-7	mg/kg	1.4			2,710	N	148	N	NMED	5.17E-09	9.46E-03	
Cadmium	7440-43-9	mg/kg	0.2			3,610	N	72	N	NMED	5.54E-10	2.77E-03	
Calcium	7440-70-2	mg/kg	20,000			NS	NS	8,850,000	N	NMED		2.26E-03	
Chromium (Total) (3)	7440-47-3	mg/kg	16			468	N	134	N	NMED	3.42E-07	1.19E-01	GI, Blood
Cobalt	7440-48-4	mg/kg	6.2			722	N	37	N	NMED	8.59E-08	1.69E-01	Endocrine
Copper	7440-50-8	mg/kg	23			NS	NS	14,200	N	NMED		1.62E-03	
Iron	7439-89-6	mg/kg	17,000			NS	NS	248,000	N	NMED		6.85E-02	
Lead	7439-92-1	mg/kg	13			NS	NS	800	N	IEUBK			
Magnesium	7439-95-4	mg/kg	10,000			NS	NS	1,550,000	N	NMED		6.45E-03	
Manganese	7439-96-5	mg/kg	340			NS	NS	464	N	NMED		7.33E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.04	J		NS	NS	21	N	NMED		1.93E-03	
Nickel	7440-02-0	mg/kg	17			20,500	N	753	N	NMED	8.29E-09	2.26E-02	
Potassium	7440-09-7	mg/kg	2,500			NS	NS	20,800,000	N	NMED		1.20E-04	
Selenium	7782-49-2	mg/kg	1.8			NS	NS	1,750	N	NMED		1.03E-03	
Silver	7440-22-4	mg/kg	0.066	J		NS	NS	1,770	N	NMED		3.73E-05	
Sodium	7440-23-5	mg/kg	44			NS	NS	10,200,000	N	NMED		4.31E-06	
Thallium	7440-28-0	mg/kg	0.11			NS	NS	4	N	NMED		3.11E-02	
Vanadium	7440-62-2	mg/kg	22			NS	NS	614	N	NMED		3.58E-02	
Zinc	7440-66-6	mg/kg	41			NS	NS	106,000	N	NMED		3.87E-04	
									Cumulative Risk/Hazard		**5E-07**	**2.1**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent	NA = not applicable
CAS = Chemical Abstracts Service	NS = No Standard
HI = Hazard Index	RAG = Risk Assessment Guidance
IEUBK = Integrated Exposure Uptake Biokinetic Model	SSL = soil screening level
J = Estimated	U = Nondetect
mg/kg = milligrams per kilogram	UTL = upper tolerance limit
N = no	Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	1.5
Endocrine	0.17
GI	0.12
Blood	0.12
Kidneys	0.10
All Others	3.19

TABLE D1-AN28-1
GRID AN28 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	2,200	N	RSL			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	6.3	N	RSL			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		211	N	36	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		3.56	N	18.5	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	7.7	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		31.6	N	70.4	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	6.16	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	7.64	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		333	N	247	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		83.1	N	301	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	156	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U		60.4	N	131	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U		313	N	6.16	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	3,850	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		1,300	N	570	N	RSL			

TABLE D1-AN28-1
GRID AN28 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	21,000			NS	NS	78,000	N	NMED		2.69E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	31.3	N	NMED			
Arsenic	7440-38-2	mg/kg	1			7.07	N	13	N	NMED	1.41E-06	7.69E-02	
Barium	7440-39-3	mg/kg	410			NS	NS	15,600	N	NMED		2.63E-02	
Beryllium	7440-41-7	mg/kg	1.1			64,400	N	156	N	NMED	1.71E-10	7.05E-03	
Cadmium	7440-43-9	mg/kg	0.21			85,900	N	70.5	N	NMED	2.44E-11	2.98E-03	
Calcium	7440-70-2	mg/kg	32,000			NS	NS	13,000,000	N	NMED		2.46E-03	
Chromium (Total) (2)	7440-47-3	mg/kg	11			96.6	N	45,200	N	NMED	1.14E-06	2.43E-04	
Cobalt	7440-48-4	mg/kg	5.7			17,200	N	23.4	N	NMED	3.31E-09	2.44E-01	Endocrine
Copper	7440-50-8	mg/kg	25			NS	NS	3,130	N	NMED		7.99E-03	
Iron	7439-89-6	mg/kg	11,000			NS	NS	54,800	N	NMED		2.01E-01	GI
Lead	7439-92-1	mg/kg	12			NS	NS	200	N	IEUBK			
Magnesium	7439-95-4	mg/kg	7,500			NS	NS	15,600,000	N	NMED		4.81E-04	
Manganese	7439-96-5	mg/kg	510			NS	NS	10,500	N	NMED		4.86E-02	
Mercury (Elemental)	7439-97-6	mg/kg	0.031	J		NS	NS	23.8	N	NMED		1.30E-03	
Nickel	7440-02-0	mg/kg	14			595,000	N	1,560	N	NMED	2.35E-10	8.97E-03	
Potassium	7440-09-7	mg/kg	1,600			NS	NS	15,600,000	N	NMED		1.03E-04	
Selenium	7782-49-2	mg/kg	1.5			NS	NS	391	N	NMED		3.84E-03	
Silver	7440-22-4	mg/kg	0.065	J		NS	NS	391	N	NMED		1.66E-04	
Sodium	7440-23-5	mg/kg	16			NS	NS	7,820,000	N	NMED		2.05E-06	
Thallium	7440-28-0	mg/kg	0.073	J		NS	NS	0.782	N	NMED		9.34E-02	
Vanadium	7440-62-2	mg/kg	13			NS	NS	394	N	NMED		3.30E-02	
Zinc	7440-66-6	mg/kg	38			NS	NS	23,500	N	NMED		1.62E-03	
									Cumulative Risk/Hazard		**3E-06**	**1.0**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Residential Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Residential Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	0.3
Endocrine	0.24
GI	0.20
All Others	0.32

TABLE D1-AN28-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID AN28
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		5,300	N	7,400	N	RSL		

TABLE D1-AN28-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID AN28
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	21,000			NS	NS	1,290,000	N	NMED		1.63E-02
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	519	N	NMED		
Arsenic	7440-38-2	mg/kg	1			36	N	208	N	NMED	2.79E-07	4.81E-03
Barium	7440-39-3	mg/kg	410			NS	NS	255,000	N	NMED		1.61E-03
Beryllium	7440-41-7	mg/kg	1.1			313,000	N	2,580	N	NMED	3.51E-11	4.26E-04
Cadmium	7440-43-9	mg/kg	0.21			417,000	N	1,110	N	NMED	5.04E-12	1.89E-04
Calcium	7440-70-2	mg/kg	32,000			NS	NS	32,400,000	N	NMED		9.88E-04
Chromium (Total) (2)	7440-47-3	mg/kg	11			505	N	314,000	N	NMED	2.18E-07	3.50E-05
Cobalt	7440-48-4	mg/kg	5.7			83,400	N	388	N	NMED	6.83E-10	1.47E-02
Copper	7440-50-8	mg/kg	25			NS	NS	51,900	N	NMED		4.82E-04
Iron	7439-89-6	mg/kg	11,000			NS	NS	908,000	N	NMED		1.21E-02
Lead	7439-92-1	mg/kg	12			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	7,500			NS	NS	5,680,000	N	NMED		1.32E-03
Manganese	7439-96-5	mg/kg	510			NS	NS	160,000	N	NMED		3.19E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.031	J		NS	NS	112	N	NMED		2.77E-04
Nickel	7440-02-0	mg/kg	14			2,890,000	N	25,700	N	NMED	4.84E-11	5.45E-04
Potassium	7440-09-7	mg/kg	1,600			NS	NS	76,200,000	N	NMED		2.10E-05
Selenium	7782-49-2	mg/kg	1.5			NS	NS	6,490	N	NMED		2.31E-04
Silver	7440-22-4	mg/kg	0.065	J		NS	NS	6,490	N	NMED		1.00E-05
Sodium	7440-23-5	mg/kg	16			NS	NS	37,300,000	N	NMED		4.29E-07
Thallium	7440-28-0	mg/kg	0.073	J		NS	NS	13	N	NMED		5.62E-03
Vanadium	7440-62-2	mg/kg	13			NS	NS	6,530	N	NMED		1.99E-03
Zinc	7440-66-6	mg/kg	38			NS	NS	38,900	N	NMED		9.77E-04
									Cumulative Risk/Hazard		**5E-07**	**0.066**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Industrial Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-AN28-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID AN28
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		626	N	2,420	N	NMEDC			

TABLE D1-AN28-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID AN28
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	21,000			NS	NS	41,400	N	NMED		5.07E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	142	N	NMED			
Arsenic	7440-38-2	mg/kg	1			216	N	41	N	NMED	4.63E-08	2.43E-02	
Barium	7440-39-3	mg/kg	410			NS	NS	4,390	N	NMED		9.34E-02	
Beryllium	7440-41-7	mg/kg	1.1			2,710	N	148	N	NMED	4.06E-09	7.43E-03	
Cadmium	7440-43-9	mg/kg	0.21			3,610	N	72	N	NMED	5.82E-10	2.91E-03	
Calcium	7440-70-2	mg/kg	32,000			NS	NS	8,850,000	N	NMED		3.62E-03	
Chromium (Total) (3)	7440-47-3	mg/kg	11			468	N	134	N	NMED	2.35E-07	8.21E-02	
Cobalt	7440-48-4	mg/kg	5.7			722	N	37	N	NMED	7.89E-08	1.55E-01	Endocrine
Copper	7440-50-8	mg/kg	25			NS	NS	14,200	N	NMED		1.76E-03	
Iron	7439-89-6	mg/kg	11,000			NS	NS	248,000	N	NMED		4.44E-02	
Lead	7439-92-1	mg/kg	12			NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	7,500			NS	NS	1,550,000	N	NMED		4.84E-03	
Manganese	7439-96-5	mg/kg	510			NS	NS	464	Y	NMED		1.10E+00	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.031	J		NS	NS	21	N	NMED		1.50E-03	
Nickel	7440-02-0	mg/kg	14			20,500	N	753	N	NMED	6.83E-09	1.86E-02	
Potassium	7440-09-7	mg/kg	1,600			NS	NS	20,800,000	N	NMED		7.69E-05	
Selenium	7782-49-2	mg/kg	1.5			NS	NS	1,750	N	NMED		8.57E-04	
Silver	7440-22-4	mg/kg	0.065	J		NS	NS	1,770	N	NMED		3.67E-05	
Sodium	7440-23-5	mg/kg	16			NS	NS	10,200,000	N	NMED		1.57E-06	
Thallium	7440-28-0	mg/kg	0.073	J		NS	NS	4	N	NMED		2.06E-02	
Vanadium	7440-62-2	mg/kg	13			NS	NS	614	N	NMED		2.12E-02	
Zinc	7440-66-6	mg/kg	38			NS	NS	106,000	N	NMED		3.58E-04	
									Cumulative Risk/Hazard		**4E-07**	**2.09**	
									Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	1.6
Endocrine	0.16
All Others	0.33

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-AN38-1
GRID AN38 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	2,200	N	RSL			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	6.3	N	RSL			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		211	N	36	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		3.56	N	18.5	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	7.7	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		31.6	N	70.4	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	6.16	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	7.64	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		333	N	247	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		83.1	N	301	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	156	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		60.4	N	131	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		313	N	6.16	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	3,850	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		1,300	N	570	N	RSL			

TABLE D1-AN38-1
GRID AN38 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	21,000			NS	NS	78,000	N	NMED		2.69E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	31.3	N	NMED			
Arsenic	7440-38-2	mg/kg	1.9	J		7.07	N	13	N	NMED	2.69E-06	1.46E-01	Heart/Endocrine
Barium	7440-39-3	mg/kg	280			NS	NS	15,600	N	NMED		1.79E-02	
Beryllium	7440-41-7	mg/kg	0.64	J		64,400	N	156	N	NMED	9.94E-11	4.10E-03	
Cadmium	7440-43-9	mg/kg	0.15			85,900	N	70.5	N	NMED	1.75E-11	2.13E-03	
Calcium	7440-70-2	mg/kg	4,400			NS	NS	13,000,000	N	NMED		3.38E-04	
Chromium (Total) (2)	7440-47-3	mg/kg	15			96.6	N	45,200	N	NMED	1.55E-06	3.32E-04	
Cobalt	7440-48-4	mg/kg	5.8	J		17,200	N	23.4	N	NMED	3.37E-09	2.48E-01	Endocrine
Copper	7440-50-8	mg/kg	27			NS	NS	3,130	N	NMED		8.63E-03	
Iron	7439-89-6	mg/kg	14,000			NS	NS	54,800	N	NMED		2.55E-01	Gastrointestinal
Lead	7439-92-1	mg/kg	11			NS	NS	200	N	IEUBK			
Magnesium	7439-95-4	mg/kg	6,200	J		NS	NS	15,600,000	N	NMED		3.97E-04	
Manganese	7439-96-5	mg/kg	400			NS	NS	10,500	N	NMED		3.81E-02	
Mercury (Elemental)	7439-97-6	mg/kg	0.023	J		NS	NS	23.8	N	NMED		9.66E-04	
Nickel	7440-02-0	mg/kg	11			595,000	N	1,560	N	NMED	1.85E-10	7.05E-03	
Potassium	7440-09-7	mg/kg	2,400			NS	NS	15,600,000	N	NMED		1.54E-04	
Selenium	7782-49-2	mg/kg	1.2	J		NS	NS	391	N	NMED		3.07E-03	
Silver	7440-22-4	mg/kg	0.053	J		NS	NS	391	N	NMED		1.36E-04	
Sodium	7440-23-5	mg/kg	52	J		NS	NS	7,820,000	N	NMED		6.65E-06	
Thallium	7440-28-0	mg/kg	0.12			NS	NS	0.782	N	NMED		1.53E-01	Hair/Coat/Eyes
Vanadium	7440-62-2	mg/kg	29	J		NS	NS	394	N	NMED		7.36E-02	
Zinc	7440-66-6	mg/kg	28			NS	NS	23,500	N	NMED		1.19E-03	
									Cumulative Risk/Hazard		**4E-06**	**1.2**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Residential Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Residential Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent	NS = No Standard
CAS = Chemical Abstracts Service	RAG = Risk Assessment Guidance
HI = Hazard Index	SSL = soil screening level
IEUBK = Integrated Exposure Uptake Biokinetic Model	U = Nondetect
J = Estimated	UJ = Estimated Nondetect
mg/kg = milligrams per kilogram	UTL = upper tolerance limit
N = no	Y = yes

NA = not applicable

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	0.27
Endocrine	0.39
GI	0.26
Hair/Coat	0.15
Eyes	0.15
All Others	0.16

TABLE D1-AN38-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID AN38
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		5,300	N	7,400	N	RSL		

TABLE D1-AN38-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID AN38
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	21,000			NS	NS	1,290,000	N	NMED		1.63E-02
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	519	N	NMED		
Arsenic	7440-38-2	mg/kg	1.9	J		36	N	208	N	NMED	5.29E-07	9.13E-03
Barium	7440-39-3	mg/kg	280			NS	NS	255,000	N	NMED		1.10E-03
Beryllium	7440-41-7	mg/kg	0.64	J		313,000	N	2,580	N	NMED	2.04E-11	2.48E-04
Cadmium	7440-43-9	mg/kg	0.15			417,000	N	1,110	N	NMED	3.60E-12	1.35E-04
Calcium	7440-70-2	mg/kg	4,400			NS	NS	32,400,000	N	NMED		1.36E-04
Chromium (Total) (2)	7440-47-3	mg/kg	15			505	N	314,000	N	NMED	2.97E-07	4.78E-05
Cobalt	7440-48-4	mg/kg	5.8	J		83,400	N	388	N	NMED	6.95E-10	1.49E-02
Copper	7440-50-8	mg/kg	27			NS	NS	51,900	N	NMED		5.20E-04
Iron	7439-89-6	mg/kg	14,000			NS	NS	908,000	N	NMED		1.54E-02
Lead	7439-92-1	mg/kg	11			NS	NS	800	N	RSL		1.38E-02
Magnesium	7439-95-4	mg/kg	6,200	J		NS	NS	5,680,000	N	NMED		1.09E-03
Manganese	7439-96-5	mg/kg	400			NS	NS	160,000	N	NMED		2.50E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.023	J		NS	NS	112	N	NMED		2.05E-04
Nickel	7440-02-0	mg/kg	11			2,890,000	N	25,700	N	NMED	3.81E-11	4.28E-04
Potassium	7440-09-7	mg/kg	2,400			NS	NS	76,200,000	N	NMED		3.15E-05
Selenium	7782-49-2	mg/kg	1.2	J		NS	NS	6,490	N	NMED		1.85E-04
Silver	7440-22-4	mg/kg	0.053	J		NS	NS	6,490	N	NMED		8.17E-06
Sodium	7440-23-5	mg/kg	52	J		NS	NS	37,300,000	N	NMED		1.39E-06
Thallium	7440-28-0	mg/kg	0.12			NS	NS	13	N	NMED		9.23E-03
Vanadium	7440-62-2	mg/kg	29	J		NS	NS	6,530	N	NMED		4.44E-03
Zinc	7440-66-6	mg/kg	28			NS	NS	38,900	N	NMED		7.20E-04
									Cumulative Risk/Hazard		**8E-07**	**0.091**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Industrial Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-AN38-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID AN38
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		626	N	2,420	N	NMEDC			

TABLE D1-AN38-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID AN38
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	21,000			NS	NS	41,400	N	NMED		5.07E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	142	N	NMED			
Arsenic	7440-38-2	mg/kg	1.9	J		216	N	41	N	NMED		4.61E-02	
Barium	7440-39-3	mg/kg	280			NS	NS	4,390	N	NMED		6.38E-02	
Beryllium	7440-41-7	mg/kg	0.64	J		2,710	N	148	N	NMED		4.32E-03	
Cadmium	7440-43-9	mg/kg	0.15			3,610	N	72	N	NMED		2.08E-03	
Calcium	7440-70-2	mg/kg	4,400			NS	NS	8,850,000	N	NMED		4.97E-04	
Chromium (Total) (3)	7440-47-3	mg/kg	15			468	N	134	N	NMED		1.12E-01	GI, Blood
Cobalt	7440-48-4	mg/kg	5.8	J		722	N	37	N	NMED		1.58E-01	Endocrine
Copper	7440-50-8	mg/kg	27			NS	NS	14,200	N	NMED		1.90E-03	
Iron	7439-89-6	mg/kg	14,000			NS	NS	248,000	N	NMED		5.65E-02	
Lead	7439-92-1	mg/kg	11			NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	6,200	J		NS	NS	1,550,000	N	NMED		4.00E-03	
Manganese	7439-96-5	mg/kg	400			NS	NS	464	N	NMED		8.62E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.023	J		NS	NS	21	N	NMED		1.11E-03	
Nickel	7440-02-0	mg/kg	11			20,500	N	753	N	NMED		1.46E-02	
Potassium	7440-09-7	mg/kg	2,400			NS	NS	20,800,000	N	NMED		1.15E-04	
Selenium	7782-49-2	mg/kg	1.2	J		NS	NS	1,750	N	NMED		6.86E-04	
Silver	7440-22-4	mg/kg	0.053	J		NS	NS	1,770	N	NMED		2.99E-05	
Sodium	7440-23-5	mg/kg	52	J		NS	NS	10,200,000	N	NMED		5.10E-06	
Thallium	7440-28-0	mg/kg	0.12			NS	NS	4	N	NMED		3.39E-02	
Vanadium	7440-62-2	mg/kg	29	J		NS	NS	614	N	NMED		4.72E-02	
Zinc	7440-66-6	mg/kg	28			NS	NS	106,000	N	NMED		2.64E-04	
									Cumulative Risk/Hazard		**0E+00**	**1.9**	
									Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	1.4
Endocrine	0.16
GI	0.11
Blood	0.11
All Others	0.28

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent

CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-AO26-1
GRID AO26 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	2,200	N	RSL			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	6.3	N	RSL			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		211	N	36	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		3.56	N	18.5	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	7.7	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		31.6	N	70.4	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	6.16	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	7.64	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		333	N	247	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		83.1	N	301	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	156	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U		60.4	N	131	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U		313	N	6.16	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	3,850	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		1,300	N	570	N	RSL			

TABLE D1-AO26-1
GRID AO26 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	20,000			NS	NS	78,000	N	NMED		2.56E-01	Nervous
Antimony	7440-36-0	mg/kg	0.11	J		NS	NS	31.3	N	NMED		3.51E-03	
Arsenic	7440-38-2	mg/kg	1.3			7.07	N	13	N	NMED	1.84E-06	1.00E-01	Heart/Endocrine
Barium	7440-39-3	mg/kg	150			NS	NS	15,600	N	NMED		9.62E-03	
Beryllium	7440-41-7	mg/kg	0.53	J		64,400	N	156	N	NMED	8.23E-11	3.40E-03	
Cadmium	7440-43-9	mg/kg	3.6	J		85,900	N	70.5	N	NMED	4.19E-10	5.11E-02	
Calcium	7440-70-2	mg/kg	2,600			NS	NS	13,000,000	N	NMED		2.00E-04	
Chromium (Total) (2)	7440-47-3	mg/kg	14			96.6	N	45,200	N	NMED	1.45E-06	3.10E-04	
Cobalt	7440-48-4	mg/kg	5			17,200	N	23.4	N	NMED	2.91E-09	2.14E-01	Endocrine
Copper	7440-50-8	mg/kg	34			NS	NS	3,130	N	NMED		1.09E-02	
Iron	7439-89-6	mg/kg	11,000			NS	NS	54,800	N	NMED		2.01E-01	Gastrointestinal
Lead	7439-92-1	mg/kg	11			NS	NS	200	N	IEUBK			
Magnesium	7439-95-4	mg/kg	8,300			NS	NS	15,600,000	N	NMED		5.32E-04	
Manganese	7439-96-5	mg/kg	300			NS	NS	10,500	N	NMED		2.86E-02	
Mercury (Elemental)	7439-97-6	mg/kg	0.026	J		NS	NS	23.8	N	NMED		1.09E-03	
Nickel	7440-02-0	mg/kg	10			595,000	N	1,560	N	NMED	1.68E-10	6.41E-03	
Potassium	7440-09-7	mg/kg	980			NS	NS	15,600,000	N	NMED		6.28E-05	
Selenium	7782-49-2	mg/kg	1.1			NS	NS	391	N	NMED		2.81E-03	
Silver	7440-22-4	mg/kg	0.056	J		NS	NS	391	N	NMED		1.43E-04	
Sodium	7440-23-5	mg/kg	55	J		NS	NS	7,820,000	N	NMED		7.03E-06	
Thallium	7440-28-0	mg/kg	0.054	J		NS	NS	0.782	N	NMED		6.91E-02	
Vanadium	7440-62-2	mg/kg	19			NS	NS	394	N	NMED		4.82E-02	
Zinc	7440-66-6	mg/kg	40			NS	NS	23,500	N	NMED		1.70E-03	
									Cumulative Risk/Hazard		**3E-06**	**1.0**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Residential Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Residential Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	0.3
Endocrine	0.31
Heart	0.10
GI	0.20
All Others	0.24

TABLE D1-AO26-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID AO26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		5,300	N	7,400	N	RSL		

TABLE D1-AO26-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID AO26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	20,000			NS	NS	1,290,000	N	NMED		1.55E-02
Antimony	7440-36-0	mg/kg	0.11	J		NS	NS	519	N	NMED		2.12E-04
Arsenic	7440-38-2	mg/kg	1.3			36	N	208	N	NMED	3.62E-07	6.25E-03
Barium	7440-39-3	mg/kg	150			NS	NS	255,000	N	NMED		5.88E-04
Beryllium	7440-41-7	mg/kg	0.53	J		313,000	N	2,580	N	NMED	1.69E-11	2.05E-04
Cadmium	7440-43-9	mg/kg	3.6	J		417,000	N	1,110	N	NMED	8.63E-11	3.24E-03
Calcium	7440-70-2	mg/kg	2,600			NS	NS	32,400,000	N	NMED		8.02E-05
Chromium (Total) (2)	7440-47-3	mg/kg	14			505	N	314,000	N	NMED	2.77E-07	4.46E-05
Cobalt	7440-48-4	mg/kg	5			83,400	N	388	N	NMED	6.00E-10	1.29E-02
Copper	7440-50-8	mg/kg	34			NS	NS	51,900	N	NMED		6.55E-04
Iron	7439-89-6	mg/kg	11,000			NS	NS	908,000	N	NMED		1.21E-02
Lead	7439-92-1	mg/kg	11			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	8,300			NS	NS	5,680,000	N	NMED		1.46E-03
Manganese	7439-96-5	mg/kg	300			NS	NS	160,000	N	NMED		1.88E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.026	J		NS	NS	112	N	NMED		2.32E-04
Nickel	7440-02-0	mg/kg	10			2,890,000	N	25,700	N	NMED	3.46E-11	3.89E-04
Potassium	7440-09-7	mg/kg	980			NS	NS	76,200,000	N	NMED		1.29E-05
Selenium	7782-49-2	mg/kg	1.1			NS	NS	6,490	N	NMED		1.69E-04
Silver	7440-22-4	mg/kg	0.056	J		NS	NS	6,490	N	NMED		8.63E-06
Sodium	7440-23-5	mg/kg	55	J		NS	NS	37,300,000	N	NMED		1.47E-06
Thallium	7440-28-0	mg/kg	0.054	J		NS	NS	13	N	NMED		4.15E-03
Vanadium	7440-62-2	mg/kg	19			NS	NS	6,530	N	NMED		2.91E-03
Zinc	7440-66-6	mg/kg	40			NS	NS	38,900	N	NMED		1.03E-03
									Cumulative Risk/Hazard		**6E-07**	**0.064**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Industrial Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-AO26-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID AO26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		626	N	2,420	N	NMEDC			

TABLE D1-AO26-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID AO26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	20,000			NS	NS	41,400	N	NMED		4.83E-01	Nervous
Antimony	7440-36-0	mg/kg	0.11	J		NS	NS	142	N	NMED		7.75E-04	
Arsenic	7440-38-2	mg/kg	1.3			216	N	41	N	NMED	6.02E-08	3.16E-02	
Barium	7440-39-3	mg/kg	150			NS	NS	4,390	N	NMED		3.42E-02	
Beryllium	7440-41-7	mg/kg	0.53	J		2,710	N	148	N	NMED	1.96E-09	3.58E-03	
Cadmium	7440-43-9	mg/kg	3.6	J		3,610	N	72	N	NMED	9.97E-09	4.99E-02	
Calcium	7440-70-2	mg/kg	2,600			NS	NS	8,850,000	N	NMED		2.94E-04	
Chromium (Total) (3)	7440-47-3	mg/kg	14			468	N	134	N	NMED	2.99E-07	1.04E-01	GI, Blood
Cobalt	7440-48-4	mg/kg	5			722	N	37	N	NMED	6.93E-08	1.36E-01	Endocrine
Copper	7440-50-8	mg/kg	34			NS	NS	14,200	N	NMED		2.39E-03	
Iron	7439-89-6	mg/kg	11,000			NS	NS	248,000	N	NMED		4.44E-02	
Lead	7439-92-1	mg/kg	11			NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	8,300			NS	NS	1,550,000	N	NMED		5.35E-03	
Manganese	7439-96-5	mg/kg	300			NS	NS	464	N	NMED		6.47E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.026	J		NS	NS	21	N	NMED		1.26E-03	
Nickel	7440-02-0	mg/kg	10			20,500	N	753	N	NMED	4.88E-09	1.33E-02	
Potassium	7440-09-7	mg/kg	980			NS	NS	20,800,000	N	NMED		4.71E-05	
Selenium	7782-49-2	mg/kg	1.1			NS	NS	1,750	N	NMED		6.29E-04	
Silver	7440-22-4	mg/kg	0.056	J		NS	NS	1,770	N	NMED		3.16E-05	
Sodium	7440-23-5	mg/kg	55	J		NS	NS	10,200,000	N	NMED		5.39E-06	
Thallium	7440-28-0	mg/kg	0.054	J		NS	NS	4	N	NMED		1.53E-02	
Vanadium	7440-62-2	mg/kg	19			NS	NS	614	N	NMED		3.09E-02	
Zinc	7440-66-6	mg/kg	40			NS	NS	106,000	N	NMED		3.77E-04	
									Cumulative Risk/Hazard		**4E-07**	**1.6**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent

CAS = Chemical Abstracts Service

HI = Hazard Index

J = Estimated

mg/kg = milligrams per kilogram

N = no

NA = not applicable

NS = No Standard

RAG = Risk Assessment Guidance

SSL = soil screening level

U = Nondetect

UTL = upper tolerance limit

Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	1.1
Endocrine	0.14
GI	0.10
Blood	0.10
All Others	0.23

TABLE D1-AP28-1
GRID AP28 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	2,200	N	RSL			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	6.3	N	RSL			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		211	N	36	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		3.56	N	18.5	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	7.7	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		31.6	N	70.4	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	6.16	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	7.64	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		333	N	247	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		83.1	N	301	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	156	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U		60.4	N	131	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U		313	N	6.16	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	3,850	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		1,300	N	570	N	RSL			

TABLE D1-AP28-1
GRID AP28 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	29,000			NS	NS	78,000	N	NMED		3.72E-01	Nervous
Antimony	7440-36-0	mg/kg	0.095	J		NS	NS	31.3	N	NMED		3.04E-03	
Arsenic	7440-38-2	mg/kg	1.7			7.07	N	13	N	NMED	2.40E-06	1.31E-01	Heart/Endocrine
Barium	7440-39-3	mg/kg	530			NS	NS	15,600	N	NMED		3.40E-02	
Beryllium	7440-41-7	mg/kg	1.2			64,400	N	156	N	NMED	1.86E-10	7.69E-03	
Cadmium	7440-43-9	mg/kg	0.33			85,900	N	70.5	N	NMED	3.84E-11	4.68E-03	
Calcium	7440-70-2	mg/kg	13,000			NS	NS	13,000,000	N	NMED		1.00E-03	
Chromium (Total) (2)	7440-47-3	mg/kg	17			96.6	N	45,200	N	NMED	1.76E-06	3.76E-04	
Cobalt	7440-48-4	mg/kg	6.3			17,200	N	23.4	N	NMED	3.66E-09	2.69E-01	Endocrine
Copper	7440-50-8	mg/kg	32			NS	NS	3,130	N	NMED		1.02E-02	
Iron	7439-89-6	mg/kg	16,000			NS	NS	54,800	N	NMED		2.92E-01	Gastrointestinal
Lead	7439-92-1	mg/kg	13			NS	NS	200	N	IEUBK			
Magnesium	7439-95-4	mg/kg	10,000			NS	NS	15,600,000	N	NMED		6.41E-04	
Manganese	7439-96-5	mg/kg	770			NS	NS	10,500	N	NMED		7.33E-02	
Mercury (Elemental)	7439-97-6	mg/kg	0.038	J		NS	NS	23.8	N	NMED		1.60E-03	
Nickel	7440-02-0	mg/kg	15			595,000	N	1,560	N	NMED	2.52E-10	9.62E-03	
Potassium	7440-09-7	mg/kg	1,900			NS	NS	15,600,000	N	NMED		1.22E-04	
Selenium	7782-49-2	mg/kg	1.6			NS	NS	391	N	NMED		4.09E-03	
Silver	7440-22-4	mg/kg	0.091	J		NS	NS	391	N	NMED		2.33E-04	
Sodium	7440-23-5	mg/kg	26			NS	NS	7,820,000	N	NMED		3.32E-06	
Thallium	7440-28-0	mg/kg	0.19			NS	NS	0.782	N	NMED		2.43E-01	Hair/Coat/Eyes
Vanadium	7440-62-2	mg/kg	22			NS	NS	394	N	NMED		5.58E-02	
Zinc	7440-66-6	mg/kg	45			NS	NS	23,500	N	NMED		1.91E-03	
									Cumulative Risk/Hazard		**4E-06**	**1.5**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Residential Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Residential Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	0.37
Endocrine	0.40
GI	0.29
Heart	0.13
Hair/Coat	0.24
Eyes	0.24
All Others	0.21

TABLE D1-AP28-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID AP28
FORT WINGATE DEPTO ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		5,300	N	7,400	N	RSL		

TABLE D1-AP28-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID AP28
FORT WINGATE DEPTO ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	29,000			NS	NS	1,290,000	N	NMED		2.25E-02
Antimony	7440-36-0	mg/kg	0.095	J		NS	NS	519	N	NMED		1.83E-04
Arsenic	7440-38-2	mg/kg	1.7			36	N	208	N	NMED	4.74E-07	8.17E-03
Barium	7440-39-3	mg/kg	530			NS	NS	255,000	N	NMED		2.08E-03
Beryllium	7440-41-7	mg/kg	1.2			313,000	N	2,580	N	NMED	3.83E-11	4.65E-04
Cadmium	7440-43-9	mg/kg	0.33			417,000	N	1,110	N	NMED	7.91E-12	2.97E-04
Calcium	7440-70-2	mg/kg	13,000			NS	NS	32,400,000	N	NMED		4.01E-04
Chromium (Total) (2)	7440-47-3	mg/kg	17			505	N	314,000	N	NMED	3.37E-07	5.41E-05
Cobalt	7440-48-4	mg/kg	6.3			83,400	N	388	N	NMED	7.55E-10	1.62E-02
Copper	7440-50-8	mg/kg	32			NS	NS	51,900	N	NMED		6.17E-04
Iron	7439-89-6	mg/kg	16,000			NS	NS	908,000	N	NMED		1.76E-02
Lead	7439-92-1	mg/kg	13			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	10,000			NS	NS	5,680,000	N	NMED		1.76E-03
Manganese	7439-96-5	mg/kg	770			NS	NS	160,000	N	NMED		4.81E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.038	J		NS	NS	112	N	NMED		3.39E-04
Nickel	7440-02-0	mg/kg	15			2,890,000	N	25,700	N	NMED	5.19E-11	5.84E-04
Potassium	7440-09-7	mg/kg	1,900			NS	NS	76,200,000	N	NMED		2.49E-05
Selenium	7782-49-2	mg/kg	1.6			NS	NS	6,490	N	NMED		2.47E-04
Silver	7440-22-4	mg/kg	0.091	J		NS	NS	6,490	N	NMED		1.40E-05
Sodium	7440-23-5	mg/kg	26			NS	NS	37,300,000	N	NMED		6.97E-07
Thallium	7440-28-0	mg/kg	0.19			NS	NS	13	N	NMED		1.46E-02
Vanadium	7440-62-2	mg/kg	22			NS	NS	6,530	N	NMED		3.37E-03
Zinc	7440-66-6	mg/kg	45			NS	NS	38,900	N	NMED		1.16E-03
									Cumulative Risk/Hazard		**8E-07**	**0.10**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Industrial Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-AP28-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID AP28
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		626	N	2,420	N	NMEDC			

TABLE D1-AP28-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID AP28
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	29,000			NS	NS	41,400	N	NMED		7.00E-01	Nervous
Antimony	7440-36-0	mg/kg	0.095	J		NS	NS	142	N	NMED		6.69E-04	
Arsenic	7440-38-2	mg/kg	1.7			216	N	41	N	NMED	7.87E-08	4.13E-02	
Barium	7440-39-3	mg/kg	530			NS	NS	4,390	N	NMED		1.21E-01	Kidneys
Beryllium	7440-41-7	mg/kg	1.2			2,710	N	148	N	NMED	4.43E-09	8.11E-03	
Cadmium	7440-43-9	mg/kg	0.33			3,610	N	72	N	NMED	9.14E-10	4.58E-03	
Calcium	7440-70-2	mg/kg	13,000			NS	NS	8,850,000	N	NMED		1.47E-03	
Chromium (Total) (3)	7440-47-3	mg/kg	17			468	N	134	N	NMED	3.63E-07	1.27E-01	GI, Blood
Cobalt	7440-48-4	mg/kg	6.3			722	N	37	N	NMED	8.73E-08	1.72E-01	Endocrine
Copper	7440-50-8	mg/kg	32			NS	NS	14,200	N	NMED		2.25E-03	
Iron	7439-89-6	mg/kg	16,000			NS	NS	248,000	N	NMED		6.45E-02	
Lead	7439-92-1	mg/kg	13			NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	10,000			NS	NS	1,550,000	N	NMED		6.45E-03	
Manganese	7439-96-5	mg/kg	770			NS	NS	464	Y	NMED		1.66E+00	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.038	J		NS	NS	21	N	NMED		1.84E-03	
Nickel	7440-02-0	mg/kg	15			20,500	N	753	N	NMED	7.32E-09	1.99E-02	
Potassium	7440-09-7	mg/kg	1,900			NS	NS	20,800,000	N	NMED		9.13E-05	
Selenium	7782-49-2	mg/kg	1.6			NS	NS	1,750	N	NMED		9.14E-04	
Silver	7440-22-4	mg/kg	0.091	J		NS	NS	1,770	N	NMED		5.14E-05	
Sodium	7440-23-5	mg/kg	26			NS	NS	10,200,000	N	NMED		2.55E-06	
Thallium	7440-28-0	mg/kg	0.19			NS	NS	4	N	NMED		5.37E-02	
Vanadium	7440-62-2	mg/kg	22			NS	NS	614	N	NMED		3.58E-02	
Zinc	7440-66-6	mg/kg	45			NS	NS	106,000	N	NMED		4.25E-04	
									Cumulative Risk/Hazard		**5E-07**	**3.0**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	2.4
Endocrine	0.17
GI	0.13
Blood	0.13
Kidneys	0.12
All Others	0.24

TABLE D1-AQ15-1
GRID AQ15 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	2,200	N	RSL			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	6.3	N	RSL			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		211	N	36	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		3.56	N	18.5	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	7.7	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		31.6	N	70.4	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	6.16	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	7.64	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		333	N	247	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		83.1	N	301	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	156	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U		60.4	N	131	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U		313	N	6.16	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	3,850	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		1,300	N	570	N	RSL			

TABLE D1-AQ15-1
GRID AQ15 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	19,000			NS	NS	78,000	N	NMED		2.44E-01	Nervous
Antimony	7440-36-0	mg/kg	0.19	J		NS	NS	31.3	N	NMED		6.07E-03	
Arsenic	7440-38-2	mg/kg	1.2			7.07	N	13	N	NMED	1.70E-06	9.23E-02	
Barium	7440-39-3	mg/kg	160			NS	NS	15,600	N	NMED		1.03E-02	
Beryllium	7440-41-7	mg/kg	0.84	J		64,400	N	156	N	NMED	1.30E-10	5.38E-03	
Cadmium	7440-43-9	mg/kg	0.97	J		85,900	N	70.5	N	NMED	1.13E-10	1.38E-02	
Calcium	7440-70-2	mg/kg	3,200			NS	NS	13,000,000	N	NMED		2.46E-04	
Chromium (Total) (2)	7440-47-3	mg/kg	13			96.6	N	45,200	N	NMED	1.35E-06	2.88E-04	
Cobalt	7440-48-4	mg/kg	4.7			17,200	N	23.4	N	NMED	2.73E-09	2.01E-01	Endocrine
Copper	7440-50-8	mg/kg	40			NS	NS	3,130	N	NMED		1.28E-02	
Iron	7439-89-6	mg/kg	11,000			NS	NS	54,800	N	NMED		2.01E-01	Gastrointestinal
Lead	7439-92-1	mg/kg	12			NS	NS	200	N	IEUBK			
Magnesium	7439-95-4	mg/kg	6,900			NS	NS	15,600,000	N	NMED		4.42E-04	
Manganese	7439-96-5	mg/kg	300			NS	NS	10,500	N	NMED		2.86E-02	
Mercury (Elemental)	7439-97-6	mg/kg	1.2	J		NS	NS	23.8	N	NMED		5.04E-02	
Nickel	7440-02-0	mg/kg	11			595,000	N	1,560	N	NMED	1.85E-10	7.05E-03	
Potassium	7440-09-7	mg/kg	1,700			NS	NS	15,600,000	N	NMED		1.09E-04	
Selenium	7782-49-2	mg/kg	1.4			NS	NS	391	N	NMED		3.58E-03	
Silver	7440-22-4	mg/kg	0.064	J		NS	NS	391	N	NMED		1.64E-04	
Sodium	7440-23-5	mg/kg	20			NS	NS	7,820,000	N	NMED		2.56E-06	
Thallium	7440-28-0	mg/kg	0.072	J		NS	NS	0.782	N	NMED		9.21E-02	
Vanadium	7440-62-2	mg/kg	17			NS	NS	394	N	NMED		4.31E-02	
Zinc	7440-66-6	mg/kg	43			NS	NS	23,500	N	NMED		1.83E-03	
									Cumulative Risk/Hazard		**3E-06**	**1.0**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Residential Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Residential Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	0.24
Endocrine	0.20
GI	0.20
All Others	0.37

TABLE D1-AQ15-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID AQ15
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		5,300	N	7,400	N	RSL		

TABLE D1-AQ15-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID AQ15
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	19,000			NS	NS	1,290,000	N	NMED		1.47E-02
Antimony	7440-36-0	mg/kg	0.19	J		NS	NS	519	N	NMED		3.66E-04
Arsenic	7440-38-2	mg/kg	1.2			36	N	208	N	NMED	3.34E-07	5.77E-03
Barium	7440-39-3	mg/kg	160			NS	NS	255,000	N	NMED		6.27E-04
Beryllium	7440-41-7	mg/kg	0.84	J		313,000	N	2,580	N	NMED	2.68E-11	3.26E-04
Cadmium	7440-43-9	mg/kg	0.97	J		417,000	N	1,110	N	NMED	2.33E-11	8.74E-04
Calcium	7440-70-2	mg/kg	3,200			NS	NS	32,400,000	N	NMED		9.88E-05
Chromium (Total) (2)	7440-47-3	mg/kg	13			505	N	314,000	N	NMED	2.57E-07	4.14E-05
Cobalt	7440-48-4	mg/kg	4.7			83,400	N	388	N	NMED	5.64E-10	1.21E-02
Copper	7440-50-8	mg/kg	40			NS	NS	51,900	N	NMED		7.71E-04
Iron	7439-89-6	mg/kg	11,000			NS	NS	908,000	N	NMED		1.21E-02
Lead	7439-92-1	mg/kg	12			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	6,900			NS	NS	5,680,000	N	NMED		1.21E-03
Manganese	7439-96-5	mg/kg	300			NS	NS	160,000	N	NMED		1.88E-03
Mercury (Elemental)	7439-97-6	mg/kg	1.2	J		NS	NS	112	N	NMED		1.07E-02
Nickel	7440-02-0	mg/kg	11			2,890,000	N	25,700	N	NMED	3.81E-11	4.28E-04
Potassium	7440-09-7	mg/kg	1,700			NS	NS	76,200,000	N	NMED		2.23E-05
Selenium	7782-49-2	mg/kg	1.4			NS	NS	6,490	N	NMED		2.16E-04
Silver	7440-22-4	mg/kg	0.064	J		NS	NS	6,490	N	NMED		9.86E-06
Sodium	7440-23-5	mg/kg	20			NS	NS	37,300,000	N	NMED		5.36E-07
Thallium	7440-28-0	mg/kg	0.072	J		NS	NS	13	N	NMED		5.54E-03
Vanadium	7440-62-2	mg/kg	17			NS	NS	6,530	N	NMED		2.60E-03
Zinc	7440-66-6	mg/kg	43			NS	NS	38,900	N	NMED		1.11E-03
									Cumulative Risk/Hazard		**6E-07**	**0.07**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Industrial Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-AQ15-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID AQ15
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		626	N	2,420	N	NMEDC			

TABLE D1-AQ15-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID AQ15
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	19,000			NS	NS	41,400	N	NMED		4.59E-01	Nervous
Antimony	7440-36-0	mg/kg	0.19	J		NS	NS	142	N	NMED		1.34E-03	
Arsenic	7440-38-2	mg/kg	1.2			216	N	41	N	NMED	5.56E-08	2.91E-02	
Barium	7440-39-3	mg/kg	160			NS	NS	4,390	N	NMED		3.64E-02	
Beryllium	7440-41-7	mg/kg	0.84	J		2,710	N	148	N	NMED	3.10E-09	5.68E-03	
Cadmium	7440-43-9	mg/kg	0.97	J		3,610	N	72	N	NMED	2.69E-09	1.35E-02	
Calcium	7440-70-2	mg/kg	3,200			NS	NS	8,850,000	N	NMED		3.62E-04	
Chromium (Total) (3)	7440-47-3	mg/kg	13			468	N	134	N	NMED	2.78E-07	9.70E-02	
Cobalt	7440-48-4	mg/kg	4.7			722	N	37	N	NMED	6.51E-08	1.28E-01	Endocrine
Copper	7440-50-8	mg/kg	40			NS	NS	14,200	N	NMED		2.82E-03	
Iron	7439-89-6	mg/kg	11,000			NS	NS	248,000	N	NMED		4.44E-02	
Lead	7439-92-1	mg/kg	12			NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	6,900			NS	NS	1,550,000	N	NMED		4.45E-03	
Manganese	7439-96-5	mg/kg	300			NS	NS	464	N	NMED		6.47E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	1.2	J		NS	NS	21	N	NMED		5.80E-02	
Nickel	7440-02-0	mg/kg	11			20,500	N	753	N	NMED	5.37E-09	1.46E-02	
Potassium	7440-09-7	mg/kg	1,700			NS	NS	20,800,000	N	NMED		8.17E-05	
Selenium	7782-49-2	mg/kg	1.4			NS	NS	1,750	N	NMED		8.00E-04	
Silver	7440-22-4	mg/kg	0.064	J		NS	NS	1,770	N	NMED		3.62E-05	
Sodium	7440-23-5	mg/kg	20			NS	NS	10,200,000	N	NMED		1.96E-06	
Thallium	7440-28-0	mg/kg	0.072	J		NS	NS	4	N	NMED		2.03E-02	
Vanadium	7440-62-2	mg/kg	17			NS	NS	614	N	NMED		2.77E-02	
Zinc	7440-66-6	mg/kg	43			NS	NS	106,000	N	NMED		4.06E-04	
									Cumulative Risk/Hazard		**4E-07**	**1.6**	
									Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	1.1
Endocrine	0.13
All Others	0.36

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-AQ22-1
GRID AQ22 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U		60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U		313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		1,300	N	570	N	RSL		

TABLE D1-AQ22-1
GRID AQ22 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	12,000			NS	NS	78,000	N	NMED		1.54E-01
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	31.3	N	NMED		
Arsenic	7440-38-2	mg/kg	0.9			7.07	N	13	N	NMED	1.27E-06	6.92E-02
Barium	7440-39-3	mg/kg	160			NS	NS	15,600	N	NMED		1.03E-02
Beryllium	7440-41-7	mg/kg	0.4	J		64,400	N	156	N	NMED	6.21E-11	2.56E-03
Cadmium	7440-43-9	mg/kg	0.22			85,900	N	70.5	N	NMED	2.56E-11	3.12E-03
Calcium	7440-70-2	mg/kg	2,100			NS	NS	13,000,000	N	NMED		1.62E-04
Chromium (Total) (2)	7440-47-3	mg/kg	8.9			96.6	N	45,200	N	NMED	9.21E-07	1.97E-04
Cobalt	7440-48-4	mg/kg	3.7			17,200	N	23.4	N	NMED	2.15E-09	1.58E-01
Copper	7440-50-8	mg/kg	30			NS	NS	3,130	N	NMED		9.58E-03
Iron	7439-89-6	mg/kg	7,400			NS	NS	54,800	N	NMED		1.35E-01
Lead	7439-92-1	mg/kg	10			NS	NS	200	N	IEUBK		
Magnesium	7439-95-4	mg/kg	5,100			NS	NS	15,600,000	N	NMED		3.27E-04
Manganese	7439-96-5	mg/kg	250			NS	NS	10,500	N	NMED		2.38E-02
Mercury (Elemental)	7439-97-6	mg/kg	0.039	J		NS	NS	23.8	N	NMED		1.64E-03
Nickel	7440-02-0	mg/kg	6			595,000	N	1,560	N	NMED	1.01E-10	3.85E-03
Potassium	7440-09-7	mg/kg	690			NS	NS	15,600,000	N	NMED		4.42E-05
Selenium	7782-49-2	mg/kg	0.86			NS	NS	391	N	NMED		2.20E-03
Silver	7440-22-4	mg/kg	0.05	J		NS	NS	391	N	NMED		1.28E-04
Sodium	7440-23-5	mg/kg	51			NS	NS	7,820,000	N	NMED		6.52E-06
Thallium	7440-28-0	mg/kg	0.053	J		NS	NS	0.782	N	NMED		6.78E-02
Vanadium	7440-62-2	mg/kg	16			NS	NS	394	N	NMED		4.06E-02
Zinc	7440-66-6	mg/kg	24			NS	NS	23,500	N	NMED		1.02E-03
									Cumulative Risk/Hazard		**2E-06**	**0.68**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Residential Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Residential Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI =Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-AQ22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID AQ22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		5,300	N	7,400	N	RSL		

TABLE D1-AQ22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID AQ22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	12,000			NS	NS	1,290,000	N	NMED		9.30E-03
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	519	N	NMED		
Arsenic	7440-38-2	mg/kg	0.9			36	N	208	N	NMED	2.51E-07	4.33E-03
Barium	7440-39-3	mg/kg	160			NS	NS	255,000	N	NMED		6.27E-04
Beryllium	7440-41-7	mg/kg	0.4	J		313,000	N	2,580	N	NMED	1.28E-11	1.55E-04
Cadmium	7440-43-9	mg/kg	0.22			417,000	N	1,110	N	NMED	5.28E-12	1.98E-04
Calcium	7440-70-2	mg/kg	2,100			NS	NS	32,400,000	N	NMED		
Chromium (Total) (2)	7440-47-3	mg/kg	8.9			505	N	314,000	N	NMED	1.76E-07	2.83E-05
Cobalt	7440-48-4	mg/kg	3.7			83,400	N	388	N	NMED	4.44E-10	9.54E-03
Copper	7440-50-8	mg/kg	30			NS	NS	51,900	N	NMED		5.78E-04
Iron	7439-89-6	mg/kg	7,400			NS	NS	908,000	N	NMED		8.15E-03
Lead	7439-92-1	mg/kg	10			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	5,100			NS	NS	5,680,000	N	NMED		
Manganese	7439-96-5	mg/kg	250			NS	NS	160,000	N	NMED		1.56E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.039	J		NS	NS	112	N	NMED		3.48E-04
Nickel	7440-02-0	mg/kg	6			2,890,000	N	25,700	N	NMED	2.08E-11	2.33E-04
Potassium	7440-09-7	mg/kg	690			NS	NS	76,200,000	N	NMED		
Selenium	7782-49-2	mg/kg	0.86			NS	NS	6,490	N	NMED		1.33E-04
Silver	7440-22-4	mg/kg	0.05	J		NS	NS	6,490	N	NMED		7.70E-06
Sodium	7440-23-5	mg/kg	51			NS	NS	37,300,000	N	NMED		1.37E-06
Thallium	7440-28-0	mg/kg	0.053	J		NS	NS	13	N	NMED		4.08E-03
Vanadium	7440-62-2	mg/kg	16			NS	NS	6,530	N	NMED		2.45E-03
Zinc	7440-66-6	mg/kg	24			NS	NS	38,900	N	NMED		6.17E-04
									Cumulative Risk/Hazard		**4E-07**	**0.04**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Industrial Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-AQ22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID AQ22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		626	N	2,420	N	NMEDC			

TABLE D1-AQ22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID AQ22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	12,000			NS	NS	41,400	N	NMED		2.90E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	142	N	NMED			
Arsenic	7440-38-2	mg/kg	0.9			216	N	41	N	NMED	4.17E-08	2.18E-02	
Barium	7440-39-3	mg/kg	160			NS	NS	4,390	N	NMED		3.64E-02	
Beryllium	7440-41-7	mg/kg	0.4	J		2,710	N	148	N	NMED	1.48E-09	2.70E-03	
Cadmium	7440-43-9	mg/kg	0.22			3,610	N	72	N	NMED	6.09E-10	3.05E-03	
Calcium	7440-70-2	mg/kg	2,100			NS	NS	8,850,000	N	NMED		2.37E-04	
Chromium (Total) (3)	7440-47-3	mg/kg	8.9			468	N	134	N	NMED	1.90E-07	6.64E-02	
Cobalt	7440-48-4	mg/kg	3.7			722	N	37	N	NMED	5.12E-08	1.01E-01	Endocrine
Copper	7440-50-8	mg/kg	30			NS	NS	14,200	N	NMED		2.11E-03	
Iron	7439-89-6	mg/kg	7,400			NS	NS	248,000	N	NMED		2.98E-02	
Lead	7439-92-1	mg/kg	10			NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	5,100			NS	NS	1,550,000	N	NMED		3.29E-03	
Manganese	7439-96-5	mg/kg	250			NS	NS	464	N	NMED		5.39E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.039	J		NS	NS	21	N	NMED		1.88E-03	
Nickel	7440-02-0	mg/kg	6			20,500	N	753	N	NMED	2.93E-09	7.97E-03	
Potassium	7440-09-7	mg/kg	690			NS	NS	20,800,000	N	NMED		3.32E-05	
Selenium	7782-49-2	mg/kg	0.86			NS	NS	1,750	N	NMED		4.91E-04	
Silver	7440-22-4	mg/kg	0.05	J		NS	NS	1,770	N	NMED		2.82E-05	
Sodium	7440-23-5	mg/kg	51			NS	NS	10,200,000	N	NMED		5.00E-06	
Thallium	7440-28-0	mg/kg	0.053	J		NS	NS	4	N	NMED		1.50E-02	
Vanadium	7440-62-2	mg/kg	16			NS	NS	614	N	NMED		2.61E-02	
Zinc	7440-66-6	mg/kg	24			NS	NS	106,000	N	NMED		2.26E-04	
									Cumulative Risk/Hazard		**3E-07**	**1.1**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	0.8
Endocrine	0.10
All Others	0.22

TABLE D1-C27-1
GRID C27 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U		60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U		313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		1,300	N	570	N	RSL		

TABLE D1-C27-1
GRID C27 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	15,000			NS	NS	78,000	N	NMED		1.92E-01
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	31.3	N	NMED		
Arsenic	7440-38-2	mg/kg	0.94			7.07	N	13	N	NMED	1.33E-06	7.23E-02
Barium	7440-39-3	mg/kg	320			NS	NS	15,600	N	NMED		2.05E-02
Beryllium	7440-41-7	mg/kg	0.78	J		64,400	N	156	N	NMED	1.21E-10	5.00E-03
Cadmium	7440-43-9	mg/kg	0.2			85,900	N	70.5	N	NMED	2.33E-11	2.84E-03
Calcium	7440-70-2	mg/kg	37,000			NS	NS	13,000,000	N	NMED		2.85E-03
Chromium (Total) (2)	7440-47-3	mg/kg	6.2			96.6	N	45,200	N	NMED	6.42E-07	1.37E-04
Cobalt	7440-48-4	mg/kg	3.1			17,200	N	23.4	N	NMED	1.80E-09	1.32E-01
Copper	7440-50-8	mg/kg	36			NS	NS	3,130	N	NMED		1.15E-02
Iron	7439-89-6	mg/kg	5,000			NS	NS	54,800	N	NMED		9.12E-02
Lead	7439-92-1	mg/kg	7.6			NS	NS	200	N	IEUBK		
Magnesium	7439-95-4	mg/kg	4,600			NS	NS	15,600,000	N	NMED		2.95E-04
Manganese	7439-96-5	mg/kg	410			NS	NS	10,500	N	NMED		3.90E-02
Mercury (Elemental)	7439-97-6	mg/kg	0.016	J		NS	NS	23.8	N	NMED		6.72E-04
Nickel	7440-02-0	mg/kg	6.8			595,000	N	1,560	N	NMED	1.14E-10	4.36E-03
Potassium	7440-09-7	mg/kg	1,600			NS	NS	15,600,000	N	NMED		1.03E-04
Selenium	7782-49-2	mg/kg	1.3			NS	NS	391	N	NMED		3.32E-03
Silver	7440-22-4	mg/kg	0.027	J		NS	NS	391	N	NMED		6.91E-05
Sodium	7440-23-5	mg/kg	64			NS	NS	7,820,000	N	NMED		8.18E-06
Thallium	7440-28-0	mg/kg	0.067	J		NS	NS	0.782	N	NMED		8.57E-02
Vanadium	7440-62-2	mg/kg	5.3			NS	NS	394	N	NMED		1.35E-02
Zinc	7440-66-6	mg/kg	16			NS	NS	23,500	N	NMED		6.81E-04
									Cumulative Risk/Hazard		**2E-06**	**0.68**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Residential Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Residential Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-C27-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID C27
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		5,300	N	7,400	N	RSL		

TABLE D1-C27-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID C27
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	15,000			NS	NS	1,290,000	N	NMED		1.16E-02
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	519	N	NMED		
Arsenic	7440-38-2	mg/kg	0.94			36	N	208	N	NMED	2.62E-07	4.52E-03
Barium	7440-39-3	mg/kg	320			NS	NS	255,000	N	NMED		1.25E-03
Beryllium	7440-41-7	mg/kg	0.78	J		313,000	N	2,580	N	NMED	2.49E-11	3.02E-04
Cadmium	7440-43-9	mg/kg	0.2			417,000	N	1,110	N	NMED	4.80E-12	1.80E-04
Calcium	7440-70-2	mg/kg	37,000			NS	NS	32,400,000	N	NMED		1.14E-03
Chromium (Total) (2)	7440-47-3	mg/kg	6.2			505	N	314,000	N	NMED	1.23E-07	1.97E-05
Cobalt	7440-48-4	mg/kg	3.1			83,400	N	388	N	NMED	3.72E-10	7.99E-03
Copper	7440-50-8	mg/kg	36			NS	NS	51,900	N	NMED		6.94E-04
Iron	7439-89-6	mg/kg	5,000			NS	NS	908,000	N	NMED		5.51E-03
Lead	7439-92-1	mg/kg	7.6			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	4,600			NS	NS	5,680,000	N	NMED		8.10E-04
Manganese	7439-96-5	mg/kg	410			NS	NS	160,000	N	NMED		2.56E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.016	J		NS	NS	112	N	NMED		1.43E-04
Nickel	7440-02-0	mg/kg	6.8			2,890,000	N	25,700	N	NMED	2.35E-11	2.65E-04
Potassium	7440-09-7	mg/kg	1,600			NS	NS	76,200,000	N	NMED		2.10E-05
Selenium	7782-49-2	mg/kg	1.3			NS	NS	6,490	N	NMED		2.00E-04
Silver	7440-22-4	mg/kg	0.027	J		NS	NS	6,490	N	NMED		4.16E-06
Sodium	7440-23-5	mg/kg	64			NS	NS	37,300,000	N	NMED		1.72E-06
Thallium	7440-28-0	mg/kg	0.067	J		NS	NS	13	N	NMED		5.15E-03
Vanadium	7440-62-2	mg/kg	5.3			NS	NS	6,530	N	NMED		8.12E-04
Zinc	7440-66-6	mg/kg	16			NS	NS	38,900	N	NMED		4.11E-04
									Cumulative Risk/Hazard		**4E-07**	**0.04**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Industrial Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI =Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-C27-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID C27
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		626	N	2,420	N	NMEDC			

TABLE D1-C27-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID C27
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	15,000			NS	NS	41,400	N	NMED		3.62E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	142	N	NMED			
Arsenic	7440-38-2	mg/kg	0.94			216	N	41	N	NMED	4.35E-08	2.28E-02	
Barium	7440-39-3	mg/kg	320			NS	NS	4,390	N	NMED		7.29E-02	
Beryllium	7440-41-7	mg/kg	0.78	J		2,710	N	148	N	NMED	2.88E-09	5.27E-03	
Cadmium	7440-43-9	mg/kg	0.2			3,610	N	72	N	NMED	5.54E-10	2.77E-03	
Calcium	7440-70-2	mg/kg	37,000			NS	NS	8,850,000	N	NMED		4.18E-03	
Chromium (Total) (3)	7440-47-3	mg/kg	6.2			468	N	134	N	NMED	1.32E-07	4.63E-02	
Cobalt	7440-48-4	mg/kg	3.1			722	N	37	N	NMED	4.29E-08	8.45E-02	
Copper	7440-50-8	mg/kg	36			NS	NS	14,200	N	NMED		2.54E-03	
Iron	7439-89-6	mg/kg	5,000			NS	NS	248,000	N	NMED		2.02E-02	
Lead	7439-92-1	mg/kg	7.6			NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	4,600			NS	NS	1,550,000	N	NMED		2.97E-03	
Manganese	7439-96-5	mg/kg	410			NS	NS	464	N	NMED		8.84E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.016	J		NS	NS	21	N	NMED		7.73E-04	
Nickel	7440-02-0	mg/kg	6.8			20,500	N	753	N	NMED	3.32E-09	9.03E-03	
Potassium	7440-09-7	mg/kg	1,600			NS	NS	20,800,000	N	NMED		7.69E-05	
Selenium	7782-49-2	mg/kg	1.3			NS	NS	1,750	N	NMED		7.43E-04	
Silver	7440-22-4	mg/kg	0.027	J		NS	NS	1,770	N	NMED		1.53E-05	
Sodium	7440-23-5	mg/kg	64			NS	NS	10,200,000	N	NMED		6.27E-06	
Thallium	7440-28-0	mg/kg	0.067	J		NS	NS	4	N	NMED		1.89E-02	
Vanadium	7440-62-2	mg/kg	5.3			NS	NS	614	N	NMED		8.63E-03	
Zinc	7440-66-6	mg/kg	16			NS	NS	106,000	N	NMED		1.51E-04	
									Cumulative Risk/Hazard		**2E-07**	**1.5**	
									Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	1.2
All Others	0.30

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI - Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
N = no
NA = not applicable

NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-C35-1
GRID C35 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U		60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U		313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		1,300	N	570	N	RSL		

TABLE D1-C35-1
GRID C35 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	16,000			NS	NS	78,000	N	NMED		2.05E-01
Antimony	7440-36-0	mg/kg	0.19	J		NS	NS	31.3	N	NMED		6.07E-03
Arsenic	7440-38-2	mg/kg	1.4			7.07	N	13	N	NMED	1.98E-06	1.08E-01
Barium	7440-39-3	mg/kg	260			NS	NS	15,600	N	NMED		1.67E-02
Beryllium	7440-41-7	mg/kg	0.71	J		64,400	N	156	N	NMED	1.10E-10	4.55E-03
Cadmium	7440-43-9	mg/kg	0.28			85,900	N	70.5	N	NMED	3.26E-11	3.97E-03
Calcium	7440-70-2	mg/kg	19,000			NS	NS	13,000,000	N	NMED		1.46E-03
Chromium (Total) (2)	7440-47-3	mg/kg	11			96.6	N	45,200	N	NMED	1.14E-06	2.43E-04
Cobalt	7440-48-4	mg/kg	4.4			17,200	N	23.4	N	NMED	2.56E-09	1.88E-01
Copper	7440-50-8	mg/kg	59			NS	NS	3,130	N	NMED		1.88E-02
Iron	7439-89-6	mg/kg	8,900			NS	NS	54,800	N	NMED		1.62E-01
Lead	7439-92-1	mg/kg	12			NS	NS	200	N	IEUBK		
Magnesium	7439-95-4	mg/kg	5,300			NS	NS	15,600,000	N	NMED		3.40E-04
Manganese	7439-96-5	mg/kg	650			NS	NS	10,500	N	NMED		6.19E-02
Mercury (Elemental)	7439-97-6	mg/kg	0.031	J		NS	NS	23.8	N	NMED		1.30E-03
Nickel	7440-02-0	mg/kg	8.9			595,000	N	1,560	N	NMED	1.50E-10	5.71E-03
Potassium	7440-09-7	mg/kg	2,000			NS	NS	15,600,000	N	NMED		1.28E-04
Selenium	7782-49-2	mg/kg	1.5			NS	NS	391	N	NMED		3.84E-03
Silver	7440-22-4	mg/kg	0.05	U		NS	NS	391	N	NMED		
Sodium	7440-23-5	mg/kg	45			NS	NS	7,820,000	N	NMED		5.75E-06
Thallium	7440-28-0	mg/kg	0.071	J		NS	NS	0.782	N	NMED		9.08E-02
Vanadium	7440-62-2	mg/kg	12			NS	NS	394	N	NMED		3.05E-02
Zinc	7440-66-6	mg/kg	23			NS	NS	23,500	N	NMED		9.79E-04
									Cumulative Risk/Hazard		**3E-06**	**0.91**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Residential Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Residential Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-C35-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID C35
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEIXOC

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		5,300	N	7,400	N	RSL		

TABLE D1-C35-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID C35
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEIXOC

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	16,000			NS	NS	1,290,000	N	NMED		1.24E-02
Antimony	7440-36-0	mg/kg	0.19	J		NS	NS	519	N	NMED		3.66E-04
Arsenic	7440-38-2	mg/kg	1.4			36	N	208	N	NMED	3.90E-07	6.73E-03
Barium	7440-39-3	mg/kg	260			NS	NS	255,000	N	NMED		1.02E-03
Beryllium	7440-41-7	mg/kg	0.71	J		313,000	N	2,580	N	NMED	2.27E-11	2.75E-04
Cadmium	7440-43-9	mg/kg	0.28			417,000	N	1,110	N	NMED	6.71E-12	2.52E-04
Calcium	7440-70-2	mg/kg	19,000			NS	NS	32,400,000	N	NMED		5.86E-04
Chromium (Total) (2)	7440-47-3	mg/kg	11			505	N	314,000	N	NMED	2.18E-07	3.50E-05
Cobalt	7440-48-4	mg/kg	4.4			83,400	N	388	N	NMED	5.28E-10	1.13E-02
Copper	7440-50-8	mg/kg	59			NS	NS	51,900	N	NMED		1.14E-03
Iron	7439-89-6	mg/kg	8,900			NS	NS	908,000	N	NMED		9.80E-03
Lead	7439-92-1	mg/kg	12			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	5,300			NS	NS	5,680,000	N	NMED		9.33E-04
Manganese	7439-96-5	mg/kg	650			NS	NS	160,000	N	NMED		4.06E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.031	J		NS	NS	112	N	NMED		2.77E-04
Nickel	7440-02-0	mg/kg	8.9			2,890,000	N	25,700	N	NMED	3.08E-11	3.46E-04
Potassium	7440-09-7	mg/kg	2,000			NS	NS	76,200,000	N	NMED		2.62E-05
Selenium	7782-49-2	mg/kg	1.5			NS	NS	6,490	N	NMED		2.31E-04
Silver	7440-22-4	mg/kg	0.05	U		NS	NS	6,490	N	NMED		
Sodium	7440-23-5	mg/kg	45			NS	NS	37,300,000	N	NMED		1.21E-06
Thallium	7440-28-0	mg/kg	0.071	J		NS	NS	13	N	NMED		5.46E-03
Vanadium	7440-62-2	mg/kg	12			NS	NS	6,530	N	NMED		1.84E-03
Zinc	7440-66-6	mg/kg	23			NS	NS	38,900	N	NMED		5.91E-04
									Cumulative Risk/Hazard		**6E-07**	**0.06**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Industrial Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-C35-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID C35
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		626	N	2,420	N	NMEDC			

TABLE D1-C35-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID C35
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	16,000			NS	NS	41,400	N	NMED		3.86E-01	Nervous
Antimony	7440-36-0	mg/kg	0.19	J		NS	NS	142	N	NMED		1.34E-03	
Arsenic	7440-38-2	mg/kg	1.4			216	N	41	N	NMED	6.48E-08	3.40E-02	
Barium	7440-39-3	mg/kg	260			NS	NS	4,390	N	NMED		5.92E-02	
Beryllium	7440-41-7	mg/kg	0.71	J		2,710	N	148	N	NMED	2.62E-09	4.80E-03	
Cadmium	7440-43-9	mg/kg	0.28			3,610	N	72	N	NMED	7.76E-10	3.88E-03	
Calcium	7440-70-2	mg/kg	19,000			NS	NS	8,850,000	N	NMED		2.15E-03	
Chromium (Total) (3)	7440-47-3	mg/kg	11			468	N	134	N	NMED	2.35E-07	8.21E-02	
Cobalt	7440-48-4	mg/kg	4.4			722	N	37	N	NMED	6.09E-08	1.20E-01	Endocrine
Copper	7440-50-8	mg/kg	59			NS	NS	14,200	N	NMED		4.15E-03	
Iron	7439-89-6	mg/kg	8,900			NS	NS	248,000	N	NMED		3.59E-02	
Lead	7439-92-1	mg/kg	12			NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	5,300			NS	NS	1,550,000	N	NMED		3.42E-03	
Manganese	7439-96-5	mg/kg	650			NS	NS	464	Y	NMED		1.40E+00	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.031	J		NS	NS	21	N	NMED		1.50E-03	
Nickel	7440-02-0	mg/kg	8.9			20,500	N	753	N	NMED	4.34E-09	1.18E-02	
Potassium	7440-09-7	mg/kg	2,000			NS	NS	20,800,000	N	NMED		9.62E-05	
Selenium	7782-49-2	mg/kg	1.5			NS	NS	1,750	N	NMED		8.57E-04	
Silver	7440-22-4	mg/kg	0.05	U		NS	NS	1,770	N	NMED			
Sodium	7440-23-5	mg/kg	45			NS	NS	10,200,000	N	NMED		4.41E-06	
Thallium	7440-28-0	mg/kg	0.071	J		NS	NS	4	N	NMED		2.01E-02	
Vanadium	7440-62-2	mg/kg	12			NS	NS	614	N	NMED		1.95E-02	
Zinc	7440-66-6	mg/kg	23			NS	NS	106,000	N	NMED		2.17E-04	
									Cumulative Risk/Hazard		**4E-07**	**2.2**	
									Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	1.8
Endocrine	0.12
All Others	0.29

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-C37-1
GRID C37 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.15	UJ		NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.15	UJ		NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.15	UJ		211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.15	UJ		17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.15	UJ		3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.15	UJ		NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.15	UJ		31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.15	UJ		NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.15	UJ		NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.15	UJ		333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.15	UJ		83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.15	UJ		NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.15	UJ		60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.3	UJ		313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.15	UJ		NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.5	UJ		1,300	N	570	N	RSL		

TABLE D1-C37-1
GRID C37 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	14,000			NS	NS	78,000	N	NMED		1.79E-01
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	31.3	N	NMED		
Arsenic	7440-38-2	mg/kg	1.4			7.07	N	13	N	NMED	1.98E-06	1.08E-01
Barium	7440-39-3	mg/kg	530			NS	NS	15,600	N	NMED		3.40E-02
Beryllium	7440-41-7	mg/kg	0.8	J		64,400	N	156	N	NMED	1.24E-10	5.13E-03
Cadmium	7440-43-9	mg/kg	0.24			85,900	N	70.5	N	NMED	2.79E-11	3.40E-03
Calcium	7440-70-2	mg/kg	60,000			NS	NS	13,000,000	N	NMED		4.62E-03
Chromium (Total) (2)	7440-47-3	mg/kg	9			96.6	N	45,200	N	NMED	9.32E-07	1.99E-04
Cobalt	7440-48-4	mg/kg	3.7			17,200	N	23.4	N	NMED	2.15E-09	1.58E-01
Copper	7440-50-8	mg/kg	23			NS	NS	3,130	N	NMED		7.35E-03
Iron	7439-89-6	mg/kg	7,700			NS	NS	54,800	N	NMED		1.41E-01
Lead	7439-92-1	mg/kg	12			NS	NS	200	N	IEUBK		
Magnesium	7439-95-4	mg/kg	4,500			NS	NS	15,600,000	N	NMED		2.88E-04
Manganese	7439-96-5	mg/kg	930			NS	NS	10,500	N	NMED		8.86E-02
Mercury (Elemental)	7439-97-6	mg/kg	0.033	J		NS	NS	23.8	N	NMED		1.39E-03
Nickel	7440-02-0	mg/kg	8.1			595,000	N	1,560	N	NMED	1.36E-10	5.19E-03
Potassium	7440-09-7	mg/kg	2,000			NS	NS	15,600,000	N	NMED		1.28E-04
Selenium	7782-49-2	mg/kg	1.5			NS	NS	391	N	NMED		3.84E-03
Silver	7440-22-4	mg/kg	0.052	J		NS	NS	391	N	NMED		1.33E-04
Sodium	7440-23-5	mg/kg	38			NS	NS	7,820,000	N	NMED		4.86E-06
Thallium	7440-28-0	mg/kg	0.091	J		NS	NS	0.782	N	NMED		1.16E-01
Vanadium	7440-62-2	mg/kg	7			NS	NS	394	N	NMED		1.78E-02
Zinc	7440-66-6	mg/kg	17			NS	NS	23,500	N	NMED		7.23E-04
									Cumulative Risk/Hazard		**3E-06**	**0.87**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Residential Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Residential Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-C37-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID C37
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.15	UJ		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.15	UJ		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.15	UJ		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.15	UJ		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.15	UJ		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.15	UJ		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.15	UJ		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.15	UJ		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.15	UJ		NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.15	UJ		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.15	UJ		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.15	UJ		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.15	UJ		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.3	UJ		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.15	UJ		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.5	UJ		5,300	N	7,400	N	RSL		

TABLE D1-C37-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID C37
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	14,000			NS	NS	1,290,000	N	NMED		1.09E-02
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	519	N	NMED		
Arsenic	7440-38-2	mg/kg	1.4			36	N	208	N	NMED	3.90E-07	6.73E-03
Barium	7440-39-3	mg/kg	530			NS	NS	255,000	N	NMED		2.08E-03
Beryllium	7440-41-7	mg/kg	0.8	J		313,000	N	2,580	N	NMED	2.56E-11	3.10E-04
Cadmium	7440-43-9	mg/kg	0.24			417,000	N	1,110	N	NMED	5.76E-12	2.16E-04
Calcium	7440-70-2	mg/kg	60,000			NS	NS	32,400,000	N	NMED		1.85E-03
Chromium (Total) (2)	7440-47-3	mg/kg	9			505	N	314,000	N	NMED	1.78E-07	2.87E-05
Cobalt	7440-48-4	mg/kg	3.7			83,400	N	388	N	NMED	4.44E-10	9.54E-03
Copper	7440-50-8	mg/kg	23			NS	NS	51,900	N	NMED		4.43E-04
Iron	7439-89-6	mg/kg	7,700			NS	NS	908,000	N	NMED		8.48E-03
Lead	7439-92-1	mg/kg	12			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	4,500			NS	NS	5,680,000	N	NMED		7.92E-04
Manganese	7439-96-5	mg/kg	930			NS	NS	160,000	N	NMED		5.81E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.033	J		NS	NS	112	N	NMED		2.95E-04
Nickel	7440-02-0	mg/kg	8.1			2,890,000	N	25,700	N	NMED	2.80E-11	3.15E-04
Potassium	7440-09-7	mg/kg	2,000			NS	NS	76,200,000	N	NMED		2.62E-05
Selenium	7782-49-2	mg/kg	1.5			NS	NS	6,490	N	NMED		2.31E-04
Silver	7440-22-4	mg/kg	0.052	J		NS	NS	6,490	N	NMED		8.01E-06
Sodium	7440-23-5	mg/kg	38			NS	NS	37,300,000	N	NMED		1.02E-06
Thallium	7440-28-0	mg/kg	0.091	J		NS	NS	13	N	NMED		7.00E-03
Vanadium	7440-62-2	mg/kg	7			NS	NS	6,530	N	NMED		1.07E-03
Zinc	7440-66-6	mg/kg	17			NS	NS	38,900	N	NMED		4.37E-04
									Cumulative Risk/Hazard		**6E-07**	**0.06**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Industrial Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-C37-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID C37
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.15	UJ		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.15	UJ		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.15	UJ		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.15	UJ		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.15	UJ		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.15	UJ		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.15	UJ		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.15	UJ		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.15	UJ		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.15	UJ		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.15	UJ		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.15	UJ		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.15	UJ		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.3	UJ		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.15	UJ		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.5	UJ		626	N	2,420	N	NMEDC			

TABLE D1-C37-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID C37
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	14,000			NS	NS	41,400	N	NMED		3.38E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	142	N	NMED			
Arsenic	7440-38-2	mg/kg	1.4			216	N	41	N	NMED	6.48E-08	3.40E-02	
Barium	7440-39-3	mg/kg	530			NS	NS	4,390	N	NMED		1.21E-01	Kidneys
Beryllium	7440-41-7	mg/kg	0.8	J		2,710	N	148	N	NMED	2.95E-09	5.41E-03	
Cadmium	7440-43-9	mg/kg	0.24			3,610	N	72	N	NMED	6.65E-10	3.33E-03	
Calcium	7440-70-2	mg/kg	60,000			NS	NS	8,850,000	N	NMED		6.78E-03	
Chromium (Total) (3)	7440-47-3	mg/kg	9			468	N	134	N	NMED	1.92E-07	6.72E-02	
Cobalt	7440-48-4	mg/kg	3.7			722	N	37	N	NMED	5.12E-08	1.01E-01	Endocrine
Copper	7440-50-8	mg/kg	23			NS	NS	14,200	N	NMED		1.62E-03	
Iron	7439-89-6	mg/kg	7,700			NS	NS	248,000	N	NMED		3.10E-02	
Lead	7439-92-1	mg/kg	12			NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	4,500			NS	NS	1,550,000	N	NMED		2.90E-03	
Manganese	7439-96-5	mg/kg	930			NS	NS	464	Y	NMED		2.00E+00	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.033	J		NS	NS	21	N	NMED		1.59E-03	
Nickel	7440-02-0	mg/kg	8.1			20,500	N	753	N	NMED	3.95E-09	1.08E-02	
Potassium	7440-09-7	mg/kg	2,000			NS	NS	20,800,000	N	NMED		9.62E-05	
Selenium	7782-49-2	mg/kg	1.5			NS	NS	1,750	N	NMED		8.57E-04	
Silver	7440-22-4	mg/kg	0.052	J		NS	NS	1,770	N	NMED		2.94E-05	
Sodium	7440-23-5	mg/kg	38			NS	NS	10,200,000	N	NMED		3.73E-06	
Thallium	7440-28-0	mg/kg	0.091	J		NS	NS	4	N	NMED		2.57E-02	
Vanadium	7440-62-2	mg/kg	7			NS	NS	614	N	NMED		1.14E-02	
Zinc	7440-66-6	mg/kg	17			NS	NS	106,000	N	NMED		1.60E-04	
									Cumulative Risk/Hazard		**3E-07**	**2.8**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	2.3
Endocrine	0.10
Kidneys	0.12
All Others	0.20

TABLE D1-E27-1
GRID E27 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		1,300	N	570	N	RSL		

TABLE D1-E27-1
GRID E27 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	19,000			NS	NS	78,000	N	NMED		2.44E-01
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	31.3	N	NMED		
Arsenic	7440-38-2	mg/kg	1.6			7.07	N	13	N	NMED	2.26E-06	1.23E-01
Barium	7440-39-3	mg/kg	360			NS	NS	15,600	N	NMED		2.31E-02
Beryllium	7440-41-7	mg/kg	0.71	J		64,400	N	156	N	NMED	1.10E-10	4.55E-03
Cadmium	7440-43-9	mg/kg	0.28			85,900	N	70.5	N	NMED	3.26E-11	3.97E-03
Calcium	7440-70-2	mg/kg	23,000			NS	NS	13,000,000	N	NMED		1.77E-03
Chromium (Total) (2)	7440-47-3	mg/kg	12			96.6	N	45,200	N	NMED	1.24E-06	2.65E-04
Cobalt	7440-48-4	mg/kg	4.1			17,200	N	23.4	N	NMED	2.38E-09	1.75E-01
Copper	7440-50-8	mg/kg	59			NS	NS	3,130	N	NMED		1.88E-02
Iron	7439-89-6	mg/kg	9,600			NS	NS	54,800	N	NMED		1.75E-01
Lead	7439-92-1	mg/kg	9.9			NS	NS	200	N	IEUBK		
Magnesium	7439-95-4	mg/kg	5,500			NS	NS	15,600,000	N	NMED		3.53E-04
Manganese	7439-96-5	mg/kg	360			NS	NS	10,500	N	NMED		3.43E-02
Mercury (Elemental)	7439-97-6	mg/kg	0.03	J		NS	NS	23.8	N	NMED		1.26E-03
Nickel	7440-02-0	mg/kg	9			595,000	N	1,560	N	NMED	1.51E-10	5.77E-03
Potassium	7440-09-7	mg/kg	2,000			NS	NS	15,600,000	N	NMED		1.28E-04
Selenium	7782-49-2	mg/kg	1.4			NS	NS	391	N	NMED		3.58E-03
Silver	7440-22-4	mg/kg	0.045	J		NS	NS	391	N	NMED		1.15E-04
Sodium	7440-23-5	mg/kg	46			NS	NS	7,820,000	N	NMED		5.88E-06
Thallium	7440-28-0	mg/kg	0.08	J		NS	NS	0.782	N	NMED		1.02E-01
Vanadium	7440-62-2	mg/kg	12			NS	NS	394	N	NMED		3.05E-02
Zinc	7440-66-6	mg/kg	23			NS	NS	23,500	N	NMED		9.79E-04
									Cumulative Risk/Hazard		**4E-06**	**0.95**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Residential Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Residential Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-E27-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID E27
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		5,300	N	7,400	N	RSL		

TABLE D1-E27-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID E27
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	19,000			NS	NS	1,290,000	N	NMED		1.47E-02
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	519	N	NMED		
Arsenic	7440-38-2	mg/kg	1.6			36	N	208	N	NMED	4.46E-07	7.69E-03
Barium	7440-39-3	mg/kg	360			NS	NS	255,000	N	NMED		1.41E-03
Beryllium	7440-41-7	mg/kg	0.71	J		313,000	N	2,580	N	NMED	2.27E-11	2.75E-04
Cadmium	7440-43-9	mg/kg	0.28			417,000	N	1,110	N	NMED	6.71E-12	2.52E-04
Calcium	7440-70-2	mg/kg	23,000			NS	NS	32,400,000	N	NMED		7.10E-04
Chromium (Total) (2)	7440-47-3	mg/kg	12			505	N	314,000	N	NMED	2.38E-07	3.82E-05
Cobalt	7440-48-4	mg/kg	4.1			83,400	N	388	N	NMED	4.92E-10	1.06E-02
Copper	7440-50-8	mg/kg	59			NS	NS	51,900	N	NMED		1.14E-03
Iron	7439-89-6	mg/kg	9,600			NS	NS	908,000	N	NMED		1.06E-02
Lead	7439-92-1	mg/kg	9.9			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	5,500			NS	NS	5,680,000	N	NMED		9.68E-04
Manganese	7439-96-5	mg/kg	360			NS	NS	160,000	N	NMED		2.25E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.03	J		NS	NS	112	N	NMED		2.68E-04
Nickel	7440-02-0	mg/kg	9			2,890,000	N	25,700	N	NMED	3.11E-11	3.50E-04
Potassium	7440-09-7	mg/kg	2,000			NS	NS	76,200,000	N	NMED		2.62E-05
Selenium	7782-49-2	mg/kg	1.4			NS	NS	6,490	N	NMED		2.16E-04
Silver	7440-22-4	mg/kg	0.045	J		NS	NS	6,490	N	NMED		6.93E-06
Sodium	7440-23-5	mg/kg	46			NS	NS	37,300,000	N	NMED		1.23E-06
Thallium	7440-28-0	mg/kg	0.08	J		NS	NS	13	N	NMED		6.15E-03
Vanadium	7440-62-2	mg/kg	12			NS	NS	6,530	N	NMED		1.84E-03
Zinc	7440-66-6	mg/kg	23			NS	NS	38,900	N	NMED		5.91E-04
									Cumulative Risk/Hazard		**7E-07**	**0.06**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Industrial Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-E27-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID E27
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		626	N	2,420	N	NMEDC			

TABLE D1-E27-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID E27
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	19,000			NS	NS	41,400	N	NMED		4.59E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	142	N	NMED			
Arsenic	7440-38-2	mg/kg	1.6			216	N	41	N	NMED	7.41E-08	3.88E-02	
Barium	7440-39-3	mg/kg	360			NS	NS	4,390	N	NMED		8.20E-02	
Beryllium	7440-41-7	mg/kg	0.71	J		2,710	N	148	N	NMED	2.62E-09	4.80E-03	
Cadmium	7440-43-9	mg/kg	0.28			3,610	N	72	N	NMED	7.76E-10	3.88E-03	
Calcium	7440-70-2	mg/kg	23,000			NS	NS	8,850,000	N	NMED		2.60E-03	
Chromium (Total) (3)	7440-47-3	mg/kg	12			468	N	134	N	NMED	2.56E-07	8.96E-02	
Cobalt	7440-48-4	mg/kg	4.1			722	N	37	N	NMED	5.68E-08	1.12E-01	Endocrine
Copper	7440-50-8	mg/kg	59			NS	NS	14,200	N	NMED		4.15E-03	
Iron	7439-89-6	mg/kg	9,600			NS	NS	248,000	N	NMED		3.87E-02	
Lead	7439-92-1	mg/kg	9.9			NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	5,500			NS	NS	1,550,000	N	NMED		3.55E-03	
Manganese	7439-96-5	mg/kg	360			NS	NS	464	N	NMED		7.76E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.03	J		NS	NS	21	N	NMED		1.45E-03	
Nickel	7440-02-0	mg/kg	9			20,500	N	753	N	NMED	4.39E-09	1.20E-02	
Potassium	7440-09-7	mg/kg	2,000			NS	NS	20,800,000	N	NMED		9.62E-05	
Selenium	7782-49-2	mg/kg	1.4			NS	NS	1,750	N	NMED		8.00E-04	
Silver	7440-22-4	mg/kg	0.045	J		NS	NS	1,770	N	NMED		2.54E-05	
Sodium	7440-23-5	mg/kg	46			NS	NS	10,200,000	N	NMED		4.51E-06	
Thallium	7440-28-0	mg/kg	0.08	J		NS	NS	4	N	NMED		2.26E-02	
Vanadium	7440-62-2	mg/kg	12			NS	NS	614	N	NMED		1.95E-02	
Zinc	7440-66-6	mg/kg	23			NS	NS	106,000	N	NMED		2.17E-04	
									Cumulative Risk/Hazard		**4E-07**	**1.7**	
									Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	1.2
Endocrine	0.11
All Others	0.32

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-F32-1
GRID F32 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCINKLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U		60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U		313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		1,300	N	570	N	RSL		

TABLE D1-F32-1
GRID F32 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCINKLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	17,000			NS	NS	78,000	N	NMED		2.18E-01
Antimony	7440-36-0	mg/kg	0.12	J		NS	NS	31.3	N	NMED		3.83E-03
Arsenic	7440-38-2	mg/kg	1.6			7.07	N	13	N	NMED	2.26E-06	1.23E-01
Barium	7440-39-3	mg/kg	280			NS	NS	15,600	N	NMED		1.79E-02
Beryllium	7440-41-7	mg/kg	0.9	J		64,400	N	156	N	NMED	1.40E-10	5.77E-03
Cadmium	7440-43-9	mg/kg	0.23			85,900	N	70.5	N	NMED	2.68E-11	3.26E-03
Calcium	7440-70-2	mg/kg	26,000			NS	NS	13,000,000	N	NMED		2.00E-03
Chromium (Total) (2)	7440-47-3	mg/kg	12			96.6	N	45,200	N	NMED	1.24E-06	2.65E-04
Cobalt	7440-48-4	mg/kg	5.2			17,200	N	23.4	N	NMED	3.02E-09	2.22E-01
Copper	7440-50-8	mg/kg	35			NS	NS	3,130	N	NMED		1.12E-02
Iron	7439-89-6	mg/kg	11,000			NS	NS	54,800	N	NMED		2.01E-01
Lead	7439-92-1	mg/kg	12			NS	NS	200	N	IEUBK		
Magnesium	7439-95-4	mg/kg	6,000			NS	NS	15,600,000	N	NMED		3.85E-04
Manganese	7439-96-5	mg/kg	540			NS	NS	10,500	N	NMED		5.14E-02
Mercury (Elemental)	7439-97-6	mg/kg	0.031	J		NS	NS	23.8	N	NMED		1.30E-03
Nickel	7440-02-0	mg/kg	10			595,000	N	1,560	N	NMED	1.68E-10	6.41E-03
Potassium	7440-09-7	mg/kg	1,500			NS	NS	15,600,000	N	NMED		9.62E-05
Selenium	7782-49-2	mg/kg	1.6			NS	NS	391	N	NMED		4.09E-03
Silver	7440-22-4	mg/kg	0.021	J		NS	NS	391	N	NMED		5.37E-05
Sodium	7440-23-5	mg/kg	50			NS	NS	7,820,000	N	NMED		6.39E-06
Thallium	7440-28-0	mg/kg	0.065	J		NS	NS	0.782	N	NMED		8.31E-02
Vanadium	7440-62-2	mg/kg	14			NS	NS	394	N	NMED		3.55E-02
Zinc	7440-66-6	mg/kg	20			NS	NS	23,500	N	NMED		8.51E-04
									Cumulative Risk/Hazard		**4E-06**	**0.99**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Residential Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Residential Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-F32-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID F32
FORT WINGTE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		5,300	N	7,400	N	RSL		

TABLE D1-F32-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID F32
FORT WINGTE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	17,000			NS	NS	1,290,000	N	NMED		1.32E-02
Antimony	7440-36-0	mg/kg	0.12	J		NS	NS	519	N	NMED		2.31E-04
Arsenic	7440-38-2	mg/kg	1.6			36	N	208	N	NMED	4.46E-07	7.69E-03
Barium	7440-39-3	mg/kg	280			NS	NS	255,000	N	NMED		1.10E-03
Beryllium	7440-41-7	mg/kg	0.9	J		313,000	N	2,580	N	NMED	2.88E-11	3.49E-04
Cadmium	7440-43-9	mg/kg	0.23			417,000	N	1,110	N	NMED	5.52E-12	2.07E-04
Calcium	7440-70-2	mg/kg	26,000			NS	NS	32,400,000	N	NMED		8.02E-04
Chromium (Total) (2)	7440-47-3	mg/kg	12			505	N	314,000	N	NMED	2.38E-07	3.82E-05
Cobalt	7440-48-4	mg/kg	5.2			83,400	N	388	N	NMED	6.24E-10	1.34E-02
Copper	7440-50-8	mg/kg	35			NS	NS	51,900	N	NMED		6.74E-04
Iron	7439-89-6	mg/kg	11,000			NS	NS	908,000	N	NMED		1.21E-02
Lead	7439-92-1	mg/kg	12			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	6,000			NS	NS	5,680,000	N	NMED		1.06E-03
Manganese	7439-96-5	mg/kg	540			NS	NS	160,000	N	NMED		3.38E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.031	J		NS	NS	112	N	NMED		2.77E-04
Nickel	7440-02-0	mg/kg	10			2,890,000	N	25,700	N	NMED	3.46E-11	3.89E-04
Potassium	7440-09-7	mg/kg	1,500			NS	NS	76,200,000	N	NMED		1.97E-05
Selenium	7782-49-2	mg/kg	1.6			NS	NS	6,490	N	NMED		2.47E-04
Silver	7440-22-4	mg/kg	0.021	J		NS	NS	6,490	N	NMED		3.24E-06
Sodium	7440-23-5	mg/kg	50			NS	NS	37,300,000	N	NMED		1.34E-06
Thallium	7440-28-0	mg/kg	0.065	J		NS	NS	13	N	NMED		5.00E-03
Vanadium	7440-62-2	mg/kg	14			NS	NS	6,530	N	NMED		2.14E-03
Zinc	7440-66-6	mg/kg	20			NS	NS	38,900	N	NMED		5.14E-04
									Cumulative Risk/Hazard		**7E-07**	**0.06**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Industrial Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-F32-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID F32
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		626	N	2,420	N	NMEDC			

TABLE D1-F32-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID F32
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	17,000			NS	NS	41,400	N	NMED		4.11E-01	Nervous
Antimony	7440-36-0	mg/kg	0.12	J		NS	NS	142	N	NMED		8.45E-04	
Arsenic	7440-38-2	mg/kg	1.6			216	N	41	N	NMED	7.41E-08	3.88E-02	
Barium	7440-39-3	mg/kg	280			NS	NS	4,390	N	NMED		6.38E-02	
Beryllium	7440-41-7	mg/kg	0.9	J		2,710	N	148	N	NMED	3.32E-09	6.08E-03	
Cadmium	7440-43-9	mg/kg	0.23			3,610	N	72	N	NMED	6.37E-10	3.19E-03	
Calcium	7440-70-2	mg/kg	26,000			NS	NS	8,850,000	N	NMED		2.94E-03	
Chromium (Total) (3)	7440-47-3	mg/kg	12			468	N	134	N	NMED	2.56E-07	8.96E-02	
Cobalt	7440-48-4	mg/kg	5.2			722	N	37	N	NMED	7.20E-08	1.42E-01	Endocrine
Copper	7440-50-8	mg/kg	35			NS	NS	14,200	N	NMED		2.46E-03	
Iron	7439-89-6	mg/kg	11,000			NS	NS	248,000	N	NMED		4.44E-02	
Lead	7439-92-1	mg/kg	12			NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	6,000			NS	NS	1,550,000	N	NMED		3.87E-03	
Manganese	7439-96-5	mg/kg	540			NS	NS	464	Y	NMED		1.16E+00	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.031	J		NS	NS	21	N	NMED		1.50E-03	
Nickel	7440-02-0	mg/kg	10			20,500	N	753	N	NMED	4.88E-09	1.33E-02	
Potassium	7440-09-7	mg/kg	1,500			NS	NS	20,800,000	N	NMED		7.21E-05	
Selenium	7782-49-2	mg/kg	1.6			NS	NS	1,750	N	NMED		9.14E-04	
Silver	7440-22-4	mg/kg	0.021	J		NS	NS	1,770	N	NMED		1.19E-05	
Sodium	7440-23-5	mg/kg	50			NS	NS	10,200,000	N	NMED		4.90E-06	
Thallium	7440-28-0	mg/kg	0.065	J		NS	NS	4	N	NMED		1.84E-02	
Vanadium	7440-62-2	mg/kg	14			NS	NS	614	N	NMED		2.28E-02	
Zinc	7440-66-6	mg/kg	20			NS	NS	106,000	N	NMED		1.89E-04	
									Cumulative Risk/Hazard		**4E-07**	**2.0**	
									Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	1.6
Endocrine	0.14
All Others	0.31

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-G30-1
GRID G30 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGTE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U		60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U		313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		1,300	N	570	N	RSL		

TABLE D1-G30-1
GRID G30 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGTE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	17,000			NS	NS	78,000	N	NMED		2.18E-01
Antimony	7440-36-0	mg/kg	0.13	J		NS	NS	31.3	N	NMED		4.15E-03
Arsenic	7440-38-2	mg/kg	1.4	J		7.07	N	13	N	NMED	1.98E-06	1.08E-01
Barium	7440-39-3	mg/kg	200			NS	NS	15,600	N	NMED		1.28E-02
Beryllium	7440-41-7	mg/kg	0.71	J		64,400	N	156	N	NMED	1.10E-10	4.55E-03
Cadmium	7440-43-9	mg/kg	0.33			85,900	N	70.5	N	NMED	3.84E-11	4.68E-03
Calcium	7440-70-2	mg/kg	4,900			NS	NS	13,000,000	N	NMED		3.77E-04
Chromium (Total) (2)	7440-47-3	mg/kg	12			96.6	N	45,200	N	NMED	1.24E-06	2.65E-04
Cobalt	7440-48-4	mg/kg	5.3			17,200	N	23.4	N	NMED	3.08E-09	2.26E-01
Copper	7440-50-8	mg/kg	77	J		NS	NS	3,130	N	NMED		2.46E-02
Iron	7439-89-6	mg/kg	9,700			NS	NS	54,800	N	NMED		1.77E-01
Lead	7439-92-1	mg/kg	12			NS	NS	200	N	IEUBK		
Magnesium	7439-95-4	mg/kg	6,300			NS	NS	15,600,000	N	NMED		4.04E-04
Manganese	7439-96-5	mg/kg	410			NS	NS	10,500	N	NMED		3.90E-02
Mercury (Elemental)	7439-97-6	mg/kg	0.032	J		NS	NS	23.8	N	NMED		1.34E-03
Nickel	7440-02-0	mg/kg	9.8			595,000	N	1,560	N	NMED	1.65E-10	6.28E-03
Potassium	7440-09-7	mg/kg	1,300			NS	NS	15,600,000	N	NMED		8.33E-05
Selenium	7782-49-2	mg/kg	1.2			NS	NS	391	N	NMED		3.07E-03
Silver	7440-22-4	mg/kg	0.028	J		NS	NS	391	N	NMED		7.16E-05
Sodium	7440-23-5	mg/kg	55			NS	NS	7,820,000	N	NMED		7.03E-06
Thallium	7440-28-0	mg/kg	0.051	J		NS	NS	0.782	N	NMED		6.52E-02
Vanadium	7440-62-2	mg/kg	17			NS	NS	394	N	NMED		4.31E-02
Zinc	7440-66-6	mg/kg	23			NS	NS	23,500	N	NMED		9.79E-04
									Cumulative Risk/Hazard		**3E-06**	**0.94**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Residential Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Residential Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-G30-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID G30
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		5,300	N	7,400	N	RSL		

TABLE D1-G30-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID G30
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	17,000			NS	NS	1,290,000	N	NMED		1.32E-02
Antimony	7440-36-0	mg/kg	0.13	J		NS	NS	519	N	NMED		2.50E-04
Arsenic	7440-38-2	mg/kg	1.4	J		36	N	208	N	NMED	3.90E-07	6.73E-03
Barium	7440-39-3	mg/kg	200			NS	NS	255,000	N	NMED		7.84E-04
Beryllium	7440-41-7	mg/kg	0.71	J		313,000	N	2,580	N	NMED	2.27E-11	2.75E-04
Cadmium	7440-43-9	mg/kg	0.33			417,000	N	1,110	N	NMED	7.91E-12	2.97E-04
Calcium	7440-70-2	mg/kg	4,900			NS	NS	32,400,000	N	NMED		1.51E-04
Chromium (Total) (2)	7440-47-3	mg/kg	12			505	N	314,000	N	NMED	2.38E-07	3.82E-05
Cobalt	7440-48-4	mg/kg	5.3			83,400	N	388	N	NMED	6.35E-10	1.37E-02
Copper	7440-50-8	mg/kg	77	J		NS	NS	51,900	N	NMED		1.48E-03
Iron	7439-89-6	mg/kg	9,700			NS	NS	908,000	N	NMED		1.07E-02
Lead	7439-92-1	mg/kg	12			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	6,300			NS	NS	5,680,000	N	NMED		1.11E-03
Manganese	7439-96-5	mg/kg	410			NS	NS	160,000	N	NMED		2.56E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.032	J		NS	NS	112	N	NMED		2.86E-04
Nickel	7440-02-0	mg/kg	9.8			2,890,000	N	25,700	N	NMED	3.39E-11	3.81E-04
Potassium	7440-09-7	mg/kg	1,300			NS	NS	76,200,000	N	NMED		1.71E-05
Selenium	7782-49-2	mg/kg	1.2			NS	NS	6,490	N	NMED		1.85E-04
Silver	7440-22-4	mg/kg	0.028	J		NS	NS	6,490	N	NMED		4.31E-06
Sodium	7440-23-5	mg/kg	55			NS	NS	37,300,000	N	NMED		1.47E-06
Thallium	7440-28-0	mg/kg	0.051	J		NS	NS	13	N	NMED		3.92E-03
Vanadium	7440-62-2	mg/kg	17			NS	NS	6,530	N	NMED		2.60E-03
Zinc	7440-66-6	mg/kg	23			NS	NS	38,900	N	NMED		5.91E-04
									Cumulative Risk/Hazard		**6E-07**	**0.06**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Industrial Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-G30-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID G30
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[2,3]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		626	N	2,420	N	NMEDC			

TABLE D1-G30-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID G30
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[2,3]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	17,000			NS	NS	41,400	N	NMED		4.11E-01	Nervous
Antimony	7440-36-0	mg/kg	0.13	J		NS	NS	142	N	NMED		9.15E-04	
Arsenic	7440-38-2	mg/kg	1.4	J		216	N	41	N	NMED	6.48E-08	3.40E-02	
Barium	7440-39-3	mg/kg	200			NS	NS	4,390	N	NMED		4.56E-02	
Beryllium	7440-41-7	mg/kg	0.71	J		2,710	N	148	N	NMED	2.62E-09	4.80E-03	
Cadmium	7440-43-9	mg/kg	0.33			3,610	N	72	N	NMED	9.14E-10	4.58E-03	
Calcium	7440-70-2	mg/kg	4,900			NS	NS	8,850,000	N	NMED		5.54E-04	
Chromium (Total) (3)	7440-47-3	mg/kg	12			468	N	134	N	NMED	2.56E-07	8.96E-02	
Cobalt	7440-48-4	mg/kg	5.3			722	N	37	N	NMED	7.34E-08	1.44E-01	Endocrine
Copper	7440-50-8	mg/kg	77	J		NS	NS	14,200	N	NMED		5.42E-03	
Iron	7439-89-6	mg/kg	9,700			NS	NS	248,000	N	NMED		3.91E-02	
Lead	7439-92-1	mg/kg	12			NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	6,300			NS	NS	1,550,000	N	NMED		4.06E-03	
Manganese	7439-96-5	mg/kg	410			NS	NS	464	N	NMED		8.84E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.032	J		NS	NS	21	N	NMED		1.55E-03	
Nickel	7440-02-0	mg/kg	9.8			20,500	N	753	N	NMED	4.78E-09	1.30E-02	
Potassium	7440-09-7	mg/kg	1,300			NS	NS	20,800,000	N	NMED		6.25E-05	
Selenium	7782-49-2	mg/kg	1.2			NS	NS	1,750	N	NMED		6.86E-04	
Silver	7440-22-4	mg/kg	0.028	J		NS	NS	1,770	N	NMED		1.58E-05	
Sodium	7440-23-5	mg/kg	55			NS	NS	10,200,000	N	NMED		5.39E-06	
Thallium	7440-28-0	mg/kg	0.051	J		NS	NS	4	N	NMED		1.44E-02	
Vanadium	7440-62-2	mg/kg	17			NS	NS	614	N	NMED		2.77E-02	
Zinc	7440-66-6	mg/kg	23			NS	NS	106,000	N	NMED		2.17E-04	
									Cumulative Risk/Hazard		**4E-07**	**1.7**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent	NS = No Standard
CAS = Chemical Abstracts Service	RAG = Risk Assessment Guidance
HI = Hazard Index	SSL = soil screening level
J = Estimated	U = Nondetect
mg/kg = milligrams per kilogram	UJ = Estimated Nondetect
N = no	UTL = upper tolerance limit
NA = not applicable	Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	1.3
Endocrine	0.14
All Others	0.29

TABLE D1-H35-1
GRID H35 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	2,200	N	RSL			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	6.3	N	RSL			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		211	N	36	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		3.56	N	18.5	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	7.7	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		31.6	N	70.4	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	6.16	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.15			NS	NS	7.64	N	NMED		1.96E-02	
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		333	N	247	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		83.1	N	301	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	156	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U		60.4	N	131	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U		313	N	6.16	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	3,850	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		1,300	N	570	N	RSL			

TABLE D1-H35-1
GRID H35 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	21,000			NS	NS	78,000	N	NMED		2.69E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	31.3	N	NMED			
Arsenic	7440-38-2	mg/kg	1.4			7.07	N	13	N	NMED	1.98E-06	1.08E-01	Heart/Endocrine
Barium	7440-39-3	mg/kg	320			NS	NS	15,600	N	NMED		2.05E-02	
Beryllium	7440-41-7	mg/kg	1.1			64,400	N	156	N	NMED	1.71E-10	7.05E-03	
Cadmium	7440-43-9	mg/kg	0.32			85,900	N	70.5	N	NMED	3.73E-11	4.54E-03	
Calcium	7440-70-2	mg/kg	11,000			NS	NS	13,000,000	N	NMED		8.46E-04	
Chromium (Total) (2)	7440-47-3	mg/kg	14			96.6	N	45,200	N	NMED	1.45E-06	3.10E-04	
Cobalt	7440-48-4	mg/kg	6.1			17,200	N	23.4	N	NMED	3.55E-09	2.61E-01	Endocrine
Copper	7440-50-8	mg/kg	35			NS	NS	3,130	N	NMED		1.12E-02	
Iron	7439-89-6	mg/kg	11,000			NS	NS	54,800	N	NMED		2.01E-01	Gastrointestinal
Lead	7439-92-1	mg/kg	11			NS	NS	200	N	IEUBK			
Magnesium	7439-95-4	mg/kg	6,900			NS	NS	15,600,000	N	NMED		4.42E-04	
Manganese	7439-96-5	mg/kg	850			NS	NS	10,500	N	NMED		8.10E-02	
Mercury (Elemental)	7439-97-6	mg/kg	0.032	J		NS	NS	23.8	N	NMED		1.34E-03	
Nickel	7440-02-0	mg/kg	12			595,000	N	1,560	N	NMED	2.02E-10	7.69E-03	
Potassium	7440-09-7	mg/kg	1,700			NS	NS	15,600,000	N	NMED		1.09E-04	
Selenium	7782-49-2	mg/kg	1.9			NS	NS	391	N	NMED		4.86E-03	
Silver	7440-22-4	mg/kg	0.038	J		NS	NS	391	N	NMED		9.72E-05	
Sodium	7440-23-5	mg/kg	34			NS	NS	7,820,000	N	NMED		4.35E-06	
Thallium	7440-28-0	mg/kg	0.091	J		NS	NS	0.782	N	NMED		1.16E-01	Hair/Coat/Eyes
Vanadium	7440-62-2	mg/kg	27			NS	NS	394	N	NMED		6.85E-02	
Zinc	7440-66-6	mg/kg	30			NS	NS	23,500	N	NMED		1.28E-03	
									Cumulative Risk/Hazard		**3E-06**	**1.2**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Residential Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Residential Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
R = Rejected
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	0.27
Endocrine	0.37
GI	0.20
Heart	0.11
Hair/Coat	0.12
Eyes	0.12
All Others	0.21

TABLE D1-H35-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID H35
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.15			NS	NS	125	N	NMED		1.20E-03
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		5,300	N	7,400	N	RSL		

TABLE D1-H35-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID H35
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	21,000			NS	NS	1,290,000	N	NMED		1.63E-02
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	519	N	NMED		
Arsenic	7440-38-2	mg/kg	1.4			36	N	208	N	NMED	3.90E-07	6.73E-03
Barium	7440-39-3	mg/kg	320			NS	NS	255,000	N	NMED		1.25E-03
Beryllium	7440-41-7	mg/kg	1.1			313,000	N	2,580	N	NMED	3.51E-11	4.26E-04
Cadmium	7440-43-9	mg/kg	0.32			417,000	N	1,110	N	NMED	7.67E-12	2.88E-04
Calcium	7440-70-2	mg/kg	11,000			NS	NS	32,400,000	N	NMED		3.40E-04
Chromium (Total) (2)	7440-47-3	mg/kg	14			505	N	314,000	N	NMED	2.77E-07	4.46E-05
Cobalt	7440-48-4	mg/kg	6.1			83,400	N	388	N	NMED	7.31E-10	1.57E-02
Copper	7440-50-8	mg/kg	35			NS	NS	51,900	N	NMED		6.74E-04
Iron	7439-89-6	mg/kg	11,000			NS	NS	908,000	N	NMED		1.21E-02
Lead	7439-92-1	mg/kg	11			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	6,900			NS	NS	5,680,000	N	NMED		1.21E-03
Manganese	7439-96-5	mg/kg	850			NS	NS	160,000	N	NMED		5.31E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.032	J		NS	NS	112	N	NMED		2.86E-04
Nickel	7440-02-0	mg/kg	12			2,890,000	N	25,700	N	NMED	4.15E-11	4.67E-04
Potassium	7440-09-7	mg/kg	1,700			NS	NS	76,200,000	N	NMED		2.23E-05
Selenium	7782-49-2	mg/kg	1.9			NS	NS	6,490	N	NMED		2.93E-04
Silver	7440-22-4	mg/kg	0.038	J		NS	NS	6,490	N	NMED		5.86E-06
Sodium	7440-23-5	mg/kg	34			NS	NS	37,300,000	N	NMED		9.12E-07
Thallium	7440-28-0	mg/kg	0.091	J		NS	NS	13	N	NMED		7.00E-03
Vanadium	7440-62-2	mg/kg	27			NS	NS	6,530	N	NMED		4.13E-03
Zinc	7440-66-6	mg/kg	30			NS	NS	38,900	N	NMED		7.71E-04
									Cumulative Risk/Hazard		**7E-07**	**0.075**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Industrial Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
R = Rejected
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-H35-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID H35
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.15			NS	NS	17	N	NMED		8.67E-03	
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		626	N	2,420	N	NMEDC			

TABLE D1-H35-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID H35
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	21,000			NS	NS	41,400	N	NMED		5.07E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	142	N	NMED			
Arsenic	7440-38-2	mg/kg	1.4			216	N	41	N	NMED	6.48E-08	3.40E-02	
Barium	7440-39-3	mg/kg	320			NS	NS	4,390	N	NMED		7.29E-02	
Beryllium	7440-41-7	mg/kg	1.1			2,710	N	148	N	NMED	4.06E-09	7.43E-03	
Cadmium	7440-43-9	mg/kg	0.32			3,610	N	72	N	NMED	8.86E-10	4.44E-03	
Calcium	7440-70-2	mg/kg	11,000			NS	NS	8,850,000	N	NMED		1.24E-03	
Chromium (Total) (3)	7440-47-3	mg/kg	14			468	N	134	N	NMED	2.99E-07	1.04E-01	GI, Blood
Cobalt	7440-48-4	mg/kg	6.1			722	N	37	N	NMED	8.45E-08	1.66E-01	Endocrine
Copper	7440-50-8	mg/kg	35			NS	NS	14,200	N	NMED		2.46E-03	
Iron	7439-89-6	mg/kg	11,000			NS	NS	248,000	N	NMED		4.44E-02	
Lead	7439-92-1	mg/kg	11			NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	6,900			NS	NS	1,550,000	N	NMED		4.45E-03	
Manganese	7439-96-5	mg/kg	850			NS	NS	464	Y	NMED		1.83E+00	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.032	J		NS	NS	21	N	NMED		1.55E-03	
Nickel	7440-02-0	mg/kg	12			20,500	N	753	N	NMED	5.85E-09	1.59E-02	
Potassium	7440-09-7	mg/kg	1,700			NS	NS	20,800,000	N	NMED		8.17E-05	
Selenium	7782-49-2	mg/kg	1.9			NS	NS	1,750	N	NMED		1.09E-03	
Silver	7440-22-4	mg/kg	0.038	J		NS	NS	1,770	N	NMED		2.15E-05	
Sodium	7440-23-5	mg/kg	34			NS	NS	10,200,000	N	NMED		3.33E-06	
Thallium	7440-28-0	mg/kg	0.091	J		NS	NS	4	N	NMED		2.57E-02	
Vanadium	7440-62-2	mg/kg	27			NS	NS	614	N	NMED		4.40E-02	
Zinc	7440-66-6	mg/kg	30			NS	NS	106,000	N	NMED		2.83E-04	
									Cumulative Risk/Hazard		**5E-07**	**2.9**	
									Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	2.3
Endocrine	0.17
GI	0.10
Blood	0.10
All Others	0.26

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent

CAS = Chemical Abstracts Service

J = Estimated

mg/kg = milligrams per kilogram

N = no

NA = not applicable

NS = No Standard

NA = not applicable

NS = No Standard

RAG = Risk Assessment Guidance

SSL = soil screening level

R = Rejected

U = Nondetect

UTL = upper tolerance limit

Y = yes

UTL = upper tolerance limit

Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-H39-1
GRID H39 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.013	UJ		NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.022	UJ		NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.031	UJ		211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.028	UJ		17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.031	UJ		3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.034	UJ		NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.037	UJ		31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.037	UJ		NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.034	UJ		NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.037	UJ		333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.025	UJ		83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.037	UJ		NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.028	UJ		60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.061	UJ		313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.037	UJ		NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.11	UJ		1,300	N	570	N	RSL		

TABLE D1-H39-1
GRID H39 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	12,000			NS	NS	78,000	N	NMED		1.54E-01
Antimony	7440-36-0	mg/kg	0.19	J		NS	NS	31.3	N	NMED		6.07E-03
Arsenic	7440-38-2	mg/kg	1.2			7.07	N	13	N	NMED	1.70E-06	9.23E-02
Barium	7440-39-3	mg/kg	300			NS	NS	15,600	N	NMED		1.92E-02
Beryllium	7440-41-7	mg/kg	0.57	J		64,400	N	156	N	NMED	8.85E-11	3.65E-03
Cadmium	7440-43-9	mg/kg	0.22			85,900	N	70.5	N	NMED	2.56E-11	3.12E-03
Calcium	7440-70-2	mg/kg	3,100			NS	NS	13,000,000	N	NMED		2.38E-04
Chromium (Total) (2)	7440-47-3	mg/kg	8.9			96.6	N	45,200	N	NMED	9.21E-07	1.97E-04
Cobalt	7440-48-4	mg/kg	5.1			17,200	N	23.4	N	NMED	2.97E-09	2.18E-01
Copper	7440-50-8	mg/kg	23			NS	NS	3,130	N	NMED		7.35E-03
Iron	7439-89-6	mg/kg	8,500			NS	NS	54,800	N	NMED		1.55E-01
Lead	7439-92-1	mg/kg	10			NS	NS	200	N	IEUBK		
Magnesium	7439-95-4	mg/kg	3,800			NS	NS	15,600,000	N	NMED		2.44E-04
Manganese	7439-96-5	mg/kg	610			NS	NS	10,500	N	NMED		5.81E-02
Mercury (Elemental)	7439-97-6	mg/kg	0.02	J		NS	NS	23.8	N	NMED		8.40E-04
Nickel	7440-02-0	mg/kg	8.3			595,000	N	1,560	N	NMED	1.39E-10	5.32E-03
Potassium	7440-09-7	mg/kg	1,400			NS	NS	15,600,000	N	NMED		8.97E-05
Selenium	7782-49-2	mg/kg	1.2			NS	NS	391	N	NMED		3.07E-03
Silver	7440-22-4	mg/kg	0.042	J		NS	NS	391	N	NMED		1.07E-04
Sodium	7440-23-5	mg/kg	40			NS	NS	7,820,000	N	NMED		5.12E-06
Thallium	7440-28-0	mg/kg	0.081	J		NS	NS	0.782	N	NMED		1.04E-01
Vanadium	7440-62-2	mg/kg	13			NS	NS	394	N	NMED		3.30E-02
Zinc	7440-66-6	mg/kg	22			NS	NS	23,500	N	NMED		9.36E-04
									Cumulative Risk/Hazard		**3E-06**	**0.86**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Residential Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Residential Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-H39-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID H39
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.013	UJ		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.022	UJ		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.031	UJ		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.028	UJ		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.031	UJ		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.034	UJ		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.037	UJ		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.037	UJ		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.034	UJ		NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.037	UJ		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.025	UJ		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.037	UJ		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.028	UJ		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.061	UJ		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.037	UJ		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.11	UJ		5,300	N	7,400	N	RSL		

TABLE D1-H39-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID H39
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	12,000			NS	NS	1,290,000	N	NMED		9.30E-03
Antimony	7440-36-0	mg/kg	0.19	J		NS	NS	519	N	NMED		3.66E-04
Arsenic	7440-38-2	mg/kg	1.2			36	N	208	N	NMED	3.34E-07	5.77E-03
Barium	7440-39-3	mg/kg	300			NS	NS	255,000	N	NMED		1.18E-03
Beryllium	7440-41-7	mg/kg	0.57	J		313,000	N	2,580	N	NMED	1.82E-11	2.21E-04
Cadmium	7440-43-9	mg/kg	0.22			417,000	N	1,110	N	NMED	5.28E-12	1.98E-04
Calcium	7440-70-2	mg/kg	3,100			NS	NS	32,400,000	N	NMED		9.57E-05
Chromium (Total) (2)	7440-47-3	mg/kg	8.9			505	N	314,000	N	NMED	1.76E-07	2.83E-05
Cobalt	7440-48-4	mg/kg	5.1			83,400	N	388	N	NMED	6.12E-10	1.31E-02
Copper	7440-50-8	mg/kg	23			NS	NS	51,900	N	NMED		4.43E-04
Iron	7439-89-6	mg/kg	8,500			NS	NS	908,000	N	NMED		9.36E-03
Lead	7439-92-1	mg/kg	10			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	3,800			NS	NS	5,680,000	N	NMED		6.69E-04
Manganese	7439-96-5	mg/kg	610			NS	NS	160,000	N	NMED		3.81E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.02	J		NS	NS	112	N	NMED		1.79E-04
Nickel	7440-02-0	mg/kg	8.3			2,890,000	N	25,700	N	NMED	2.87E-11	3.23E-04
Potassium	7440-09-7	mg/kg	1,400			NS	NS	76,200,000	N	NMED		1.84E-05
Selenium	7782-49-2	mg/kg	1.2			NS	NS	6,490	N	NMED		1.85E-04
Silver	7440-22-4	mg/kg	0.042	J		NS	NS	6,490	N	NMED		6.47E-06
Sodium	7440-23-5	mg/kg	40			NS	NS	37,300,000	N	NMED		1.07E-06
Thallium	7440-28-0	mg/kg	0.081	J		NS	NS	13	N	NMED		6.23E-03
Vanadium	7440-62-2	mg/kg	13			NS	NS	6,530	N	NMED		1.99E-03
Zinc	7440-66-6	mg/kg	22			NS	NS	38,900	N	NMED		5.66E-04
									Cumulative Risk/Hazard		**5E-07**	**0.05**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Industrial Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-H39-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID H39
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.013	UJ		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.022	UJ		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.031	UJ		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.028	UJ		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.031	UJ		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.034	UJ		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.037	UJ		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.037	UJ		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.034	UJ		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.037	UJ		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.025	UJ		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.037	UJ		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.028	UJ		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.061	UJ		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.037	UJ		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.11	UJ		626	N	2,420	N	NMEDC			

TABLE D1-H39-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID H39
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	12,000			NS	NS	41,400	N	NMED		2.90E-01	Nervous
Antimony	7440-36-0	mg/kg	0.19	J		NS	NS	142	N	NMED		1.34E-03	
Arsenic	7440-38-2	mg/kg	1.2			216	N	41	N	NMED	5.56E-08	2.91E-02	
Barium	7440-39-3	mg/kg	300			NS	NS	4,390	N	NMED		6.83E-02	
Beryllium	7440-41-7	mg/kg	0.57	J		2,710	N	148	N	NMED	2.10E-09	3.85E-03	
Cadmium	7440-43-9	mg/kg	0.22			3,610	N	72	N	NMED	6.09E-10	3.05E-03	
Calcium	7440-70-2	mg/kg	3,100			NS	NS	8,850,000	N	NMED		3.50E-04	
Chromium (Total) (3)	7440-47-3	mg/kg	8.9			468	N	134	N	NMED	1.90E-07	6.64E-02	
Cobalt	7440-48-4	mg/kg	5.1			722	N	37	N	NMED	7.06E-08	1.39E-01	Endocrine
Copper	7440-50-8	mg/kg	23			NS	NS	14,200	N	NMED		1.62E-03	
Iron	7439-89-6	mg/kg	8,500			NS	NS	248,000	N	NMED		3.43E-02	
Lead	7439-92-1	mg/kg	10			NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	3,800			NS	NS	1,550,000	N	NMED		2.45E-03	
Manganese	7439-96-5	mg/kg	610			NS	NS	464	Y	NMED		1.31E+00	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.02	J		NS	NS	21	N	NMED		9.66E-04	
Nickel	7440-02-0	mg/kg	8.3			20,500	N	753	N	NMED	4.05E-09	1.10E-02	
Potassium	7440-09-7	mg/kg	1,400			NS	NS	20,800,000	N	NMED		6.73E-05	
Selenium	7782-49-2	mg/kg	1.2			NS	NS	1,750	N	NMED		6.86E-04	
Silver	7440-22-4	mg/kg	0.042	J		NS	NS	1,770	N	NMED		2.37E-05	
Sodium	7440-23-5	mg/kg	40			NS	NS	10,200,000	N	NMED		3.92E-06	
Thallium	7440-28-0	mg/kg	0.081	J		NS	NS	4	N	NMED		2.29E-02	
Vanadium	7440-62-2	mg/kg	13			NS	NS	614	N	NMED		2.12E-02	
Zinc	7440-66-6	mg/kg	22			NS	NS	106,000	N	NMED		2.08E-04	
									Cumulative Risk/Hazard		**3E-07**	**2.0**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	1.6
Endocrine	0.14
All Others	0.27

TABLE D1-I29-1
GRID I29 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U		60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U		313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		1,300	N	570	N	RSL		

TABLE D1-I29-1
GRID I29 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	15,000			NS	NS	78,000	N	NMED		1.92E-01
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	31.3	N	NMED		
Arsenic	7440-38-2	mg/kg	1.3			7.07	N	13	N	NMED	1.84E-06	1.00E-01
Barium	7440-39-3	mg/kg	150			NS	NS	15,600	N	NMED		9.62E-03
Beryllium	7440-41-7	mg/kg	0.38	J		64,400	N	156	N	NMED	5.90E-11	2.44E-03
Cadmium	7440-43-9	mg/kg	0.46			85,900	N	70.5	N	NMED	5.36E-11	6.52E-03
Calcium	7440-70-2	mg/kg	3,700			NS	NS	13,000,000	N	NMED		2.85E-04
Chromium (Total) (2)	7440-47-3	mg/kg	9.7			96.6	N	45,200	N	NMED	1.00E-06	2.15E-04
Cobalt	7440-48-4	mg/kg	4.7			17,200	N	23.4	N	NMED	2.73E-09	2.01E-01
Copper	7440-50-8	mg/kg	81	J		NS	NS	3,130	N	NMED		2.59E-02
Iron	7439-89-6	mg/kg	6,700			NS	NS	54,800	N	NMED		1.22E-01
Lead	7439-92-1	mg/kg	9.5			NS	NS	200	N	IEUBK		
Magnesium	7439-95-4	mg/kg	6,200			NS	NS	15,600,000	N	NMED		3.97E-04
Manganese	7439-96-5	mg/kg	360			NS	NS	10,500	N	NMED		3.43E-02
Mercury (Elemental)	7439-97-6	mg/kg	0.025	J		NS	NS	23.8	N	NMED		1.05E-03
Nickel	7440-02-0	mg/kg	8.1			595,000	N	1,560	N	NMED	1.36E-10	5.19E-03
Potassium	7440-09-7	mg/kg	890			NS	NS	15,600,000	N	NMED		5.71E-05
Selenium	7782-49-2	mg/kg	1.1			NS	NS	391	N	NMED		2.81E-03
Silver	7440-22-4	mg/kg	0.052	J		NS	NS	391	N	NMED		1.33E-04
Sodium	7440-23-5	mg/kg	92			NS	NS	7,820,000	N	NMED		1.18E-05
Thallium	7440-28-0	mg/kg	0.047	J		NS	NS	0.782	N	NMED		6.01E-02
Vanadium	7440-62-2	mg/kg	12			NS	NS	394	N	NMED		3.05E-02
Zinc	7440-66-6	mg/kg	24			NS	NS	23,500	N	NMED		1.02E-03
									Cumulative Risk/Hazard		**3E-06**	**0.80**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Residential Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Residential Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
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NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-I29-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID I29
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		5,300	N	7,400	N	RSL		

TABLE D1-I29-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID I29
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	15,000			NS	NS	1,290,000	N	NMED		1.16E-02
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	519	N	NMED		
Arsenic	7440-38-2	mg/kg	1.3			36	N	208	N	NMED	3.62E-07	6.25E-03
Barium	7440-39-3	mg/kg	150			NS	NS	255,000	N	NMED		5.88E-04
Beryllium	7440-41-7	mg/kg	0.38	J		313,000	N	2,580	N	NMED	1.21E-11	1.47E-04
Cadmium	7440-43-9	mg/kg	0.46			417,000	N	1,110	N	NMED	1.10E-11	4.14E-04
Calcium	7440-70-2	mg/kg	3,700			NS	NS	32,400,000	N	NMED		1.14E-04
Chromium (Total) (2)	7440-47-3	mg/kg	9.7			505	N	314,000	N	NMED	1.92E-07	3.09E-05
Cobalt	7440-48-4	mg/kg	4.7			83,400	N	388	N	NMED	5.64E-10	1.21E-02
Copper	7440-50-8	mg/kg	81	J		NS	NS	51,900	N	NMED		1.56E-03
Iron	7439-89-6	mg/kg	6,700			NS	NS	908,000	N	NMED		7.38E-03
Lead	7439-92-1	mg/kg	9.5			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	6,200			NS	NS	5,680,000	N	NMED		1.09E-03
Manganese	7439-96-5	mg/kg	360			NS	NS	160,000	N	NMED		2.25E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.025	J		NS	NS	112	N	NMED		2.23E-04
Nickel	7440-02-0	mg/kg	8.1			2,890,000	N	25,700	N	NMED	2.80E-11	3.15E-04
Potassium	7440-09-7	mg/kg	890			NS	NS	76,200,000	N	NMED		1.17E-05
Selenium	7782-49-2	mg/kg	1.1			NS	NS	6,490	N	NMED		1.69E-04
Silver	7440-22-4	mg/kg	0.052	J		NS	NS	6,490	N	NMED		8.01E-06
Sodium	7440-23-5	mg/kg	92			NS	NS	37,300,000	N	NMED		2.47E-06
Thallium	7440-28-0	mg/kg	0.047	J		NS	NS	13	N	NMED		3.62E-03
Vanadium	7440-62-2	mg/kg	12			NS	NS	6,530	N	NMED		1.84E-03
Zinc	7440-66-6	mg/kg	24			NS	NS	38,900	N	NMED		6.17E-04
									Cumulative Risk/Hazard		**6E-07**	**0.05**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Industrial Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-I29-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID I29
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		626	N	2,420	N	NMEDC			

TABLE D1-I29-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID I29
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	15,000			NS	NS	41,400	N	NMED		3.62E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	142	N	NMED			
Arsenic	7440-38-2	mg/kg	1.3			216	N	41	N	NMED	6.02E-08	3.16E-02	
Barium	7440-39-3	mg/kg	150			NS	NS	4,390	N	NMED		3.42E-02	
Beryllium	7440-41-7	mg/kg	0.38	J		2,710	N	148	N	NMED	1.40E-09	2.57E-03	
Cadmium	7440-43-9	mg/kg	0.46			3,610	N	72	N	NMED	1.27E-09	6.38E-03	
Calcium	7440-70-2	mg/kg	3,700			NS	NS	8,850,000	N	NMED		4.18E-04	
Chromium (Total) (3)	7440-47-3	mg/kg	9.7			468	N	134	N	NMED	2.07E-07	7.24E-02	
Cobalt	7440-48-4	mg/kg	4.7			722	N	37	N	NMED	6.51E-08	1.28E-01	Endocrine
Copper	7440-50-8	mg/kg	81	J		NS	NS	14,200	N	NMED		5.70E-03	
Iron	7439-89-6	mg/kg	6,700			NS	NS	248,000	N	NMED		2.70E-02	
Lead	7439-92-1	mg/kg	9.5			NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	6,200			NS	NS	1,550,000	N	NMED		4.00E-03	
Manganese	7439-96-5	mg/kg	360			NS	NS	464	N	NMED		7.76E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.025	J		NS	NS	21	N	NMED		1.21E-03	
Nickel	7440-02-0	mg/kg	8.1			20,500	N	753	N	NMED	3.95E-09	1.08E-02	
Potassium	7440-09-7	mg/kg	890			NS	NS	20,800,000	N	NMED		4.28E-05	
Selenium	7782-49-2	mg/kg	1.1			NS	NS	1,750	N	NMED		6.29E-04	
Silver	7440-22-4	mg/kg	0.052	J		NS	NS	1,770	N	NMED		2.94E-05	
Sodium	7440-23-5	mg/kg	92			NS	NS	10,200,000	N	NMED		9.02E-06	
Thallium	7440-28-0	mg/kg	0.047	J		NS	NS	4	N	NMED		1.33E-02	
Vanadium	7440-62-2	mg/kg	12			NS	NS	614	N	NMED		1.95E-02	
Zinc	7440-66-6	mg/kg	24			NS	NS	106,000	N	NMED		2.26E-04	
									Cumulative Risk/Hazard		**3E-07**	**1.5**	
									Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	1.1
Endocrine	0.13
All Others	0.23

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-I30-1
GRID I30 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U		60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U		313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		1,300	N	570	N	RSL		

TABLE D1-I30-1
GRID I30 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	15,000			NS	NS	78,000	N	NMED		1.92E-01
Antimony	7440-36-0	mg/kg	0.12	J		NS	NS	31.3	N	NMED		3.83E-03
Arsenic	7440-38-2	mg/kg	1.2			7.07	N	13	N	NMED	1.70E-06	9.23E-02
Barium	7440-39-3	mg/kg	130			NS	NS	15,600	N	NMED		8.33E-03
Beryllium	7440-41-7	mg/kg	0.43	J		64,400	N	156	N	NMED	6.68E-11	2.76E-03
Cadmium	7440-43-9	mg/kg	0.4			85,900	N	70.5	N	NMED	4.66E-11	5.67E-03
Calcium	7440-70-2	mg/kg	3,500			NS	NS	13,000,000	N	NMED		2.69E-04
Chromium (Total) (2)	7440-47-3	mg/kg	9			96.6	N	45,200	N	NMED	9.32E-07	1.99E-04
Cobalt	7440-48-4	mg/kg	4.4			17,200	N	23.4	N	NMED	2.56E-09	1.88E-01
Copper	7440-50-8	mg/kg	67	J		NS	NS	3,130	N	NMED		2.14E-02
Iron	7439-89-6	mg/kg	6,400			NS	NS	54,800	N	NMED		1.17E-01
Lead	7439-92-1	mg/kg	9			NS	NS	200	N	IEUBK		
Magnesium	7439-95-4	mg/kg	6,100			NS	NS	15,600,000	N	NMED		3.91E-04
Manganese	7439-96-5	mg/kg	380			NS	NS	10,500	N	NMED		3.62E-02
Mercury (Elemental)	7439-97-6	mg/kg	0.029	J		NS	NS	23.8	N	NMED		1.22E-03
Nickel	7440-02-0	mg/kg	7.8			595,000	N	1,560	N	NMED	1.31E-10	5.00E-03
Potassium	7440-09-7	mg/kg	880			NS	NS	15,600,000	N	NMED		5.64E-05
Selenium	7782-49-2	mg/kg	1.1			NS	NS	391	N	NMED		2.81E-03
Silver	7440-22-4	mg/kg	0.045	J		NS	NS	391	N	NMED		1.15E-04
Sodium	7440-23-5	mg/kg	76			NS	NS	7,820,000	N	NMED		9.72E-06
Thallium	7440-28-0	mg/kg	0.059	J		NS	NS	0.782	N	NMED		7.54E-02
Vanadium	7440-62-2	mg/kg	12			NS	NS	394	N	NMED		3.05E-02
Zinc	7440-66-6	mg/kg	22			NS	NS	23,500	N	NMED		9.36E-04
									Cumulative Risk/Hazard		**3E-06**	**0.78**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Residential Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Residential Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-I30-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID I30
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		5,300	N	7,400	N	RSL		

TABLE D1-I30-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID I30
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	15,000			NS	NS	1,290,000	N	NMED		1.16E-02
Antimony	7440-36-0	mg/kg	0.12	J		NS	NS	519	N	NMED		2.31E-04
Arsenic	7440-38-2	mg/kg	1.2			36	N	208	N	NMED	3.34E-07	5.77E-03
Barium	7440-39-3	mg/kg	130			NS	NS	255,000	N	NMED		5.10E-04
Beryllium	7440-41-7	mg/kg	0.43	J		313,000	N	2,580	N	NMED	1.37E-11	1.67E-04
Cadmium	7440-43-9	mg/kg	0.4			417,000	N	1,110	N	NMED	9.59E-12	3.60E-04
Calcium	7440-70-2	mg/kg	3,500			NS	NS	32,400,000	N	NMED		1.08E-04
Chromium (Total) (2)	7440-47-3	mg/kg	9			505	N	314,000	N	NMED	1.78E-07	2.87E-05
Cobalt	7440-48-4	mg/kg	4.4			83,400	N	388	N	NMED	5.28E-10	1.13E-02
Copper	7440-50-8	mg/kg	67	J		NS	NS	51,900	N	NMED		1.29E-03
Iron	7439-89-6	mg/kg	6,400			NS	NS	908,000	N	NMED		7.05E-03
Lead	7439-92-1	mg/kg	9			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	6,100			NS	NS	5,680,000	N	NMED		1.07E-03
Manganese	7439-96-5	mg/kg	380			NS	NS	160,000	N	NMED		2.38E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.029	J		NS	NS	112	N	NMED		2.59E-04
Nickel	7440-02-0	mg/kg	7.8			2,890,000	N	25,700	N	NMED	2.70E-11	3.04E-04
Potassium	7440-09-7	mg/kg	880			NS	NS	76,200,000	N	NMED		1.15E-05
Selenium	7782-49-2	mg/kg	1.1			NS	NS	6,490	N	NMED		1.69E-04
Silver	7440-22-4	mg/kg	0.045	J		NS	NS	6,490	N	NMED		6.93E-06
Sodium	7440-23-5	mg/kg	76			NS	NS	37,300,000	N	NMED		2.04E-06
Thallium	7440-28-0	mg/kg	0.059	J		NS	NS	13	N	NMED		4.54E-03
Vanadium	7440-62-2	mg/kg	12			NS	NS	6,530	N	NMED		1.84E-03
Zinc	7440-66-6	mg/kg	22			NS	NS	38,900	N	NMED		5.66E-04
									Cumulative Risk/Hazard		**5E-07**	**0.050**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Industrial Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-I30-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID I30
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		626	N	2,420	N	NMEDC			

TABLE D1-I30-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID I30
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	15,000			NS	NS	41,400	N	NMED		3.62E-01	Nervous
Antimony	7440-36-0	mg/kg	0.12	J		NS	NS	142	N	NMED		8.45E-04	
Arsenic	7440-38-2	mg/kg	1.2			216	N	41	N	NMED	5.56E-08	2.91E-02	
Barium	7440-39-3	mg/kg	130			NS	NS	4,390	N	NMED		2.96E-02	
Beryllium	7440-41-7	mg/kg	0.43	J		2,710	N	148	N	NMED	1.59E-09	2.91E-03	
Cadmium	7440-43-9	mg/kg	0.4			3,610	N	72	N	NMED	1.11E-09	5.55E-03	
Calcium	7440-70-2	mg/kg	3,500			NS	NS	8,850,000	N	NMED		3.95E-04	
Chromium (Total) (3)	7440-47-3	mg/kg	9			468	N	134	N	NMED	1.92E-07	6.72E-02	
Cobalt	7440-48-4	mg/kg	4.4			722	N	37	N	NMED	6.09E-08	1.20E-01	Endocrine
Copper	7440-50-8	mg/kg	67	J		NS	NS	14,200	N	NMED		4.72E-03	
Iron	7439-89-6	mg/kg	6,400			NS	NS	248,000	N	NMED		2.58E-02	
Lead	7439-92-1	mg/kg	9			NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	6,100			NS	NS	1,550,000	N	NMED		3.94E-03	
Manganese	7439-96-5	mg/kg	380			NS	NS	464	N	NMED		8.19E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.029	J		NS	NS	21	N	NMED		1.40E-03	
Nickel	7440-02-0	mg/kg	7.8			20,500	N	753	N	NMED	3.80E-09	1.04E-02	
Potassium	7440-09-7	mg/kg	880			NS	NS	20,800,000	N	NMED		4.23E-05	
Selenium	7782-49-2	mg/kg	1.1			NS	NS	1,750	N	NMED		6.29E-04	
Silver	7440-22-4	mg/kg	0.045	J		NS	NS	1,770	N	NMED		2.54E-05	
Sodium	7440-23-5	mg/kg	76			NS	NS	10,200,000	N	NMED		7.45E-06	
Thallium	7440-28-0	mg/kg	0.059	J		NS	NS	4	N	NMED		1.67E-02	
Vanadium	7440-62-2	mg/kg	12			NS	NS	614	N	NMED		1.95E-02	
Zinc	7440-66-6	mg/kg	22			NS	NS	106,000	N	NMED		2.08E-04	
									Cumulative Risk/Hazard		**3E-07**	**1.5**	
									Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	1.2
Endocrine	0.12
All Others	0.22

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
N = no
NA = not applicable

NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-I33-1
GRID I33 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
INNER FENCE
FORT WINGATE DEPOT ACTIVITY

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U		60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U		313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		1,300	N	570	N	RSL		

TABLE D1-I33-1
GRID I33 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
INNER FENCE
FORT WINGATE DEPOT ACTIVITY

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	17,000			NS	NS	78,000	N	NMED		2.18E-01
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	31.3	N	NMED		
Arsenic	7440-38-2	mg/kg	1.4			7.07	N	13	N	NMED	1.98E-06	1.08E-01
Barium	7440-39-3	mg/kg	200			NS	NS	15,600	N	NMED		1.28E-02
Beryllium	7440-41-7	mg/kg	0.67	J		64,400	N	156	N	NMED	1.04E-10	4.29E-03
Cadmium	7440-43-9	mg/kg	0.27	J		85,900	N	70.5	N	NMED	3.14E-11	3.83E-03
Calcium	7440-70-2	mg/kg	4,000			NS	NS	13,000,000	N	NMED		3.08E-04
Chromium (Total) (2)	7440-47-3	mg/kg	11			96.6	N	45,200	N	NMED	1.14E-06	2.43E-04
Cobalt	7440-48-4	mg/kg	5.3			17,200	N	23.4	N	NMED	3.08E-09	2.26E-01
Copper	7440-50-8	mg/kg	45	J		NS	NS	3,130	N	NMED		1.44E-02
Iron	7439-89-6	mg/kg	9,500			NS	NS	54,800	N	NMED		1.73E-01
Lead	7439-92-1	mg/kg	9.3	J		NS	NS	200	N	IEUBK		
Magnesium	7439-95-4	mg/kg	6,100			NS	NS	15,600,000	N	NMED		3.91E-04
Manganese	7439-96-5	mg/kg	510			NS	NS	10,500	N	NMED		4.86E-02
Mercury (Elemental)	7439-97-6	mg/kg	0.031	J		NS	NS	23.8	N	NMED		1.30E-03
Nickel	7440-02-0	mg/kg	9.1			595,000	N	1,560	N	NMED	1.53E-10	5.83E-03
Potassium	7440-09-7	mg/kg	1,300			NS	NS	15,600,000	N	NMED		8.33E-05
Selenium	7782-49-2	mg/kg	1.2	J		NS	NS	391	N	NMED		3.07E-03
Silver	7440-22-4	mg/kg	0.047	J		NS	NS	391	N	NMED		1.20E-04
Sodium	7440-23-5	mg/kg	71			NS	NS	7,820,000	N	NMED		9.08E-06
Thallium	7440-28-0	mg/kg	0.05	J		NS	NS	0.782	N	NMED		6.39E-02
Vanadium	7440-62-2	mg/kg	20			NS	NS	394	N	NMED		5.08E-02
Zinc	7440-66-6	mg/kg	23			NS	NS	23,500	N	NMED		9.79E-04
									Cumulative Risk/Hazard		**3E-06**	**0.94**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Residential Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Residential Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-I33-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID I33
INNER FENCE
FORT WINGATE DEPOT ACTIVITY

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		5,300	N	7,400	N	RSL		

TABLE D1-I33-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID I33
INNER FENCE
FORT WINGATE DEPOT ACTIVITY

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	17,000			NS	NS	1,290,000	N	NMED		1.32E-02
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	519	N	NMED		
Arsenic	7440-38-2	mg/kg	1.4			36	N	208	N	NMED	3.90E-07	6.73E-03
Barium	7440-39-3	mg/kg	200			NS	NS	255,000	N	NMED		7.84E-04
Beryllium	7440-41-7	mg/kg	0.67	J		313,000	N	2,580	N	NMED	2.14E-11	2.60E-04
Cadmium	7440-43-9	mg/kg	0.27	J		417,000	N	1,110	N	NMED	6.47E-12	2.43E-04
Calcium	7440-70-2	mg/kg	4,000			NS	NS	32,400,000	N	NMED		1.23E-04
Chromium (Total) (2)	7440-47-3	mg/kg	11			505	N	314,000	N	NMED	2.18E-07	3.50E-05
Cobalt	7440-48-4	mg/kg	5.3			83,400	N	388	N	NMED	6.35E-10	1.37E-02
Copper	7440-50-8	mg/kg	45	J		NS	NS	51,900	N	NMED		8.67E-04
Iron	7439-89-6	mg/kg	9,500			NS	NS	908,000	N	NMED		1.05E-02
Lead	7439-92-1	mg/kg	9.3	J		NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	6,100			NS	NS	5,680,000	N	NMED		1.07E-03
Manganese	7439-96-5	mg/kg	510			NS	NS	160,000	N	NMED		3.19E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.031	J		NS	NS	112	N	NMED		2.77E-04
Nickel	7440-02-0	mg/kg	9.1			2,890,000	N	25,700	N	NMED	3.15E-11	3.54E-04
Potassium	7440-09-7	mg/kg	1,300			NS	NS	76,200,000	N	NMED		1.71E-05
Selenium	7782-49-2	mg/kg	1.2	J		NS	NS	6,490	N	NMED		1.85E-04
Silver	7440-22-4	mg/kg	0.047	J		NS	NS	6,490	N	NMED		7.24E-06
Sodium	7440-23-5	mg/kg	71			NS	NS	37,300,000	N	NMED		1.90E-06
Thallium	7440-28-0	mg/kg	0.05	J		NS	NS	13	N	NMED		3.85E-03
Vanadium	7440-62-2	mg/kg	20			NS	NS	6,530	N	NMED		3.06E-03
Zinc	7440-66-6	mg/kg	23			NS	NS	38,900	N	NMED		5.91E-04
									Cumulative Risk/Hazard		**6E-07**	**0.06**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Industrial Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-I33-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID I33
INNER FENCE
FORT WINGATE DEPOT ACTIVITY

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		626	N	2,420	N	NMEDC			

TABLE D1-I33-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID I33
INNER FENCE
FORT WINGATE DEPOT ACTIVITY

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	17,000			NS	NS	41,400	N	NMED		4.11E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	142	N	NMED			
Arsenic	7440-38-2	mg/kg	1.4			216	N	41	N	NMED	6.48E-08	3.40E-02	
Barium	7440-39-3	mg/kg	200			NS	NS	4,390	N	NMED		4.56E-02	
Beryllium	7440-41-7	mg/kg	0.67	J		2,710	N	148	N	NMED	2.47E-09	4.53E-03	
Cadmium	7440-43-9	mg/kg	0.27	J		3,610	N	72	N	NMED	7.48E-10	3.74E-03	
Calcium	7440-70-2	mg/kg	4,000			NS	NS	8,850,000	N	NMED		4.52E-04	
Chromium (Total) (3)	7440-47-3	mg/kg	11			468	N	134	N	NMED	2.35E-07	8.21E-02	
Cobalt	7440-48-4	mg/kg	5.3			722	N	37	N	NMED	7.34E-08	1.44E-01	Endocrine
Copper	7440-50-8	mg/kg	45	J		NS	NS	14,200	N	NMED		3.17E-03	
Iron	7439-89-6	mg/kg	9,500			NS	NS	248,000	N	NMED		3.83E-02	
Lead	7439-92-1	mg/kg	9.3	J		NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	6,100			NS	NS	1,550,000	N	NMED		3.94E-03	
Manganese	7439-96-5	mg/kg	510			NS	NS	464	Y	NMED		1.10E+00	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.031	J		NS	NS	21	N	NMED		1.50E-03	
Nickel	7440-02-0	mg/kg	9.1			20,500	N	753	N	NMED	4.44E-09	1.21E-02	
Potassium	7440-09-7	mg/kg	1,300			NS	NS	20,800,000	N	NMED		6.25E-05	
Selenium	7782-49-2	mg/kg	1.2	J		NS	NS	1,750	N	NMED		6.86E-04	
Silver	7440-22-4	mg/kg	0.047	J		NS	NS	1,770	N	NMED		2.66E-05	
Sodium	7440-23-5	mg/kg	71			NS	NS	10,200,000	N	NMED		6.96E-06	
Thallium	7440-28-0	mg/kg	0.05	J		NS	NS	4	N	NMED		1.41E-02	
Vanadium	7440-62-2	mg/kg	20			NS	NS	614	N	NMED		3.26E-02	
Zinc	7440-66-6	mg/kg	23			NS	NS	106,000	N	NMED		2.17E-04	
									Cumulative Risk/Hazard		**4E-07**	**1.9**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	1.5
Endocrine	0.14
All Others	0.28

TABLE D1-I38-1
GRID I38 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
INNER FENCE
FORT WINGATE DEPOT ACTIVITY

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.14			NS	NS	7.64	N	NMED		1.83E-02
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U		60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U		313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		1,300	N	570	N	RSL		

TABLE D1-I38-1
GRID I38 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
INNER FENCE
FORT WINGATE DEPOT ACTIVITY

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	14,000			NS	NS	78,000	N	NMED		1.79E-01
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	31.3	N	NMED		
Arsenic	7440-38-2	mg/kg	1.6			7.07	N	13	N	NMED	2.26E-06	1.23E-01
Barium	7440-39-3	mg/kg	250			NS	NS	15,600	N	NMED		1.60E-02
Beryllium	7440-41-7	mg/kg	0.69	J		64,400	N	156	N	NMED	1.07E-10	4.42E-03
Cadmium	7440-43-9	mg/kg	0.24			85,900	N	70.5	N	NMED	2.79E-11	3.40E-03
Calcium	7440-70-2	mg/kg	6,700			NS	NS	13,000,000	N	NMED		5.15E-04
Chromium (Total) (2)	7440-47-3	mg/kg	10			96.6	N	45,200	N	NMED	1.04E-06	2.21E-04
Cobalt	7440-48-4	mg/kg	4.9			17,200	N	23.4	N	NMED	2.85E-09	2.09E-01
Copper	7440-50-8	mg/kg	24			NS	NS	3,130	N	NMED		7.67E-03
Iron	7439-89-6	mg/kg	9,500			NS	NS	54,800	N	NMED		1.73E-01
Lead	7439-92-1	mg/kg	11			NS	NS	200	N	IEUBK		
Magnesium	7439-95-4	mg/kg	3,700			NS	NS	15,600,000	N	NMED		2.37E-04
Manganese	7439-96-5	mg/kg	510			NS	NS	10,500	N	NMED		4.86E-02
Mercury (Elemental)	7439-97-6	mg/kg	0.024	J		NS	NS	23.8	N	NMED		1.01E-03
Nickel	7440-02-0	mg/kg	8.6			595,000	N	1,560	N	NMED	1.45E-10	5.51E-03
Potassium	7440-09-7	mg/kg	1,800			NS	NS	15,600,000	N	NMED		1.15E-04
Selenium	7782-49-2	mg/kg	1.1			NS	NS	391	N	NMED		2.81E-03
Silver	7440-22-4	mg/kg	0.05	J		NS	NS	391	N	NMED		1.28E-04
Sodium	7440-23-5	mg/kg	32			NS	NS	7,820,000	N	NMED		4.09E-06
Thallium	7440-28-0	mg/kg	0.098	J		NS	NS	0.782	N	NMED		1.25E-01
Vanadium	7440-62-2	mg/kg	15			NS	NS	394	N	NMED		3.81E-02
Zinc	7440-66-6	mg/kg	22			NS	NS	23,500	N	NMED		9.36E-04
									Cumulative Risk/Hazard		**3E-06**	**0.96**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Residential Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Residential Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
R = Rejected
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-I38-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID I38
INNER FENCE
FORT WINGATE DEPOT ACTIVITY

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.14			NS	NS	125	N	NMED		1.12E-03
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		5,300	N	7,400	N	RSL		

TABLE D1-I38-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID I38
INNER FENCE
FORT WINGATE DEPOT ACTIVITY

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	14,000			NS	NS	1,290,000	N	NMED		1.09E-02
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	519	N	NMED		
Arsenic	7440-38-2	mg/kg	1.6			36	N	208	N	NMED	4.46E-07	7.69E-03
Barium	7440-39-3	mg/kg	250			NS	NS	255,000	N	NMED		9.80E-04
Beryllium	7440-41-7	mg/kg	0.69	J		313,000	N	2,580	N	NMED	2.20E-11	2.67E-04
Cadmium	7440-43-9	mg/kg	0.24			417,000	N	1,110	N	NMED	5.76E-12	2.16E-04
Calcium	7440-70-2	mg/kg	6,700			NS	NS	32,400,000	N	NMED		2.07E-04
Chromium (Total) (2)	7440-47-3	mg/kg	10			505	N	314,000	N	NMED	1.98E-07	3.18E-05
Cobalt	7440-48-4	mg/kg	4.9			83,400	N	388	N	NMED	5.88E-10	1.26E-02
Copper	7440-50-8	mg/kg	24			NS	NS	51,900	N	NMED		4.62E-04
Iron	7439-89-6	mg/kg	9,500			NS	NS	908,000	N	NMED		1.05E-02
Lead	7439-92-1	mg/kg	11			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	3,700			NS	NS	5,680,000	N	NMED		6.51E-04
Manganese	7439-96-5	mg/kg	510			NS	NS	160,000	N	NMED		3.19E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.024	J		NS	NS	112	N	NMED		2.14E-04
Nickel	7440-02-0	mg/kg	8.6			2,890,000	N	25,700	N	NMED	2.98E-11	3.35E-04
Potassium	7440-09-7	mg/kg	1,800			NS	NS	76,200,000	N	NMED		2.36E-05
Selenium	7782-49-2	mg/kg	1.1			NS	NS	6,490	N	NMED		1.69E-04
Silver	7440-22-4	mg/kg	0.05	J		NS	NS	6,490	N	NMED		7.70E-06
Sodium	7440-23-5	mg/kg	32			NS	NS	37,300,000	N	NMED		8.58E-07
Thallium	7440-28-0	mg/kg	0.098	J		NS	NS	13	N	NMED		7.54E-03
Vanadium	7440-62-2	mg/kg	15			NS	NS	6,530	N	NMED		2.30E-03
Zinc	7440-66-6	mg/kg	22			NS	NS	38,900	N	NMED		5.66E-04
									Cumulative Risk/Hazard		**6E-07**	**0.06**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Industrial Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
R = Rejected
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-I38-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID I38
INNER FENCE
FORT WINGATE DEPOT ACTIVITY

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.14			NS	NS	17	N	NMED		8.09E-03	
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		626	N	2,420	N	NMEDC			

TABLE D1-I38-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID I38
INNER FENCE
FORT WINGATE DEPOT ACTIVITY

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	14,000			NS	NS	41,400	N	NMED		3.38E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	142	N	NMED			
Arsenic	7440-38-2	mg/kg	1.6			216	N	41	N	NMED	7.41E-08	3.88E-02	
Barium	7440-39-3	mg/kg	250			NS	NS	4,390	N	NMED		5.69E-02	
Beryllium	7440-41-7	mg/kg	0.69	J		2,710	N	148	N	NMED	2.55E-09	4.66E-03	
Cadmium	7440-43-9	mg/kg	0.24			3,610	N	72	N	NMED	6.65E-10	3.33E-03	
Calcium	7440-70-2	mg/kg	6,700			NS	NS	8,850,000	N	NMED		7.57E-04	
Chromium (Total) (3)	7440-47-3	mg/kg	10			468	N	134	N	NMED	2.14E-07	7.46E-02	
Cobalt	7440-48-4	mg/kg	4.9			722	N	37	N	NMED	6.79E-08	1.34E-01	Endocrine
Copper	7440-50-8	mg/kg	24			NS	NS	14,200	N	NMED		1.69E-03	
Iron	7439-89-6	mg/kg	9,500			NS	NS	248,000	N	NMED		3.83E-02	
Lead	7439-92-1	mg/kg	11			NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	3,700			NS	NS	1,550,000	N	NMED		2.39E-03	
Manganese	7439-96-5	mg/kg	510			NS	NS	464	Y	NMED		1.10E+00	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.024	J		NS	NS	21	N	NMED		1.16E-03	
Nickel	7440-02-0	mg/kg	8.6			20,500	N	753	N	NMED	4.20E-09	1.14E-02	
Potassium	7440-09-7	mg/kg	1,800			NS	NS	20,800,000	N	NMED		8.65E-05	
Selenium	7782-49-2	mg/kg	1.1			NS	NS	1,750	N	NMED		6.29E-04	
Silver	7440-22-4	mg/kg	0.05	J		NS	NS	1,770	N	NMED		2.82E-05	
Sodium	7440-23-5	mg/kg	32			NS	NS	10,200,000	N	NMED		3.14E-06	
Thallium	7440-28-0	mg/kg	0.098	J		NS	NS	4	N	NMED		2.77E-02	
Vanadium	7440-62-2	mg/kg	15			NS	NS	614	N	NMED		2.44E-02	
Zinc	7440-66-6	mg/kg	22			NS	NS	106,000	N	NMED		2.08E-04	
									Cumulative Risk/Hazard		**4E-07**	**1.9**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent	NS = No Standard
CAS = Chemical Abstracts Service	RAG = Risk Assessment Guidance
HI = Hazard Index	SSL = soil screening level
J = Estimated	R = Rejected
mg/kg = milligrams per kilogram	U = Nondetect
N = no	UTL = upper tolerance limit
NA = not applicable	Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	1.4
Endocrine	0.13
All Others	0.29

TABLE D1-K30-1
GRID K30 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		1,300	N	570	N	RSL		

TABLE D1-K30-1
GRID K30 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	16,000			NS	NS	78,000	N	NMED		2.05E-01
Antimony	7440-36-0	mg/kg	0.086	J		NS	NS	31.3	N	NMED		2.75E-03
Arsenic	7440-38-2	mg/kg	1.2			7.07	N	13	N	NMED	1.70E-06	9.23E-02
Barium	7440-39-3	mg/kg	180			NS	NS	15,600	N	NMED		1.15E-02
Beryllium	7440-41-7	mg/kg	0.71	J		64,400	N	156	N	NMED	1.10E-10	4.55E-03
Cadmium	7440-43-9	mg/kg	0.33			85,900	N	70.5	N	NMED	3.84E-11	4.68E-03
Calcium	7440-70-2	mg/kg	3,400			NS	NS	13,000,000	N	NMED		2.62E-04
Chromium (Total) (2)	7440-47-3	mg/kg	11			96.6	N	45,200	N	NMED	1.14E-06	2.43E-04
Cobalt	7440-48-4	mg/kg	5.3			17,200	N	23.4	N	NMED	3.08E-09	2.26E-01
Copper	7440-50-8	mg/kg	44			NS	NS	3,130	N	NMED		1.41E-02
Iron	7439-89-6	mg/kg	9,700			NS	NS	54,800	N	NMED		1.77E-01
Lead	7439-92-1	mg/kg	9.3			NS	NS	200	N	IEUBK		
Magnesium	7439-95-4	mg/kg	6,600			NS	NS	15,600,000	N	NMED		4.23E-04
Manganese	7439-96-5	mg/kg	550			NS	NS	10,500	N	NMED		5.24E-02
Mercury (Elemental)	7439-97-6	mg/kg	0.019	J		NS	NS	23.8	N	NMED		7.98E-04
Nickel	7440-02-0	mg/kg	8.6			595,000	N	1,560	N	NMED	1.45E-10	5.51E-03
Potassium	7440-09-7	mg/kg	960			NS	NS	15,600,000	N	NMED		6.15E-05
Selenium	7782-49-2	mg/kg	1.5			NS	NS	391	N	NMED		3.84E-03
Silver	7440-22-4	mg/kg	0.044	J		NS	NS	391	N	NMED		1.13E-04
Sodium	7440-23-5	mg/kg	110	J		NS	NS	7,820,000	N	NMED		1.41E-05
Thallium	7440-28-0	mg/kg	0.049	J		NS	NS	0.782	N	NMED		6.27E-02
Vanadium	7440-62-2	mg/kg	22			NS	NS	394	N	NMED		5.58E-02
Zinc	7440-66-6	mg/kg	23			NS	NS	23,500	N	NMED		9.79E-04
									Cumulative Risk/Hazard		**3E-06**	**0.92**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Residential Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Residential Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-K30-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID K30
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		5,300	N	7,400	N	RSL		

TABLE D1-K30-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID K30
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	16,000			NS	NS	1,290,000	N	NMED		1.24E-02
Antimony	7440-36-0	mg/kg	0.086	J		NS	NS	519	N	NMED		1.66E-04
Arsenic	7440-38-2	mg/kg	1.2			36	N	208	N	NMED	3.34E-07	5.77E-03
Barium	7440-39-3	mg/kg	180			NS	NS	255,000	N	NMED		7.06E-04
Beryllium	7440-41-7	mg/kg	0.71	J		313,000	N	2,580	N	NMED	2.27E-11	2.75E-04
Cadmium	7440-43-9	mg/kg	0.33			417,000	N	1,110	N	NMED	7.91E-12	2.97E-04
Calcium	7440-70-2	mg/kg	3,400			NS	NS	32,400,000	N	NMED		1.05E-04
Chromium (Total) (2)	7440-47-3	mg/kg	11			505	N	314,000	N	NMED	2.18E-07	3.50E-05
Cobalt	7440-48-4	mg/kg	5.3			83,400	N	388	N	NMED	6.35E-10	1.37E-02
Copper	7440-50-8	mg/kg	44			NS	NS	51,900	N	NMED		8.48E-04
Iron	7439-89-6	mg/kg	9,700			NS	NS	908,000	N	NMED		1.07E-02
Lead	7439-92-1	mg/kg	9.3			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	6,600			NS	NS	5,680,000	N	NMED		1.16E-03
Manganese	7439-96-5	mg/kg	550			NS	NS	160,000	N	NMED		3.44E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.019	J		NS	NS	112	N	NMED		1.70E-04
Nickel	7440-02-0	mg/kg	8.6			2,890,000	N	25,700	N	NMED	2.98E-11	3.35E-04
Potassium	7440-09-7	mg/kg	960			NS	NS	76,200,000	N	NMED		1.26E-05
Selenium	7782-49-2	mg/kg	1.5			NS	NS	6,490	N	NMED		2.31E-04
Silver	7440-22-4	mg/kg	0.044	J		NS	NS	6,490	N	NMED		6.78E-06
Sodium	7440-23-5	mg/kg	110	J		NS	NS	37,300,000	N	NMED		2.95E-06
Thallium	7440-28-0	mg/kg	0.049	J		NS	NS	13	N	NMED		3.77E-03
Vanadium	7440-62-2	mg/kg	22			NS	NS	6,530	N	NMED		3.37E-03
Zinc	7440-66-6	mg/kg	23			NS	NS	38,900	N	NMED		5.91E-04
									Cumulative Risk/Hazard		**6E-07**	**0.06**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Industrial Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-K30-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID K30
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		626	N	2,420	N	NMEDC			

TABLE D1-K30-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID K30
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	16,000			NS	NS	41,400	N	NMED		3.86E-01	Nervous
Antimony	7440-36-0	mg/kg	0.086	J		NS	NS	142	N	NMED		6.06E-04	
Arsenic	7440-38-2	mg/kg	1.2			216	N	41	N	NMED	5.56E-08	2.91E-02	
Barium	7440-39-3	mg/kg	180			NS	NS	4,390	N	NMED		4.10E-02	
Beryllium	7440-41-7	mg/kg	0.71	J		2,710	N	148	N	NMED	2.62E-09	4.80E-03	
Cadmium	7440-43-9	mg/kg	0.33			3,610	N	72	N	NMED	9.14E-10	4.58E-03	
Calcium	7440-70-2	mg/kg	3,400			NS	NS	8,850,000	N	NMED		3.84E-04	
Chromium (Total) (3)	7440-47-3	mg/kg	11			468	N	134	N	NMED	2.35E-07	8.21E-02	
Cobalt	7440-48-4	mg/kg	5.3			722	N	37	N	NMED	7.34E-08	1.44E-01	Endocrine
Copper	7440-50-8	mg/kg	44			NS	NS	14,200	N	NMED		3.10E-03	
Iron	7439-89-6	mg/kg	9,700			NS	NS	248,000	N	NMED		3.91E-02	
Lead	7439-92-1	mg/kg	9.3			NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	6,600			NS	NS	1,550,000	N	NMED		4.26E-03	
Manganese	7439-96-5	mg/kg	550			NS	NS	464	Y	NMED		1.19E+00	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.019	J		NS	NS	21	N	NMED		9.18E-04	
Nickel	7440-02-0	mg/kg	8.6			20,500	N	753	N	NMED	4.20E-09	1.14E-02	
Potassium	7440-09-7	mg/kg	960			NS	NS	20,800,000	N	NMED		4.62E-05	
Selenium	7782-49-2	mg/kg	1.5			NS	NS	1,750	N	NMED		8.57E-04	
Silver	7440-22-4	mg/kg	0.044	J		NS	NS	1,770	N	NMED		2.49E-05	
Sodium	7440-23-5	mg/kg	110	J		NS	NS	10,200,000	N	NMED		1.08E-05	
Thallium	7440-28-0	mg/kg	0.049	J		NS	NS	4	N	NMED		1.38E-02	
Vanadium	7440-62-2	mg/kg	22			NS	NS	614	N	NMED		3.58E-02	
Zinc	7440-66-6	mg/kg	23			NS	NS	106,000	N	NMED		2.17E-04	
									Cumulative Risk/Hazard		**4E-07**	**2.0**	
									Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	1.6
Endocrine	0.14
All Others	0.27

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-K34-1
GRID K34 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXCIO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		1,300	N	570	N	RSL		

TABLE D1-K34-1
GRID K34 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXCIO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	15,000			NS	NS	78,000	N	NMED		1.92E-01
Antimony	7440-36-0	mg/kg	0.23			NS	NS	31.3	N	NMED		7.35E-03
Arsenic	7440-38-2	mg/kg	1.2			7.07	N	13	N	NMED	1.70E-06	9.23E-02
Barium	7440-39-3	mg/kg	190			NS	NS	15,600	N	NMED		1.22E-02
Beryllium	7440-41-7	mg/kg	0.63	J		64,400	N	156	N	NMED	9.78E-11	4.04E-03
Cadmium	7440-43-9	mg/kg	0.25			85,900	N	70.5	N	NMED	2.91E-11	3.55E-03
Calcium	7440-70-2	mg/kg	3,300			NS	NS	13,000,000	N	NMED		2.54E-04
Chromium (Total) (2)	7440-47-3	mg/kg	11			96.6	N	45,200	N	NMED	1.14E-06	2.43E-04
Cobalt	7440-48-4	mg/kg	5.3			17,200	N	23.4	N	NMED	3.08E-09	2.26E-01
Copper	7440-50-8	mg/kg	48			NS	NS	3,130	N	NMED		1.53E-02
Iron	7439-89-6	mg/kg	10,000			NS	NS	54,800	N	NMED		1.82E-01
Lead	7439-92-1	mg/kg	9.7			NS	NS	200	N	IEUBK		
Magnesium	7439-95-4	mg/kg	5,700			NS	NS	15,600,000	N	NMED		3.65E-04
Manganese	7439-96-5	mg/kg	550			NS	NS	10,500	N	NMED		5.24E-02
Mercury (Elemental)	7439-97-6	mg/kg	0.025	J		NS	NS	23.8	N	NMED		1.05E-03
Nickel	7440-02-0	mg/kg	9.5			595,000	N	1,560	N	NMED	1.60E-10	6.09E-03
Potassium	7440-09-7	mg/kg	1,400			NS	NS	15,600,000	N	NMED		8.97E-05
Selenium	7782-49-2	mg/kg	1.4			NS	NS	391	N	NMED		3.58E-03
Silver	7440-22-4	mg/kg	0.051	J		NS	NS	391	N	NMED		1.30E-04
Sodium	7440-23-5	mg/kg	48			NS	NS	7,820,000	N	NMED		6.14E-06
Thallium	7440-28-0	mg/kg	0.06	J		NS	NS	0.782	N	NMED		7.67E-02
Vanadium	7440-62-2	mg/kg	23			NS	NS	394	N	NMED		5.84E-02
Zinc	7440-66-6	mg/kg	24			NS	NS	23,500	N	NMED		1.02E-03
									Cumulative Risk/Hazard		**3E-06**	**0.94**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Residential Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Residential Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-K34-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID K34
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		5,300	N	7,400	N	RSL		

TABLE D1-K34-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID K34
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	15,000			NS	NS	1,290,000	N	NMED		1.16E-02
Antimony	7440-36-0	mg/kg	0.23			NS	NS	519	N	NMED		4.43E-04
Arsenic	7440-38-2	mg/kg	1.2			36	N	208	N	NMED	3.34E-07	5.77E-03
Barium	7440-39-3	mg/kg	190			NS	NS	255,000	N	NMED		7.45E-04
Beryllium	7440-41-7	mg/kg	0.63	J		313,000	N	2,580	N	NMED	2.01E-11	2.44E-04
Cadmium	7440-43-9	mg/kg	0.25			417,000	N	1,110	N	NMED	6.00E-12	2.25E-04
Calcium	7440-70-2	mg/kg	3,300			NS	NS	32,400,000	N	NMED		1.02E-04
Chromium (Total) (2)	7440-47-3	mg/kg	11			505	N	314,000	N	NMED	2.18E-07	3.50E-05
Cobalt	7440-48-4	mg/kg	5.3			83,400	N	388	N	NMED	6.35E-10	1.37E-02
Copper	7440-50-8	mg/kg	48			NS	NS	51,900	N	NMED		9.25E-04
Iron	7439-89-6	mg/kg	10,000			NS	NS	908,000	N	NMED		1.10E-02
Lead	7439-92-1	mg/kg	9.7			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	5,700			NS	NS	5,680,000	N	NMED		1.00E-03
Manganese	7439-96-5	mg/kg	550			NS	NS	160,000	N	NMED		3.44E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.025	J		NS	NS	112	N	NMED		2.23E-04
Nickel	7440-02-0	mg/kg	9.5			2,890,000	N	25,700	N	NMED	3.29E-11	3.70E-04
Potassium	7440-09-7	mg/kg	1,400			NS	NS	76,200,000	N	NMED		1.84E-05
Selenium	7782-49-2	mg/kg	1.4			NS	NS	6,490	N	NMED		2.16E-04
Silver	7440-22-4	mg/kg	0.051	J		NS	NS	6,490	N	NMED		7.86E-06
Sodium	7440-23-5	mg/kg	48			NS	NS	37,300,000	N	NMED		1.29E-06
Thallium	7440-28-0	mg/kg	0.06	J		NS	NS	13	N	NMED		4.62E-03
Vanadium	7440-62-2	mg/kg	23			NS	NS	6,530	N	NMED		3.52E-03
Zinc	7440-66-6	mg/kg	24			NS	NS	38,900	N	NMED		6.17E-04
									Cumulative Risk/Hazard		**6E-07**	**0.06**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Industrial Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-K34-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID K34
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		626	N	2,420	N	NMEDC			

TABLE D1-K34-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID K34
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	15,000			NS	NS	41,400	N	NMED		3.62E-01	Nervous
Antimony	7440-36-0	mg/kg	0.23			NS	NS	142	N	NMED		1.62E-03	
Arsenic	7440-38-2	mg/kg	1.2			216	N	41	N	NMED	5.56E-08	2.91E-02	
Barium	7440-39-3	mg/kg	190			NS	NS	4,390	N	NMED		4.33E-02	
Beryllium	7440-41-7	mg/kg	0.63	J		2,710	N	148	N	NMED	2.32E-09	4.26E-03	
Cadmium	7440-43-9	mg/kg	0.25			3,610	N	72	N	NMED	6.93E-10	3.47E-03	
Calcium	7440-70-2	mg/kg	3,300			NS	NS	8,850,000	N	NMED		3.73E-04	
Chromium (Total) (3)	7440-47-3	mg/kg	11			468	N	134	N	NMED	2.35E-07	8.21E-02	
Cobalt	7440-48-4	mg/kg	5.3			722	N	37	N	NMED	7.34E-08	1.44E-01	Endocrine
Copper	7440-50-8	mg/kg	48			NS	NS	14,200	N	NMED		3.38E-03	
Iron	7439-89-6	mg/kg	10,000			NS	NS	248,000	N	NMED		4.03E-02	
Lead	7439-92-1	mg/kg	9.7			NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	5,700			NS	NS	1,550,000	N	NMED		3.68E-03	
Manganese	7439-96-5	mg/kg	550			NS	NS	464	Y	NMED		1.19E+00	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.025	J		NS	NS	21	N	NMED		1.21E-03	
Nickel	7440-02-0	mg/kg	9.5			20,500	N	753	N	NMED	4.63E-09	1.26E-02	
Potassium	7440-09-7	mg/kg	1,400			NS	NS	20,800,000	N	NMED		6.73E-05	
Selenium	7782-49-2	mg/kg	1.4			NS	NS	1,750	N	NMED		8.00E-04	
Silver	7440-22-4	mg/kg	0.051	J		NS	NS	1,770	N	NMED		2.88E-05	
Sodium	7440-23-5	mg/kg	48			NS	NS	10,200,000	N	NMED		4.71E-06	
Thallium	7440-28-0	mg/kg	0.06	J		NS	NS	4	N	NMED		1.69E-02	
Vanadium	7440-62-2	mg/kg	23			NS	NS	614	N	NMED		3.75E-02	
Zinc	7440-66-6	mg/kg	24			NS	NS	106,000	N	NMED		2.26E-04	
									Cumulative Risk/Hazard		**4E-07**	**2.0**	
									Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	1.5
Endocrine	0.14
All Others	0.28

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
N = no
NA = not applicable

NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-L29-1
GRID L29 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		1,300	N	570	N	RSL		

TABLE D1-L29-1
GRID L29 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	14,000			NS	NS	78,000	N	NMED		1.79E-01
Antimony	7440-36-0	mg/kg	0.22			NS	NS	31.3	N	NMED		7.03E-03
Arsenic	7440-38-2	mg/kg	1.1			7.07	N	13	N	NMED	1.56E-06	8.46E-02
Barium	7440-39-3	mg/kg	120			NS	NS	15,600	N	NMED		7.69E-03
Beryllium	7440-41-7	mg/kg	0.55	J		64,400	N	156	N	NMED	8.54E-11	3.53E-03
Cadmium	7440-43-9	mg/kg	0.39			85,900	N	70.5	N	NMED	4.54E-11	5.53E-03
Calcium	7440-70-2	mg/kg	2,800			NS	NS	13,000,000	N	NMED		2.15E-04
Chromium (Total) (2)	7440-47-3	mg/kg	11			96.6	N	45,200	N	NMED	1.14E-06	2.43E-04
Cobalt	7440-48-4	mg/kg	4.6			17,200	N	23.4	N	NMED	2.67E-09	1.97E-01
Copper	7440-50-8	mg/kg	60			NS	NS	3,130	N	NMED		1.92E-02
Iron	7439-89-6	mg/kg	9,100			NS	NS	54,800	N	NMED		1.66E-01
Lead	7439-92-1	mg/kg	9			NS	NS	200	N	IEUBK		
Magnesium	7439-95-4	mg/kg	6,200			NS	NS	15,600,000	N	NMED		3.97E-04
Manganese	7439-96-5	mg/kg	350			NS	NS	10,500	N	NMED		3.33E-02
Mercury (Elemental)	7439-97-6	mg/kg	0.065	J		NS	NS	23.8	N	NMED		2.73E-03
Nickel	7440-02-0	mg/kg	8.2			595,000	N	1,560	N	NMED	1.38E-10	5.26E-03
Potassium	7440-09-7	mg/kg	820			NS	NS	15,600,000	N	NMED		5.26E-05
Selenium	7782-49-2	mg/kg	1.1			NS	NS	391	N	NMED		2.81E-03
Silver	7440-22-4	mg/kg	0.078	J		NS	NS	391	N	NMED		1.99E-04
Sodium	7440-23-5	mg/kg	88			NS	NS	7,820,000	N	NMED		1.13E-05
Thallium	7440-28-0	mg/kg	0.042	J		NS	NS	0.782	N	NMED		5.37E-02
Vanadium	7440-62-2	mg/kg	19			NS	NS	394	N	NMED		4.82E-02
Zinc	7440-66-6	mg/kg	24			NS	NS	23,500	N	NMED		1.02E-03
									Cumulative Risk/Hazard		**3E-06**	**0.82**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Residential Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Residential Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-L29-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID L29
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		5,300	N	7,400	N	RSL		

TABLE D1-L29-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID L29
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	14,000			NS	NS	1,290,000	N	NMED		1.09E-02
Antimony	7440-36-0	mg/kg	0.22			NS	NS	519	N	NMED		4.24E-04
Arsenic	7440-38-2	mg/kg	1.1			36	N	208	N	NMED	3.06E-07	5.29E-03
Barium	7440-39-3	mg/kg	120			NS	NS	255,000	N	NMED		4.71E-04
Beryllium	7440-41-7	mg/kg	0.55	J		313,000	N	2,580	N	NMED	1.76E-11	2.13E-04
Cadmium	7440-43-9	mg/kg	0.39			417,000	N	1,110	N	NMED	9.35E-12	3.51E-04
Calcium	7440-70-2	mg/kg	2,800			NS	NS	32,400,000	N	NMED		8.64E-05
Chromium (Total) (2)	7440-47-3	mg/kg	11			505	N	314,000	N	NMED	2.18E-07	3.50E-05
Cobalt	7440-48-4	mg/kg	4.6			83,400	N	388	N	NMED	5.52E-10	1.19E-02
Copper	7440-50-8	mg/kg	60			NS	NS	51,900	N	NMED		1.16E-03
Iron	7439-89-6	mg/kg	9,100			NS	NS	908,000	N	NMED		1.00E-02
Lead	7439-92-1	mg/kg	9			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	6,200			NS	NS	5,680,000	N	NMED		1.09E-03
Manganese	7439-96-5	mg/kg	350			NS	NS	160,000	N	NMED		2.19E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.065	J		NS	NS	112	N	NMED		5.80E-04
Nickel	7440-02-0	mg/kg	8.2			2,890,000	N	25,700	N	NMED	2.84E-11	3.19E-04
Potassium	7440-09-7	mg/kg	820			NS	NS	76,200,000	N	NMED		1.08E-05
Selenium	7782-49-2	mg/kg	1.1			NS	NS	6,490	N	NMED		1.69E-04
Silver	7440-22-4	mg/kg	0.078	J		NS	NS	6,490	N	NMED		1.20E-05
Sodium	7440-23-5	mg/kg	88			NS	NS	37,300,000	N	NMED		2.36E-06
Thallium	7440-28-0	mg/kg	0.042	J		NS	NS	13	N	NMED		3.23E-03
Vanadium	7440-62-2	mg/kg	19			NS	NS	6,530	N	NMED		2.91E-03
Zinc	7440-66-6	mg/kg	24			NS	NS	38,900	N	NMED		6.17E-04
									Cumulative Risk/Hazard		**5E-07**	**0.05**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Industrial Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-L29-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID L29
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		626	N	2,420	N	NMEDC			

TABLE D1-L29-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID L29
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	14,000			NS	NS	41,400	N	NMED		3.38E-01	Nervous
Antimony	7440-36-0	mg/kg	0.22			NS	NS	142	N	NMED		1.55E-03	
Arsenic	7440-38-2	mg/kg	1.1			216	N	41	N	NMED	5.09E-08	2.67E-02	
Barium	7440-39-3	mg/kg	120			NS	NS	4,390	N	NMED		2.73E-02	
Beryllium	7440-41-7	mg/kg	0.55	J		2,710	N	148	N	NMED	2.03E-09	3.72E-03	
Cadmium	7440-43-9	mg/kg	0.39			3,610	N	72	N	NMED	1.08E-09	5.41E-03	
Calcium	7440-70-2	mg/kg	2,800			NS	NS	8,850,000	N	NMED		3.16E-04	
Chromium (Total) (3)	7440-47-3	mg/kg	11			468	N	134	N	NMED	2.35E-07	8.21E-02	
Cobalt	7440-48-4	mg/kg	4.6			722	N	37	N	NMED	6.37E-08	1.25E-01	Endocrine
Copper	7440-50-8	mg/kg	60			NS	NS	14,200	N	NMED		4.23E-03	
Iron	7439-89-6	mg/kg	9,100			NS	NS	248,000	N	NMED		3.67E-02	
Lead	7439-92-1	mg/kg	9			NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	6,200			NS	NS	1,550,000	N	NMED		4.00E-03	
Manganese	7439-96-5	mg/kg	350			NS	NS	464	N	NMED		7.54E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.065	J		NS	NS	21	N	NMED		3.14E-03	
Nickel	7440-02-0	mg/kg	8.2			20,500	N	753	N	NMED	4.00E-09	1.09E-02	
Potassium	7440-09-7	mg/kg	820			NS	NS	20,800,000	N	NMED		3.94E-05	
Selenium	7782-49-2	mg/kg	1.1			NS	NS	1,750	N	NMED		6.29E-04	
Silver	7440-22-4	mg/kg	0.078	J		NS	NS	1,770	N	NMED		4.41E-05	
Sodium	7440-23-5	mg/kg	88			NS	NS	10,200,000	N	NMED		8.63E-06	
Thallium	7440-28-0	mg/kg	0.042	J		NS	NS	4	N	NMED		1.19E-02	
Vanadium	7440-62-2	mg/kg	19			NS	NS	614	N	NMED		3.09E-02	
Zinc	7440-66-6	mg/kg	24			NS	NS	106,000	N	NMED		2.26E-04	
									Cumulative Risk/Hazard		**4E-07**	**1.5**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	1.1
Endocrine	0.13
All Others	0.25

TABLE D1-L34-1
GRID L34 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		1,300	N	570	N	RSL		

TABLE D1-L34-1
GRID L34 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	15,000			NS	NS	78,000	N	NMED		1.92E-01
Antimony	7440-36-0	mg/kg	0.093	J		NS	NS	31.3	N	NMED		2.97E-03
Arsenic	7440-38-2	mg/kg	1.2			7.07	N	13	N	NMED	1.70E-06	9.23E-02
Barium	7440-39-3	mg/kg	170			NS	NS	15,600	N	NMED		1.09E-02
Beryllium	7440-41-7	mg/kg	0.62	J		64,400	N	156	N	NMED	9.63E-11	3.97E-03
Cadmium	7440-43-9	mg/kg	0.32			85,900	N	70.5	N	NMED	3.73E-11	4.54E-03
Calcium	7440-70-2	mg/kg	3,700			NS	NS	13,000,000	N	NMED		2.85E-04
Chromium (Total) (2)	7440-47-3	mg/kg	11			96.6	N	45,200	N	NMED	1.14E-06	2.43E-04
Cobalt	7440-48-4	mg/kg	5.1			17,200	N	23.4	N	NMED	2.97E-09	2.18E-01
Copper	7440-50-8	mg/kg	56			NS	NS	3,130	N	NMED		1.79E-02
Iron	7439-89-6	mg/kg	9,300			NS	NS	54,800	N	NMED		1.70E-01
Lead	7439-92-1	mg/kg	9.8			NS	NS	200	N	IEUBK		
Magnesium	7439-95-4	mg/kg	5,600			NS	NS	15,600,000	N	NMED		3.59E-04
Manganese	7439-96-5	mg/kg	480			NS	NS	10,500	N	NMED		4.57E-02
Mercury (Elemental)	7439-97-6	mg/kg	0.031	J		NS	NS	23.8	N	NMED		1.30E-03
Nickel	7440-02-0	mg/kg	9.4			595,000	N	1,560	N	NMED	1.58E-10	6.03E-03
Potassium	7440-09-7	mg/kg	1,500			NS	NS	15,600,000	N	NMED		9.62E-05
Selenium	7782-49-2	mg/kg	1.3			NS	NS	391	N	NMED		3.32E-03
Silver	7440-22-4	mg/kg	0.062	J		NS	NS	391	N	NMED		1.59E-04
Sodium	7440-23-5	mg/kg	49			NS	NS	7,820,000	N	NMED		6.27E-06
Thallium	7440-28-0	mg/kg	0.051	J		NS	NS	0.782	N	NMED		6.52E-02
Vanadium	7440-62-2	mg/kg	19			NS	NS	394	N	NMED		4.82E-02
Zinc	7440-66-6	mg/kg	27			NS	NS	23,500	N	NMED		1.15E-03
									Cumulative Risk/Hazard		**3E-06**	**0.88**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Residential Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Residential Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-L34-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID L34
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		5,300	N	7,400	N	RSL		

TABLE D1-L34-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID L34
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	15,000			NS	NS	1,290,000	N	NMED		1.16E-02
Antimony	7440-36-0	mg/kg	0.093	J		NS	NS	519	N	NMED		1.79E-04
Arsenic	7440-38-2	mg/kg	1.2			36	N	208	N	NMED	3.34E-07	5.77E-03
Barium	7440-39-3	mg/kg	170			NS	NS	255,000	N	NMED		6.67E-04
Beryllium	7440-41-7	mg/kg	0.62	J		313,000	N	2,580	N	NMED	1.98E-11	2.40E-04
Cadmium	7440-43-9	mg/kg	0.32			417,000	N	1,110	N	NMED	7.67E-12	2.88E-04
Calcium	7440-70-2	mg/kg	3,700			NS	NS	32,400,000	N	NMED		1.14E-04
Chromium (Total) (2)	7440-47-3	mg/kg	11			505	N	314,000	N	NMED	2.18E-07	3.50E-05
Cobalt	7440-48-4	mg/kg	5.1			83,400	N	388	N	NMED	6.12E-10	1.31E-02
Copper	7440-50-8	mg/kg	56			NS	NS	51,900	N	NMED		1.08E-03
Iron	7439-89-6	mg/kg	9,300			NS	NS	908,000	N	NMED		1.02E-02
Lead	7439-92-1	mg/kg	9.8			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	5,600			NS	NS	5,680,000	N	NMED		9.86E-04
Manganese	7439-96-5	mg/kg	480			NS	NS	160,000	N	NMED		3.00E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.031	J		NS	NS	112	N	NMED		2.77E-04
Nickel	7440-02-0	mg/kg	9.4			2,890,000	N	25,700	N	NMED	3.25E-11	3.66E-04
Potassium	7440-09-7	mg/kg	1,500			NS	NS	76,200,000	N	NMED		1.97E-05
Selenium	7782-49-2	mg/kg	1.3			NS	NS	6,490	N	NMED		2.00E-04
Silver	7440-22-4	mg/kg	0.062	J		NS	NS	6,490	N	NMED		9.55E-06
Sodium	7440-23-5	mg/kg	49			NS	NS	37,300,000	N	NMED		1.31E-06
Thallium	7440-28-0	mg/kg	0.051	J		NS	NS	13	N	NMED		3.92E-03
Vanadium	7440-62-2	mg/kg	19			NS	NS	6,530	N	NMED		2.91E-03
Zinc	7440-66-6	mg/kg	27			NS	NS	38,900	N	NMED		6.94E-04
									Cumulative Risk/Hazard		**6E-07**	**0.06**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Industrial Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-L34-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID L34
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		626	N	2,420	N	NMEDC			

TABLE D1-L34-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID L34
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	15,000			NS	NS	41,400	N	NMED		3.62E-01	Nervous
Antimony	7440-36-0	mg/kg	0.093	J		NS	NS	142	N	NMED		6.55E-04	
Arsenic	7440-38-2	mg/kg	1.2			216	N	41	N	NMED	5.56E-08	2.91E-02	
Barium	7440-39-3	mg/kg	170			NS	NS	4,390	N	NMED		3.87E-02	
Beryllium	7440-41-7	mg/kg	0.62	J		2,710	N	148	N	NMED	2.29E-09	4.19E-03	
Cadmium	7440-43-9	mg/kg	0.32			3,610	N	72	N	NMED	8.86E-10	4.44E-03	
Calcium	7440-70-2	mg/kg	3,700			NS	NS	8,850,000	N	NMED		4.18E-04	
Chromium (Total) (3)	7440-47-3	mg/kg	11			468	N	134	N	NMED	2.35E-07	8.21E-02	
Cobalt	7440-48-4	mg/kg	5.1			722	N	37	N	NMED	7.06E-08	1.39E-01	Endocrine
Copper	7440-50-8	mg/kg	56			NS	NS	14,200	N	NMED		3.94E-03	
Iron	7439-89-6	mg/kg	9,300			NS	NS	248,000	N	NMED		3.75E-02	
Lead	7439-92-1	mg/kg	9.8			NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	5,600			NS	NS	1,550,000	N	NMED		3.61E-03	
Manganese	7439-96-5	mg/kg	480			NS	NS	464	Y	NMED		1.03E+00	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.031	J		NS	NS	21	N	NMED		1.50E-03	
Nickel	7440-02-0	mg/kg	9.4			20,500	N	753	N	NMED	4.59E-09	1.25E-02	
Potassium	7440-09-7	mg/kg	1,500			NS	NS	20,800,000	N	NMED		7.21E-05	
Selenium	7782-49-2	mg/kg	1.3			NS	NS	1,750	N	NMED		7.43E-04	
Silver	7440-22-4	mg/kg	0.062	J		NS	NS	1,770	N	NMED		3.50E-05	
Sodium	7440-23-5	mg/kg	49			NS	NS	10,200,000	N	NMED		4.80E-06	
Thallium	7440-28-0	mg/kg	0.051	J		NS	NS	4	N	NMED		1.44E-02	
Vanadium	7440-62-2	mg/kg	19			NS	NS	614	N	NMED		3.09E-02	
Zinc	7440-66-6	mg/kg	27			NS	NS	106,000	N	NMED		2.55E-04	
									Cumulative Risk/Hazard		**4E-07**	**1.8**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	1.4
Endocrine	0.14
All Others	0.27

TABLE D1-L37-1
GRID L37 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	2,200	N	RSL			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	6.3	N	RSL			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		211	N	36	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		3.56	N	18.5	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	7.7	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		31.6	N	70.4	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	6.16	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	7.64	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		333	N	247	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		83.1	N	301	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	156	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		60.4	N	131	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		313	N	6.16	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	3,850	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		1,300	N	570	N	RSL			

TABLE D1-L37-1
GRID L37 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	24,000			NS	NS	78,000	N	NMED		3.08E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	31.3	N	NMED			
Arsenic	7440-38-2	mg/kg	1.5			7.07	N	13	N	NMED	2.12E-06	1.15E-01	Heart/Endocrine
Barium	7440-39-3	mg/kg	260			NS	NS	15,600	N	NMED		1.67E-02	
Beryllium	7440-41-7	mg/kg	0.81	J		64,400	N	156	N	NMED	1.26E-10	5.19E-03	
Cadmium	7440-43-9	mg/kg	0.26			85,900	N	70.5	N	NMED	3.03E-11	3.69E-03	
Calcium	7440-70-2	mg/kg	3,700			NS	NS	13,000,000	N	NMED		2.85E-04	
Chromium (Total) (2)	7440-47-3	mg/kg	16			96.6	N	45,200	N	NMED	1.66E-06	3.54E-04	
Cobalt	7440-48-4	mg/kg	7.2			17,200	N	23.4	N	NMED	4.19E-09	3.08E-01	Endocrine
Copper	7440-50-8	mg/kg	39			NS	NS	3,130	N	NMED		1.25E-02	
Iron	7439-89-6	mg/kg	14,000			NS	NS	54,800	N	NMED		2.55E-01	GI
Lead	7439-92-1	mg/kg	10			NS	NS	200	N	IEUBK			
Magnesium	7439-95-4	mg/kg	8,700			NS	NS	15,600,000	N	NMED		5.58E-04	
Manganese	7439-96-5	mg/kg	720			NS	NS	10,500	N	NMED		6.86E-02	
Mercury (Elemental)	7439-97-6	mg/kg	0.043	J		NS	NS	23.8	N	NMED		1.81E-03	
Nickel	7440-02-0	mg/kg	13			595,000	N	1,560	N	NMED	2.18E-10	8.33E-03	
Potassium	7440-09-7	mg/kg	1,500			NS	NS	15,600,000	N	NMED		9.62E-05	
Selenium	7782-49-2	mg/kg	1.8			NS	NS	391	N	NMED		4.60E-03	
Silver	7440-22-4	mg/kg	0.045	J		NS	NS	391	N	NMED		1.15E-04	
Sodium	7440-23-5	mg/kg	60			NS	NS	7,820,000	N	NMED		7.67E-06	
Thallium	7440-28-0	mg/kg	0.071	J		NS	NS	0.782	N	NMED		9.08E-02	
Vanadium	7440-62-2	mg/kg	42			NS	NS	394	N	NMED		1.07E-01	Hair
Zinc	7440-66-6	mg/kg	28			NS	NS	23,500	N	NMED		1.19E-03	
									Cumulative Risk/Hazard		**4E-06**	**1.3**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Residential Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Residential Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	0.3
Endocrine	0.42
GI	0.26
Hair	0.11
All Others	0.21

TABLE D1-L37-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID L37
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		5,300	N	7,400	N	RSL		

TABLE D1-L37-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID L37
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	24,000			NS	NS	1,290,000	N	NMED		1.86E-02
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	519	N	NMED		
Arsenic	7440-38-2	mg/kg	1.5			36	N	208	N	NMED	4.18E-07	7.21E-03
Barium	7440-39-3	mg/kg	260			NS	NS	255,000	N	NMED		1.02E-03
Beryllium	7440-41-7	mg/kg	0.81	J		313,000	N	2,580	N	NMED	2.59E-11	3.14E-04
Cadmium	7440-43-9	mg/kg	0.26			417,000	N	1,110	N	NMED	6.24E-12	2.34E-04
Calcium	7440-70-2	mg/kg	3,700			NS	NS	32,400,000	N	NMED		1.14E-04
Chromium (Total) (2)	7440-47-3	mg/kg	16			505	N	314,000	N	NMED	3.17E-07	5.10E-05
Cobalt	7440-48-4	mg/kg	7.2			83,400	N	388	N	NMED	8.63E-10	1.86E-02
Copper	7440-50-8	mg/kg	39			NS	NS	51,900	N	NMED		7.51E-04
Iron	7439-89-6	mg/kg	14,000			NS	NS	908,000	N	NMED		1.54E-02
Lead	7439-92-1	mg/kg	10			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	8,700			NS	NS	5,680,000	N	NMED		1.53E-03
Manganese	7439-96-5	mg/kg	720			NS	NS	160,000	N	NMED		4.50E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.043	J		NS	NS	112	N	NMED		3.84E-04
Nickel	7440-02-0	mg/kg	13			2,890,000	N	25,700	N	NMED	4.50E-11	5.06E-04
Potassium	7440-09-7	mg/kg	1,500			NS	NS	76,200,000	N	NMED		1.97E-05
Selenium	7782-49-2	mg/kg	1.8			NS	NS	6,490	N	NMED		2.77E-04
Silver	7440-22-4	mg/kg	0.045	J		NS	NS	6,490	N	NMED		6.93E-06
Sodium	7440-23-5	mg/kg	60			NS	NS	37,300,000	N	NMED		1.61E-06
Thallium	7440-28-0	mg/kg	0.071	J		NS	NS	13	N	NMED		5.46E-03
Vanadium	7440-62-2	mg/kg	42			NS	NS	6,530	N	NMED		6.43E-03
Zinc	7440-66-6	mg/kg	28			NS	NS	38,900	N	NMED		7.20E-04
									Cumulative Risk/Hazard		**7E-07**	**0.08**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Industrial Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-L37-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID L37
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		626	N	2,420	N	NMEDC			

TABLE D1-L37-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID L37
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	24,000			NS	NS	41,400	N	NMED		5.80E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	142	N	NMED			
Arsenic	7440-38-2	mg/kg	1.5			216	N	41	N	NMED	6.94E-08	3.64E-02	
Barium	7440-39-3	mg/kg	260			NS	NS	4,390	N	NMED		5.92E-02	
Beryllium	7440-41-7	mg/kg	0.81	J		2,710	N	148	N	NMED	2.99E-09	5.47E-03	
Cadmium	7440-43-9	mg/kg	0.26			3,610	N	72	N	NMED	7.20E-10	3.61E-03	
Calcium	7440-70-2	mg/kg	3,700			NS	NS	8,850,000	N	NMED		4.18E-04	
Chromium (Total) (3)	7440-47-3	mg/kg	16			468	N	134	N	NMED	3.42E-07	1.19E-01	GI, Blood
Cobalt	7440-48-4	mg/kg	7.2			722	N	37	N	NMED	9.97E-08	1.96E-01	Endocrine
Copper	7440-50-8	mg/kg	39			NS	NS	14,200	N	NMED		2.75E-03	
Iron	7439-89-6	mg/kg	14,000			NS	NS	248,000	N	NMED		5.65E-02	
Lead	7439-92-1	mg/kg	10			NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	8,700			NS	NS	1,550,000	N	NMED		5.61E-03	
Manganese	7439-96-5	mg/kg	720			NS	NS	464	Y	NMED		1.55E+00	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.043	J		NS	NS	21	N	NMED		2.08E-03	
Nickel	7440-02-0	mg/kg	13			20,500	N	753	N	NMED	6.34E-09	1.73E-02	
Potassium	7440-09-7	mg/kg	1,500			NS	NS	20,800,000	N	NMED		7.21E-05	
Selenium	7782-49-2	mg/kg	1.8			NS	NS	1,750	N	NMED		1.03E-03	
Silver	7440-22-4	mg/kg	0.045	J		NS	NS	1,770	N	NMED		2.54E-05	
Sodium	7440-23-5	mg/kg	60			NS	NS	10,200,000	N	NMED		5.88E-06	
Thallium	7440-28-0	mg/kg	0.071	J		NS	NS	4	N	NMED		2.01E-02	
Vanadium	7440-62-2	mg/kg	42			NS	NS	614	N	NMED		6.84E-02	
Zinc	7440-66-6	mg/kg	28			NS	NS	106,000	N	NMED		2.64E-04	
									Cumulative Risk/Hazard		**5E-07**	**2.7**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	2.1
Endocrine	0.20
GI	0.12
Blood	0.12
All Others	0.28

TABLE D1-M28-1
GRID M28 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUTNY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		1,300	N	570	N	RSL		

TABLE D1-M28-1
GRID M28 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUTNY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	20,000			NS	NS	78,000	N	NMED		2.56E-01
Antimony	7440-36-0	mg/kg	0.17	J		NS	NS	31.3	N	NMED		5.43E-03
Arsenic	7440-38-2	mg/kg	1.2			7.07	N	13	N	NMED	1.70E-06	9.23E-02
Barium	7440-39-3	mg/kg	260			NS	NS	15,600	N	NMED		1.67E-02
Beryllium	7440-41-7	mg/kg	0.56	J		64,400	N	156	N	NMED	8.70E-11	3.59E-03
Cadmium	7440-43-9	mg/kg	2.8	J		85,900	N	70.5	N	NMED	3.26E-10	3.97E-02
Calcium	7440-70-2	mg/kg	8,400			NS	NS	13,000,000	N	NMED		6.46E-04
Chromium (Total) (2)	7440-47-3	mg/kg	13			96.6	N	45,200	N	NMED	1.35E-06	2.88E-04
Cobalt	7440-48-4	mg/kg	5.7			17,200	N	23.4	N	NMED	3.31E-09	2.44E-01
Copper	7440-50-8	mg/kg	120			NS	NS	3,130	N	NMED		3.83E-02
Iron	7439-89-6	mg/kg	11,000			NS	NS	54,800	N	NMED		2.01E-01
Lead	7439-92-1	mg/kg	12			NS	NS	200	N	IEUBK		
Magnesium	7439-95-4	mg/kg	7,700			NS	NS	15,600,000	N	NMED		4.94E-04
Manganese	7439-96-5	mg/kg	320			NS	NS	10,500	N	NMED		3.05E-02
Mercury (Elemental)	7439-97-6	mg/kg	0.026	J		NS	NS	23.8	N	NMED		1.09E-03
Nickel	7440-02-0	mg/kg	12			595,000	N	1,560	N	NMED	2.02E-10	7.69E-03
Potassium	7440-09-7	mg/kg	1,400			NS	NS	15,600,000	N	NMED		8.97E-05
Selenium	7782-49-2	mg/kg	1.2			NS	NS	391	N	NMED		3.07E-03
Silver	7440-22-4	mg/kg	0.11			NS	NS	391	N	NMED		2.81E-04
Sodium	7440-23-5	mg/kg	64			NS	NS	7,820,000	N	NMED		8.18E-06
Thallium	7440-28-0	mg/kg	0.059	J		NS	NS	0.782	N	NMED		7.54E-02
Vanadium	7440-62-2	mg/kg	16			NS	NS	394	N	NMED		4.06E-02
Zinc	7440-66-6	mg/kg	31			NS	NS	23,500	N	NMED		1.32E-03
									Cumulative Risk/Hazard		**3E-06**	**1.1**
									Exceeds Target Level		**N**	**Y**

Notes:

[1] NMED = New Mexico Environment Department Residential Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Residential Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System
Nervous
Endocrine
GI
All Others

TABLE D1-M28-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID M28
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		5,300	N	7,400	N	RSL		

TABLE D1-M28-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID M28
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	20,000			NS	NS	1,290,000	N	NMED		1.55E-02
Antimony	7440-36-0	mg/kg	0.17	J		NS	NS	519	N	NMED		3.28E-04
Arsenic	7440-38-2	mg/kg	1.2			36	N	208	N	NMED	3.34E-07	5.77E-03
Barium	7440-39-3	mg/kg	260			NS	NS	255,000	N	NMED		1.02E-03
Beryllium	7440-41-7	mg/kg	0.56	J		313,000	N	2,580	N	NMED	1.79E-11	2.17E-04
Cadmium	7440-43-9	mg/kg	2.8	J		417,000	N	1,110	N	NMED	6.71E-11	2.52E-03
Calcium	7440-70-2	mg/kg	8,400			NS	NS	32,400,000	N	NMED		2.59E-04
Chromium (Total) (2)	7440-47-3	mg/kg	13			505	N	314,000	N	NMED	2.57E-07	4.14E-05
Cobalt	7440-48-4	mg/kg	5.7			83,400	N	388	N	NMED	6.83E-10	1.47E-02
Copper	7440-50-8	mg/kg	120			NS	NS	51,900	N	NMED		2.31E-03
Iron	7439-89-6	mg/kg	11,000			NS	NS	908,000	N	NMED		1.21E-02
Lead	7439-92-1	mg/kg	12			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	7,700			NS	NS	5,680,000	N	NMED		1.36E-03
Manganese	7439-96-5	mg/kg	320			NS	NS	160,000	N	NMED		2.00E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.026	J		NS	NS	112	N	NMED		2.32E-04
Nickel	7440-02-0	mg/kg	12			2,890,000	N	25,700	N	NMED	4.15E-11	4.67E-04
Potassium	7440-09-7	mg/kg	1,400			NS	NS	76,200,000	N	NMED		1.84E-05
Selenium	7782-49-2	mg/kg	1.2			NS	NS	6,490	N	NMED		1.85E-04
Silver	7440-22-4	mg/kg	0.11			NS	NS	6,490	N	NMED		1.69E-05
Sodium	7440-23-5	mg/kg	64			NS	NS	37,300,000	N	NMED		1.72E-06
Thallium	7440-28-0	mg/kg	0.059	J		NS	NS	13	N	NMED		4.54E-03
Vanadium	7440-62-2	mg/kg	16			NS	NS	6,530	N	NMED		2.45E-03
Zinc	7440-66-6	mg/kg	31			NS	NS	38,900	N	NMED		7.97E-04
									Cumulative Risk/Hazard		**6E-07**	**0.07**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Industrial Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-M28-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID M28
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		626	N	2,420	N	NMEDC			

TABLE D1-M28-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID M28
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	20,000			NS	NS	41,400	N	NMED		4.83E-01	Nervous
Antimony	7440-36-0	mg/kg	0.17	J		NS	NS	142	N	NMED		1.20E-03	
Arsenic	7440-38-2	mg/kg	1.2			216	N	41	N	NMED	5.56E-08	2.91E-02	
Barium	7440-39-3	mg/kg	260			NS	NS	4,390	N	NMED		5.92E-02	
Beryllium	7440-41-7	mg/kg	0.56	J		2,710	N	148	N	NMED	2.07E-09	3.78E-03	
Cadmium	7440-43-9	mg/kg	2.8	J		3,610	N	72	N	NMED	7.76E-09	3.88E-02	
Calcium	7440-70-2	mg/kg	8,400			NS	NS	8,850,000	N	NMED		9.49E-04	
Chromium (Total) (3)	7440-47-3	mg/kg	13			468	N	134	N	NMED	2.78E-07	9.70E-02	
Cobalt	7440-48-4	mg/kg	5.7			722	N	37	N	NMED	7.89E-08	1.55E-01	Endocrine
Copper	7440-50-8	mg/kg	120			NS	NS	14,200	N	NMED		8.45E-03	
Iron	7439-89-6	mg/kg	11,000			NS	NS	248,000	N	NMED		4.44E-02	
Lead	7439-92-1	mg/kg	12			NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	7,700			NS	NS	1,550,000	N	NMED		4.97E-03	
Manganese	7439-96-5	mg/kg	320			NS	NS	464	N	NMED		6.90E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.026	J		NS	NS	21	N	NMED		1.26E-03	
Nickel	7440-02-0	mg/kg	12			20,500	N	753	N	NMED	5.85E-09	1.59E-02	
Potassium	7440-09-7	mg/kg	1,400			NS	NS	20,800,000	N	NMED		6.73E-05	
Selenium	7782-49-2	mg/kg	1.2			NS	NS	1,750	N	NMED		6.86E-04	
Silver	7440-22-4	mg/kg	0.11			NS	NS	1,770	N	NMED		6.21E-05	
Sodium	7440-23-5	mg/kg	64			NS	NS	10,200,000	N	NMED		6.27E-06	
Thallium	7440-28-0	mg/kg	0.059	J		NS	NS	4	N	NMED		1.67E-02	
Vanadium	7440-62-2	mg/kg	16			NS	NS	614	N	NMED		2.61E-02	
Zinc	7440-66-6	mg/kg	31			NS	NS	106,000	N	NMED		2.92E-04	
									Cumulative Risk/Hazard		**4E-07**	**1.7**	
									Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	1.2
Endocrine	0.16
All Others	0.35

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-M32-1
GRID M32 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		1,300	N	570	N	RSL		

TABLE D1-M32-1
GRID M32 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	13,000			NS	NS	78,000	N	NMED		1.67E-01
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	31.3	N	NMED		
Arsenic	7440-38-2	mg/kg	1.2			7.07	N	13	N	NMED	1.70E-06	9.23E-02
Barium	7440-39-3	mg/kg	110			NS	NS	15,600	N	NMED		7.05E-03
Beryllium	7440-41-7	mg/kg	0.44	J		64,400	N	156	N	NMED	6.83E-11	2.82E-03
Cadmium	7440-43-9	mg/kg	0.29			85,900	N	70.5	N	NMED	3.38E-11	4.11E-03
Calcium	7440-70-2	mg/kg	2,500			NS	NS	13,000,000	N	NMED		1.92E-04
Chromium (Total) (2)	7440-47-3	mg/kg	10			96.6	N	45,200	N	NMED	1.04E-06	2.21E-04
Cobalt	7440-48-4	mg/kg	4.2			17,200	N	23.4	N	NMED	2.44E-09	1.79E-01
Copper	7440-50-8	mg/kg	66			NS	NS	3,130	N	NMED		2.11E-02
Iron	7439-89-6	mg/kg	8,900			NS	NS	54,800	N	NMED		1.62E-01
Lead	7439-92-1	mg/kg	9.6	J		NS	NS	200	N	IEUBK		
Magnesium	7439-95-4	mg/kg	6,100			NS	NS	15,600,000	N	NMED		3.91E-04
Manganese	7439-96-5	mg/kg	270			NS	NS	10,500	N	NMED		2.57E-02
Mercury (Elemental)	7439-97-6	mg/kg	0.021	J		NS	NS	23.8	N	NMED		8.82E-04
Nickel	7440-02-0	mg/kg	7.2			595,000	N	1,560	N	NMED	1.21E-10	4.62E-03
Potassium	7440-09-7	mg/kg	800			NS	NS	15,600,000	N	NMED		5.13E-05
Selenium	7782-49-2	mg/kg	0.85	J		NS	NS	391	N	NMED		2.17E-03
Silver	7440-22-4	mg/kg	0.058	J		NS	NS	391	N	NMED		1.48E-04
Sodium	7440-23-5	mg/kg	62			NS	NS	7,820,000	N	NMED		7.93E-06
Thallium	7440-28-0	mg/kg	0.037	J		NS	NS	0.782	N	NMED		4.73E-02
Vanadium	7440-62-2	mg/kg	14			NS	NS	394	N	NMED		3.55E-02
Zinc	7440-66-6	mg/kg	24			NS	NS	23,500	N	NMED		1.02E-03
									Cumulative Risk/Hazard		**3E-06**	**0.75**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Residential Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Residential Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-M32-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID M32
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		5,300	N	7,400	N	RSL		

TABLE D1-M32-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID M32
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	13,000			NS	NS	1,290,000	N	NMED		1.01E-02
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	519	N	NMED		
Arsenic	7440-38-2	mg/kg	1.2			36	N	208	N	NMED	3.34E-07	5.77E-03
Barium	7440-39-3	mg/kg	110			NS	NS	255,000	N	NMED		4.31E-04
Beryllium	7440-41-7	mg/kg	0.44	J		313,000	N	2,580	N	NMED	1.41E-11	1.71E-04
Cadmium	7440-43-9	mg/kg	0.29			417,000	N	1,110	N	NMED	6.95E-12	2.61E-04
Calcium	7440-70-2	mg/kg	2,500			NS	NS	32,400,000	N	NMED		7.72E-05
Chromium (Total) (2)	7440-47-3	mg/kg	10			505	N	314,000	N	NMED	1.98E-07	3.18E-05
Cobalt	7440-48-4	mg/kg	4.2			83,400	N	388	N	NMED	5.04E-10	1.08E-02
Copper	7440-50-8	mg/kg	66			NS	NS	51,900	N	NMED		1.27E-03
Iron	7439-89-6	mg/kg	8,900			NS	NS	908,000	N	NMED		9.80E-03
Lead	7439-92-1	mg/kg	9.6	J		NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	6,100			NS	NS	5,680,000	N	NMED		1.07E-03
Manganese	7439-96-5	mg/kg	270			NS	NS	160,000	N	NMED		1.69E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.021	J		NS	NS	112	N	NMED		1.88E-04
Nickel	7440-02-0	mg/kg	7.2			2,890,000	N	25,700	N	NMED	2.49E-11	2.80E-04
Potassium	7440-09-7	mg/kg	800			NS	NS	76,200,000	N	NMED		1.05E-05
Selenium	7782-49-2	mg/kg	0.85	J		NS	NS	6,490	N	NMED		1.31E-04
Silver	7440-22-4	mg/kg	0.058	J		NS	NS	6,490	N	NMED		8.94E-06
Sodium	7440-23-5	mg/kg	62			NS	NS	37,300,000	N	NMED		1.66E-06
Thallium	7440-28-0	mg/kg	0.037	J		NS	NS	13	N	NMED		2.85E-03
Vanadium	7440-62-2	mg/kg	14			NS	NS	6,530	N	NMED		2.14E-03
Zinc	7440-66-6	mg/kg	24			NS	NS	38,900	N	NMED		6.17E-04
									Cumulative Risk/Hazard		**5E-07**	**0.05**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Industrial Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-M32-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID M32
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		626	N	2,420	N	NMEDC			

TABLE D1-M32-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID M32
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	13,000			NS	NS	41,400	N	NMED		3.14E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	142	N	NMED			
Arsenic	7440-38-2	mg/kg	1.2			216	N	41	N	NMED		2.91E-02	
Barium	7440-39-3	mg/kg	110			NS	NS	4,390	N	NMED		2.51E-02	
Beryllium	7440-41-7	mg/kg	0.44	J		2,710	N	148	N	NMED		2.97E-03	
Cadmium	7440-43-9	mg/kg	0.29			3,610	N	72	N	NMED		4.02E-03	
Calcium	7440-70-2	mg/kg	2,500			NS	NS	8,850,000	N	NMED		2.82E-04	
Chromium (Total) (3)	7440-47-3	mg/kg	10			468	N	134	N	NMED		7.46E-02	
Cobalt	7440-48-4	mg/kg	4.2			722	N	37	N	NMED		1.14E-01	Endocrine
Copper	7440-50-8	mg/kg	66			NS	NS	14,200	N	NMED		4.65E-03	
Iron	7439-89-6	mg/kg	8,900			NS	NS	248,000	N	NMED		3.59E-02	
Lead	7439-92-1	mg/kg	9.6	J		NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	6,100			NS	NS	1,550,000	N	NMED		3.94E-03	
Manganese	7439-96-5	mg/kg	270			NS	NS	464	N	NMED		5.82E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.021	J		NS	NS	21	N	NMED		1.01E-03	
Nickel	7440-02-0	mg/kg	7.2			20,500	N	753	N	NMED		9.56E-03	
Potassium	7440-09-7	mg/kg	800			NS	NS	20,800,000	N	NMED		3.85E-05	
Selenium	7782-49-2	mg/kg	0.85	J		NS	NS	1,750	N	NMED		4.86E-04	
Silver	7440-22-4	mg/kg	0.058	J		NS	NS	1,770	N	NMED		3.28E-05	
Sodium	7440-23-5	mg/kg	62			NS	NS	10,200,000	N	NMED		6.08E-06	
Thallium	7440-28-0	mg/kg	0.037	J		NS	NS	4	N	NMED		1.05E-02	
Vanadium	7440-62-2	mg/kg	14			NS	NS	614	N	NMED		2.28E-02	
Zinc	7440-66-6	mg/kg	24			NS	NS	106,000	N	NMED		2.26E-04	
									Cumulative Risk/Hazard		**0E+00**	**1.2**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent	NS = No Standard
CAS = Chemical Abstracts Service	RAG = Risk Assessment Guidance
HI = Hazard Index	SSL = soil screening level
J = Estimated	U = Nondetect
mg/kg = milligrams per kilogram	UJ = Estimated Nondetect
N = no	UTL = upper tolerance limit
NA = not applicable	Y = yes
N = no	UTL = upper tolerance limit
NA = not applicable	Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	0.9
Endocrine	0.11
All Others	0.23

TABLE D1-M39-1
GRID M39 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	2,200	N	RSL			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	6.3	N	RSL			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		211	N	36	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		3.56	N	18.5	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	7.7	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		31.6	N	70.4	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	6.16	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.13			NS	NS	7.64	N	NMED		1.70E-02	
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		333	N	247	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		83.1	N	301	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	156	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U		60.4	N	131	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U		313	N	6.16	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	3,850	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		1,300	N	570	N	RSL			

TABLE D1-M39-1
GRID M39 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	21,000			NS	NS	78,000	N	NMED		2.69E-01	Nervous
Antimony	7440-36-0	mg/kg	0.25			NS	NS	31.3	N	NMED		7.99E-03	
Arsenic	7440-38-2	mg/kg	1.9			7.07	N	13	N	NMED	2.69E-06	1.46E-01	
Barium	7440-39-3	mg/kg	310			NS	NS	15,600	N	NMED		1.99E-02	
Beryllium	7440-41-7	mg/kg	0.89	J		64,400	N	156	N	NMED	1.38E-10	5.71E-03	
Cadmium	7440-43-9	mg/kg	0.18			85,900	N	70.5	N	NMED	2.10E-11	2.55E-03	
Calcium	7440-70-2	mg/kg	6,900			NS	NS	13,000,000	N	NMED		5.31E-04	
Chromium (Total) (2)	7440-47-3	mg/kg	14			96.6	N	45,200	N	NMED	1.45E-06	3.10E-04	
Cobalt	7440-48-4	mg/kg	5.5			17,200	N	23.4	N	NMED	3.20E-09	2.35E-01	Endocrine
Copper	7440-50-8	mg/kg	25			NS	NS	3,130	N	NMED		7.99E-03	
Iron	7439-89-6	mg/kg	12,000			NS	NS	54,800	N	NMED		2.19E-01	GI
Lead	7439-92-1	mg/kg	9.4			NS	NS	200	N	IEUBK			
Magnesium	7439-95-4	mg/kg	5,900			NS	NS	15,600,000	N	NMED		3.78E-04	
Manganese	7439-96-5	mg/kg	510			NS	NS	10,500	N	NMED		4.86E-02	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.023	J		NS	NS	23.8	N	NMED		9.66E-04	
Nickel	7440-02-0	mg/kg	11			595,000	N	1,560	N	NMED	1.85E-10	7.05E-03	
Potassium	7440-09-7	mg/kg	2,000			NS	NS	15,600,000	N	NMED		1.28E-04	
Selenium	7782-49-2	mg/kg	1.3			NS	NS	391	N	NMED		3.32E-03	
Silver	7440-22-4	mg/kg	0.047	J		NS	NS	391	N	NMED		1.20E-04	
Sodium	7440-23-5	mg/kg	33			NS	NS	7,820,000	N	NMED		4.22E-06	
Thallium	7440-28-0	mg/kg	0.12			NS	NS	0.782	N	NMED		1.53E-01	Hair/Coat/Eyes
Vanadium	7440-62-2	mg/kg	27			NS	NS	394	N	NMED		6.85E-02	
Zinc	7440-66-6	mg/kg	27			NS	NS	23,500	N	NMED		1.15E-03	
									Cumulative Risk/Hazard		**4E-06**	**1.2**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Residential Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Residential Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
R = Rejected
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	0.3
Endocrine	0.24
GI	0.22
Hair/Coat	0.15
Eyes	0.15
All Others	0.27

TABLE D1-M39-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID M39
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.13			NS	NS	125	N	NMED		1.04E-03
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		5,300	N	7,400	N	RSL		

TABLE D1-M39-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID M39
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	21,000			NS	NS	1,290,000	N	NMED		1.63E-02
Antimony	7440-36-0	mg/kg	0.25			NS	NS	519	N	NMED		4.82E-04
Arsenic	7440-38-2	mg/kg	1.9			36	N	208	N	NMED	5.29E-07	9.13E-03
Barium	7440-39-3	mg/kg	310			NS	NS	255,000	N	NMED		1.22E-03
Beryllium	7440-41-7	mg/kg	0.89	J		313,000	N	2,580	N	NMED	2.84E-11	3.45E-04
Cadmium	7440-43-9	mg/kg	0.18			417,000	N	1,110	N	NMED	4.32E-12	1.62E-04
Calcium	7440-70-2	mg/kg	6,900			NS	NS	32,400,000	N	NMED		2.13E-04
Chromium (Total) (2)	7440-47-3	mg/kg	14			505	N	314,000	N	NMED	2.77E-07	4.46E-05
Cobalt	7440-48-4	mg/kg	5.5			83,400	N	388	N	NMED	6.59E-10	1.42E-02
Copper	7440-50-8	mg/kg	25			NS	NS	51,900	N	NMED		4.82E-04
Iron	7439-89-6	mg/kg	12,000			NS	NS	908,000	N	NMED		1.32E-02
Lead	7439-92-1	mg/kg	9.4			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	5,900			NS	NS	5,680,000	N	NMED		1.04E-03
Manganese	7439-96-5	mg/kg	510			NS	NS	160,000	N	NMED		3.19E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.023	J		NS	NS	112	N	NMED		2.05E-04
Nickel	7440-02-0	mg/kg	11			2,890,000	N	25,700	N	NMED	3.81E-11	4.28E-04
Potassium	7440-09-7	mg/kg	2,000			NS	NS	76,200,000	N	NMED		2.62E-05
Selenium	7782-49-2	mg/kg	1.3			NS	NS	6,490	N	NMED		2.00E-04
Silver	7440-22-4	mg/kg	0.047	J		NS	NS	6,490	N	NMED		7.24E-06
Sodium	7440-23-5	mg/kg	33			NS	NS	37,300,000	N	NMED		8.85E-07
Thallium	7440-28-0	mg/kg	0.12			NS	NS	13	N	NMED		9.23E-03
Vanadium	7440-62-2	mg/kg	27			NS	NS	6,530	N	NMED		4.13E-03
Zinc	7440-66-6	mg/kg	27			NS	NS	38,900	N	NMED		6.94E-04
									Cumulative Risk/Hazard		**8E-07**	**0.08**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Industrial Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

2) Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
R = Rejected
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-M39-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID M39
FORT DEPOT DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.13			NS	NS	17	N	NMED		7.51E-03	
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		626	N	2,420	N	NMEDC			

TABLE D1-M39-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID M39
FORT DEPOT DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	21,000			NS	NS	41,400	N	NMED		5.07E-01	Nervous
Antimony	7440-36-0	mg/kg	0.25			NS	NS	142	N	NMED		1.76E-03	
Arsenic	7440-38-2	mg/kg	1.9			216	N	41	N	NMED	8.80E-08	4.61E-02	
Barium	7440-39-3	mg/kg	310			NS	NS	4,390	N	NMED		7.06E-02	
Beryllium	7440-41-7	mg/kg	0.89	J		2,710	N	148	N	NMED	3.28E-09	6.01E-03	
Cadmium	7440-43-9	mg/kg	0.18			3,610	N	72	N	NMED	4.99E-10	2.50E-03	
Calcium	7440-70-2	mg/kg	6,900			NS	NS	8,850,000	N	NMED		7.80E-04	
Chromium (Total) (3)	7440-47-3	mg/kg	14			468	N	134	N	NMED	2.99E-07	1.04E-01	GI, Blood
Cobalt	7440-48-4	mg/kg	5.5			722	N	37	N	NMED	7.62E-08	1.50E-01	Endocrine
Copper	7440-50-8	mg/kg	25			NS	NS	14,200	N	NMED		1.76E-03	
Iron	7439-89-6	mg/kg	12,000			NS	NS	248,000	N	NMED		4.84E-02	
Lead	7439-92-1	mg/kg	9.4			NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	5,900			NS	NS	1,550,000	N	NMED		3.81E-03	
Manganese	7439-96-5	mg/kg	510			NS	NS	464	Y	NMED		1.10E+00	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.023	J		NS	NS	21	N	NMED		1.11E-03	
Nickel	7440-02-0	mg/kg	11			20,500	N	753	N	NMED	5.37E-09	1.46E-02	
Potassium	7440-09-7	mg/kg	2,000			NS	NS	20,800,000	N	NMED		9.62E-05	
Selenium	7782-49-2	mg/kg	1.3			NS	NS	1,750	N	NMED		7.43E-04	
Silver	7440-22-4	mg/kg	0.047	J		NS	NS	1,770	N	NMED		2.66E-05	
Sodium	7440-23-5	mg/kg	33			NS	NS	10,200,000	N	NMED		3.24E-06	
Thallium	7440-28-0	mg/kg	0.12			NS	NS	4	N	NMED		3.39E-02	
Vanadium	7440-62-2	mg/kg	27			NS	NS	614	N	NMED		4.40E-02	
Zinc	7440-66-6	mg/kg	27			NS	NS	106,000	N	NMED		2.55E-04	
									Cumulative Risk/Hazard		**5E-07**	**2.1**	
									Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	1.6
Endocrine	0.15
GI	0.10
Blood	0.10
All Others	0.28

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
R = Rejected
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-N27-1
GRID N27 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	2,200	N	RSL			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	6.3	N	RSL			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		211	N	36	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		3.56	N	18.5	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	7.7	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		31.6	N	70.4	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	6.16	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	7.64	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		333	N	247	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		83.1	N	301	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	156	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		60.4	N	131	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		313	N	6.16	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	3,850	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		1,300	N	570	N	RSL			

TABLE D1-N27-1
GRID N27 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	21,000			NS	NS	78,000	N	NMED		2.69E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	31.3	N	NMED			
Arsenic	7440-38-2	mg/kg	1			7.07	N	13	N	NMED	1.41E-06	7.69E-02	
Barium	7440-39-3	mg/kg	520			NS	NS	15,600	N	NMED		3.33E-02	
Beryllium	7440-41-7	mg/kg	0.81	J		64,400	N	156	N	NMED	1.26E-10	5.19E-03	
Cadmium	7440-43-9	mg/kg	0.44			85,900	N	70.5	N	NMED	5.12E-11	6.24E-03	
Calcium	7440-70-2	mg/kg	21,000			NS	NS	13,000,000	N	NMED		1.62E-03	
Chromium (Total) (2)	7440-47-3	mg/kg	14			96.6	N	45,200	N	NMED	1.45E-06	3.10E-04	
Cobalt	7440-48-4	mg/kg	5.9			17,200	N	23.4	N	NMED	3.43E-09	2.52E-01	Endocrine
Copper	7440-50-8	mg/kg	75			NS	NS	3,130	N	NMED		2.40E-02	
Iron	7439-89-6	mg/kg	11,000			NS	NS	54,800	N	NMED		2.01E-01	GI
Lead	7439-92-1	mg/kg	14			NS	NS	200	N	IEUBK			
Magnesium	7439-95-4	mg/kg	6,900			NS	NS	15,600,000	N	NMED		4.42E-04	
Manganese	7439-96-5	mg/kg	330			NS	NS	10,500	N	NMED		3.14E-02	
Mercury (Elemental)	7439-97-6	mg/kg	0.022	J		NS	NS	23.8	N	NMED		9.24E-04	
Nickel	7440-02-0	mg/kg	15			595,000	N	1,560	N	NMED	2.52E-10	9.62E-03	
Potassium	7440-09-7	mg/kg	2,200			NS	NS	15,600,000	N	NMED		1.41E-04	
Selenium	7782-49-2	mg/kg	1.6			NS	NS	391	N	NMED		4.09E-03	
Silver	7440-22-4	mg/kg	0.066	J		NS	NS	391	N	NMED		1.69E-04	
Sodium	7440-23-5	mg/kg	45			NS	NS	7,820,000	N	NMED		5.75E-06	
Thallium	7440-28-0	mg/kg	0.089	J		NS	NS	0.782	N	NMED		1.14E-01	Hair/Coat/Eyes
Vanadium	7440-62-2	mg/kg	13			NS	NS	394	N	NMED		3.30E-02	
Zinc	7440-66-6	mg/kg	27			NS	NS	23,500	N	NMED		1.15E-03	
									Cumulative Risk/Hazard		**3E-06**	**1.1**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Residential Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Residential Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	0.3
Endocrine	0.25
GI	0.20
Hair/Coat	0.11
Eyes	0.11
All Others	0.23

TABLE D1-N27-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID N27
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		5,300	N	7,400	N	RSL		

TABLE D1-N27-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID N27
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	21,000			NS	NS	1,290,000	N	NMED		1.63E-02
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	519	N	NMED		
Arsenic	7440-38-2	mg/kg	1			36	N	208	N	NMED	2.79E-07	4.81E-03
Barium	7440-39-3	mg/kg	520			NS	NS	255,000	N	NMED		2.04E-03
Beryllium	7440-41-7	mg/kg	0.81	J		313,000	N	2,580	N	NMED	2.59E-11	3.14E-04
Cadmium	7440-43-9	mg/kg	0.44			417,000	N	1,110	N	NMED	1.06E-11	3.96E-04
Calcium	7440-70-2	mg/kg	21,000			NS	NS	32,400,000	N	NMED		6.48E-04
Chromium (Total) (2)	7440-47-3	mg/kg	14			505	N	314,000	N	NMED	2.77E-07	4.46E-05
Cobalt	7440-48-4	mg/kg	5.9			83,400	N	388	N	NMED	7.07E-10	1.52E-02
Copper	7440-50-8	mg/kg	75			NS	NS	51,900	N	NMED		1.45E-03
Iron	7439-89-6	mg/kg	11,000			NS	NS	908,000	N	NMED		1.21E-02
Lead	7439-92-1	mg/kg	14			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	6,900			NS	NS	5,680,000	N	NMED		1.21E-03
Manganese	7439-96-5	mg/kg	330			NS	NS	160,000	N	NMED		2.06E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.022	J		NS	NS	112	N	NMED		1.96E-04
Nickel	7440-02-0	mg/kg	15			2,890,000	N	25,700	N	NMED	5.19E-11	5.84E-04
Potassium	7440-09-7	mg/kg	2,200			NS	NS	76,200,000	N	NMED		2.89E-05
Selenium	7782-49-2	mg/kg	1.6			NS	NS	6,490	N	NMED		2.47E-04
Silver	7440-22-4	mg/kg	0.066	J		NS	NS	6,490	N	NMED		1.02E-05
Sodium	7440-23-5	mg/kg	45			NS	NS	37,300,000	N	NMED		1.21E-06
Thallium	7440-28-0	mg/kg	0.089	J		NS	NS	13	N	NMED		6.85E-03
Vanadium	7440-62-2	mg/kg	13			NS	NS	6,530	N	NMED		1.99E-03
Zinc	7440-66-6	mg/kg	27			NS	NS	38,900	N	NMED		6.94E-04
									Cumulative Risk/Hazard		**6E-07**	**0.07**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Industrial Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-N27-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID N27
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		626	N	2,420	N	NMEDC			

TABLE D1-N27-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID N27
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	21,000			NS	NS	41,400	N	NMED		5.07E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	142	N	NMED			
Arsenic	7440-38-2	mg/kg	1			216	N	41	N	NMED		2.43E-02	
Barium	7440-39-3	mg/kg	520			NS	NS	4,390	N	NMED		1.18E-01	Kidneys
Beryllium	7440-41-7	mg/kg	0.81	J		2,710	N	148	N	NMED		5.47E-03	
Cadmium	7440-43-9	mg/kg	0.44			3,610	N	72	N	NMED		6.10E-03	
Calcium	7440-70-2	mg/kg	21,000			NS	NS	8,850,000	N	NMED		2.37E-03	
Chromium (Total) (3)	7440-47-3	mg/kg	14			468	N	134	N	NMED		1.04E-01	GI, Blood
Cobalt	7440-48-4	mg/kg	5.9			722	N	37	N	NMED		1.61E-01	Endocrine
Copper	7440-50-8	mg/kg	75			NS	NS	14,200	N	NMED		5.28E-03	
Iron	7439-89-6	mg/kg	11,000			NS	NS	248,000	N	NMED		4.44E-02	
Lead	7439-92-1	mg/kg	14			NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	6,900			NS	NS	1,550,000	N	NMED		4.45E-03	
Manganese	7439-96-5	mg/kg	330			NS	NS	464	N	NMED		7.11E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.022	J		NS	NS	21	N	NMED		1.06E-03	
Nickel	7440-02-0	mg/kg	15			20,500	N	753	N	NMED		1.99E-02	
Potassium	7440-09-7	mg/kg	2,200			NS	NS	20,800,000	N	NMED		1.06E-04	
Selenium	7782-49-2	mg/kg	1.6			NS	NS	1,750	N	NMED		9.14E-04	
Silver	7440-22-4	mg/kg	0.066	J		NS	NS	1,770	N	NMED		3.73E-05	
Sodium	7440-23-5	mg/kg	45			NS	NS	10,200,000	N	NMED		4.41E-06	
Thallium	7440-28-0	mg/kg	0.089	J		NS	NS	4	N	NMED		2.51E-02	
Vanadium	7440-62-2	mg/kg	13			NS	NS	614	N	NMED		2.12E-02	
Zinc	7440-66-6	mg/kg	27			NS	NS	106,000	N	NMED		2.55E-04	
									Cumulative Risk/Hazard		**0E+00**	**1.8**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent	NS = No Standard
CAS = Chemical Abstracts Service	RAG = Risk Assessment Guidance
HI = Hazard Index	SSL = soil screening level
J = Estimated	U = Nondetect
mg/kg = milligrams per kilogram	UJ = Estimated Nondetect
N = no	UTL = upper tolerance limit
NA = not applicable	Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	1.2
Endocrine	0.16
GI	0.10
Blood	0.10
Kidneys	0.12
All Others	0.16

TABLE D1-N28-1
GRID N28 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	2,200	N	RSL			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	6.3	N	RSL			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		211	N	36	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		3.56	N	18.5	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	7.7	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		31.6	N	70.4	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	6.16	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	7.64	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		333	N	247	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		83.1	N	301	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	156	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		60.4	N	131	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		313	N	6.16	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	3,850	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		1,300	N	570	N	RSL			

TABLE D1-N28-1
GRID N28 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	20,000			NS	NS	78,000	N	NMED		2.56E-01	Nervous
Antimony	7440-36-0	mg/kg	0.094	J		NS	NS	31.3	N	NMED		3.00E-03	
Arsenic	7440-38-2	mg/kg	1.6			7.07	N	13	N	NMED	2.26E-06	1.23E-01	Heart/Endocrine
Barium	7440-39-3	mg/kg	210			NS	NS	15,600	N	NMED		1.35E-02	
Beryllium	7440-41-7	mg/kg	0.65	J		64,400	N	156	N	NMED	1.01E-10	4.17E-03	
Cadmium	7440-43-9	mg/kg	0.47			85,900	N	70.5	N	NMED	5.47E-11	6.67E-03	
Calcium	7440-70-2	mg/kg	4,700			NS	NS	13,000,000	N	NMED		3.62E-04	
Chromium (Total) (2)	7440-47-3	mg/kg	15			96.6	N	45,200	N	NMED	1.55E-06	3.32E-04	
Cobalt	7440-48-4	mg/kg	6			17,200	N	23.4	N	NMED	3.49E-09	2.56E-01	Endocrine
Copper	7440-50-8	mg/kg	120	J		NS	NS	3,130	N	NMED		3.83E-02	
Iron	7439-89-6	mg/kg	10,000			NS	NS	54,800	N	NMED		1.82E-01	GI
Lead	7439-92-1	mg/kg	11			NS	NS	200	N	IEUBK			
Magnesium	7439-95-4	mg/kg	7,800			NS	NS	15,600,000	N	NMED		5.00E-04	
Manganese	7439-96-5	mg/kg	410			NS	NS	10,500	N	NMED		3.90E-02	
Mercury (Elemental)	7439-97-6	mg/kg	0.03	J		NS	NS	23.8	N	NMED		1.26E-03	
Nickel	7440-02-0	mg/kg	12			595,000	N	1,560	N	NMED	2.02E-10	7.69E-03	
Potassium	7440-09-7	mg/kg	1,300			NS	NS	15,600,000	N	NMED		8.33E-05	
Selenium	7782-49-2	mg/kg	1			NS	NS	391	N	NMED		2.56E-03	
Silver	7440-22-4	mg/kg	0.065	J		NS	NS	391	N	NMED		1.66E-04	
Sodium	7440-23-5	mg/kg	66			NS	NS	7,820,000	N	NMED		8.44E-06	
Thallium	7440-28-0	mg/kg	0.061	J		NS	NS	0.782	N	NMED		7.80E-02	
Vanadium	7440-62-2	mg/kg	22			NS	NS	394	N	NMED		5.58E-02	
Zinc	7440-66-6	mg/kg	31			NS	NS	23,500	N	NMED		1.32E-03	
									Cumulative Risk/Hazard		**4E-06**	**1.1**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Residential Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Residential Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	0.3
Endocrine	0.38
GI	0.18
Heart	0.12
All Others	0.25

TABLE D1-N28-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID N28
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		5,300	N	7,400	N	RSL		

TABLE D1-N28-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID N28
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	20,000			NS	NS	1,290,000	N	NMED		1.55E-02
Antimony	7440-36-0	mg/kg	0.094	J		NS	NS	519	N	NMED		1.81E-04
Arsenic	7440-38-2	mg/kg	1.6			36	N	208	N	NMED	4.46E-07	7.69E-03
Barium	7440-39-3	mg/kg	210			NS	NS	255,000	N	NMED		8.24E-04
Beryllium	7440-41-7	mg/kg	0.65	J		313,000	N	2,580	N	NMED	2.08E-11	2.52E-04
Cadmium	7440-43-9	mg/kg	0.47			417,000	N	1,110	N	NMED	1.13E-11	4.23E-04
Calcium	7440-70-2	mg/kg	4,700			NS	NS	32,400,000	N	NMED		1.45E-04
Chromium (Total) (2)	7440-47-3	mg/kg	15			505	N	314,000	N	NMED	2.97E-07	4.78E-05
Cobalt	7440-48-4	mg/kg	6			83,400	N	388	N	NMED	7.19E-10	1.55E-02
Copper	7440-50-8	mg/kg	120	J		NS	NS	51,900	N	NMED		2.31E-03
Iron	7439-89-6	mg/kg	10,000			NS	NS	908,000	N	NMED		1.10E-02
Lead	7439-92-1	mg/kg	11			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	7,800			NS	NS	5,680,000	N	NMED		1.37E-03
Manganese	7439-96-5	mg/kg	410			NS	NS	160,000	N	NMED		2.56E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.03	J		NS	NS	112	N	NMED		2.68E-04
Nickel	7440-02-0	mg/kg	12			2,890,000	N	25,700	N	NMED	4.15E-11	4.67E-04
Potassium	7440-09-7	mg/kg	1,300			NS	NS	76,200,000	N	NMED		1.71E-05
Selenium	7782-49-2	mg/kg	1			NS	NS	6,490	N	NMED		1.54E-04
Silver	7440-22-4	mg/kg	0.065	J		NS	NS	6,490	N	NMED		1.00E-05
Sodium	7440-23-5	mg/kg	66			NS	NS	37,300,000	N	NMED		1.77E-06
Thallium	7440-28-0	mg/kg	0.061	J		NS	NS	13	N	NMED		4.69E-03
Vanadium	7440-62-2	mg/kg	22			NS	NS	6,530	N	NMED		3.37E-03
Zinc	7440-66-6	mg/kg	31			NS	NS	38,900	N	NMED		7.97E-04
									Cumulative Risk/Hazard		**7E-07**	**0.07**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Industrial Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-N28-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID N28
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		626	N	2,420	N	NMEDC			

TABLE D1-N28-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID N28
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	20,000			NS	NS	41,400	N	NMED		4.83E-01	Nervous
Antimony	7440-36-0	mg/kg	0.094	J		NS	NS	142	N	NMED		6.62E-04	
Arsenic	7440-38-2	mg/kg	1.6			216	N	41	N	NMED	7.41E-08	3.88E-02	
Barium	7440-39-3	mg/kg	210			NS	NS	4,390	N	NMED		4.78E-02	
Beryllium	7440-41-7	mg/kg	0.65	J		2,710	N	148	N	NMED	2.40E-09	4.39E-03	
Cadmium	7440-43-9	mg/kg	0.47			3,610	N	72	N	NMED	1.30E-09	6.52E-03	
Calcium	7440-70-2	mg/kg	4,700			NS	NS	8,850,000	N	NMED		5.31E-04	
Chromium (Total) (3)	7440-47-3	mg/kg	15			468	N	134	N	NMED	3.21E-07	1.12E-01	GI, Blood
Cobalt	7440-48-4	mg/kg	6			722	N	37	N	NMED	8.31E-08	1.63E-01	Endocrine
Copper	7440-50-8	mg/kg	120	J		NS	NS	14,200	N	NMED		8.45E-03	
Iron	7439-89-6	mg/kg	10,000			NS	NS	248,000	N	NMED		4.03E-02	
Lead	7439-92-1	mg/kg	11			NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	7,800			NS	NS	1,550,000	N	NMED		5.03E-03	
Manganese	7439-96-5	mg/kg	410			NS	NS	464	N	NMED		8.84E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.03	J		NS	NS	21	N	NMED		1.45E-03	
Nickel	7440-02-0	mg/kg	12			20,500	N	753	N	NMED	5.85E-09	1.59E-02	
Potassium	7440-09-7	mg/kg	1,300			NS	NS	20,800,000	N	NMED		6.25E-05	
Selenium	7782-49-2	mg/kg	1			NS	NS	1,750	N	NMED		5.71E-04	
Silver	7440-22-4	mg/kg	0.065	J		NS	NS	1,770	N	NMED		3.67E-05	
Sodium	7440-23-5	mg/kg	66			NS	NS	10,200,000	N	NMED		6.47E-06	
Thallium	7440-28-0	mg/kg	0.061	J		NS	NS	4	N	NMED		1.72E-02	
Vanadium	7440-62-2	mg/kg	22			NS	NS	614	N	NMED		3.58E-02	
Zinc	7440-66-6	mg/kg	31			NS	NS	106,000	N	NMED		2.92E-04	
									Cumulative Risk/Hazard		**5E-07**	**1.9**	
									Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	1.4
Endocrine	0.16
GI	0.11
Blood	0.11
All Others	0.22

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
N = no
NA = not applicable

NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-N37-1
GRID N37 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	2,200	N	RSL			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	6.3	N	RSL			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		211	N	36	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		3.56	N	18.5	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	7.7	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		31.6	N	70.4	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	6.16	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	7.64	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		333	N	247	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		83.1	N	301	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	156	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U		60.4	N	131	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U		313	N	6.16	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	3,850	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		1,300	N	570	N	RSL			

TABLE D1-N37-1
GRID N37 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	14,000			NS	NS	78,000	N	NMED		1.79E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	31.3	N	NMED			
Arsenic	7440-38-2	mg/kg	2.2			7.07	N	13	N	NMED	3.11E-06	1.69E-01	Heart/Endocrine
Barium	7440-39-3	mg/kg	210			NS	NS	15,600	N	NMED		1.35E-02	
Beryllium	7440-41-7	mg/kg	0.73	J		64,400	N	156	N	NMED	1.13E-10	4.68E-03	
Cadmium	7440-43-9	mg/kg	0.24			85,900	N	70.5	N	NMED	2.79E-11	3.40E-03	
Calcium	7440-70-2	mg/kg	3,300			NS	NS	13,000,000	N	NMED		2.54E-04	
Chromium (Total) (2)	7440-47-3	mg/kg	13			96.6	N	45,200	N	NMED	1.35E-06	2.88E-04	
Cobalt	7440-48-4	mg/kg	5.5			17,200	N	23.4	N	NMED	3.20E-09	2.35E-01	Endocrine
Copper	7440-50-8	mg/kg	48			NS	NS	3,130	N	NMED		1.53E-02	
Iron	7439-89-6	mg/kg	11,000			NS	NS	54,800	N	NMED		2.01E-01	GI
Lead	7439-92-1	mg/kg	9.8			NS	NS	200	N	IEUBK			
Magnesium	7439-95-4	mg/kg	4,200			NS	NS	15,600,000	N	NMED		2.69E-04	
Manganese	7439-96-5	mg/kg	480			NS	NS	10,500	N	NMED		4.57E-02	
Mercury (Elemental)	7439-97-6	mg/kg	0.021	J		NS	NS	23.8	N	NMED		8.82E-04	
Nickel	7440-02-0	mg/kg	10			595,000	N	1,560	N	NMED	1.68E-10	6.41E-03	
Potassium	7440-09-7	mg/kg	1,600			NS	NS	15,600,000	N	NMED		1.03E-04	
Selenium	7782-49-2	mg/kg	1.4			NS	NS	391	N	NMED		3.58E-03	
Silver	7440-22-4	mg/kg	0.05	U		NS	NS	391	N	NMED			
Sodium	7440-23-5	mg/kg	48			NS	NS	7,820,000	N	NMED		6.14E-06	
Thallium	7440-28-0	mg/kg	0.078	J		NS	NS	0.782	N	NMED		9.97E-02	
Vanadium	7440-62-2	mg/kg	25			NS	NS	394	N	NMED		6.35E-02	
Zinc	7440-66-6	mg/kg	25			NS	NS	23,500	N	NMED		1.06E-03	
									Cumulative Risk/Hazard		**4E-06**	**1.0**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Residential Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Residential Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	0.2
Endocrine	0.40
GI	0.20
Heart	0.17
All Others	0.26

TABLE D1-N37-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID N37
FORT WINGATE DEPOT ACTIVIT INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		5,300	N	7,400	N	RSL		

TABLE D1-N37-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID N37
FORT WINGATE DEPOT ACTIVIT INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	14,000			NS	NS	1,290,000	N	NMED		1.09E-02
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	519	N	NMED		
Arsenic	7440-38-2	mg/kg	2.2			36	N	208	N	NMED	6.13E-07	1.06E-02
Barium	7440-39-3	mg/kg	210			NS	NS	255,000	N	NMED		8.24E-04
Beryllium	7440-41-7	mg/kg	0.73	J		313,000	N	2,580	N	NMED	2.33E-11	2.83E-04
Cadmium	7440-43-9	mg/kg	0.24			417,000	N	1,110	N	NMED	5.76E-12	2.16E-04
Calcium	7440-70-2	mg/kg	3,300			NS	NS	32,400,000	N	NMED		1.02E-04
Chromium (Total) (2)	7440-47-3	mg/kg	13			505	N	314,000	N	NMED	2.57E-07	4.14E-05
Cobalt	7440-48-4	mg/kg	5.5			83,400	N	388	N	NMED	6.59E-10	1.42E-02
Copper	7440-50-8	mg/kg	48			NS	NS	51,900	N	NMED		9.25E-04
Iron	7439-89-6	mg/kg	11,000			NS	NS	908,000	N	NMED		1.21E-02
Lead	7439-92-1	mg/kg	9.8			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	4,200			NS	NS	5,680,000	N	NMED		7.39E-04
Manganese	7439-96-5	mg/kg	480			NS	NS	160,000	N	NMED		3.00E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.021	J		NS	NS	112	N	NMED		1.88E-04
Nickel	7440-02-0	mg/kg	10			2,890,000	N	25,700	N	NMED	3.46E-11	3.89E-04
Potassium	7440-09-7	mg/kg	1,600			NS	NS	76,200,000	N	NMED		2.10E-05
Selenium	7782-49-2	mg/kg	1.4			NS	NS	6,490	N	NMED		2.16E-04
Silver	7440-22-4	mg/kg	0.05	U		NS	NS	6,490	N	NMED		
Sodium	7440-23-5	mg/kg	48			NS	NS	37,300,000	N	NMED		1.29E-06
Thallium	7440-28-0	mg/kg	0.078	J		NS	NS	13	N	NMED		6.00E-03
Vanadium	7440-62-2	mg/kg	25			NS	NS	6,530	N	NMED		3.83E-03
Zinc	7440-66-6	mg/kg	25			NS	NS	38,900	N	NMED		6.43E-04
									Cumulative Risk/Hazard		**9E-07**	**0.07**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Industrial Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-N37-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID N37
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		626	N	2,420	N	NMEDC			

TABLE D1-N37-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID N37
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	14,000			NS	NS	41,400	N	NMED		3.38E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	142	N	NMED			
Arsenic	7440-38-2	mg/kg	2.2			216	N	41	N	NMED	1.02E-07	5.34E-02	
Barium	7440-39-3	mg/kg	210			NS	NS	4,390	N	NMED		4.78E-02	
Beryllium	7440-41-7	mg/kg	0.73	J		2,710	N	148	N	NMED	2.69E-09	4.93E-03	
Cadmium	7440-43-9	mg/kg	0.24			3,610	N	72	N	NMED	6.65E-10	3.33E-03	
Calcium	7440-70-2	mg/kg	3,300			NS	NS	8,850,000	N	NMED		3.73E-04	
Chromium (Total) (3)	7440-47-3	mg/kg	13			468	N	134	N	NMED	2.78E-07	9.70E-02	
Cobalt	7440-48-4	mg/kg	5.5			722	N	37	N	NMED	7.62E-08	1.50E-01	Endocrine
Copper	7440-50-8	mg/kg	48			NS	NS	14,200	N	NMED		3.38E-03	
Iron	7439-89-6	mg/kg	11,000			NS	NS	248,000	N	NMED		4.44E-02	
Lead	7439-92-1	mg/kg	9.8			NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	4,200			NS	NS	1,550,000	N	NMED		2.71E-03	
Manganese	7439-96-5	mg/kg	480			NS	NS	464	Y	NMED		1.03E+00	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.021	J		NS	NS	21	N	NMED		1.01E-03	
Nickel	7440-02-0	mg/kg	10			20,500	N	753	N	NMED	4.88E-09	1.33E-02	
Potassium	7440-09-7	mg/kg	1,600			NS	NS	20,800,000	N	NMED		7.69E-05	
Selenium	7782-49-2	mg/kg	1.4			NS	NS	1,750	N	NMED		8.00E-04	
Silver	7440-22-4	mg/kg	0.05	U		NS	NS	1,770	N	NMED			
Sodium	7440-23-5	mg/kg	48			NS	NS	10,200,000	N	NMED		4.71E-06	
Thallium	7440-28-0	mg/kg	0.078	J		NS	NS	4	N	NMED		2.20E-02	
Vanadium	7440-62-2	mg/kg	25			NS	NS	614	N	NMED		4.07E-02	
Zinc	7440-66-6	mg/kg	25			NS	NS	106,000	N	NMED		2.36E-04	
									Cumulative Risk/Hazard		**5E-07**	**1.9**	
									Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	1.4
Endocrine	0.15
All Others	0.34

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-O27-1
GRID O27 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	2,200	N	RSL			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	6.3	N	RSL			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		211	N	36	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		3.56	N	18.5	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	7.7	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		31.6	N	70.4	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	6.16	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	7.64	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		333	N	247	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		83.1	N	301	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	156	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U		60.4	N	131	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U		313	N	6.16	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	3,850	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		1,300	N	570	N	RSL			

TABLE D1-O27-1
GRID O27 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	18,000			NS	NS	78,000	N	NMED		2.31E-01	Nervous
Antimony	7440-36-0	mg/kg	0.079	J		NS	NS	31.3	N	NMED		2.52E-03	
Arsenic	7440-38-2	mg/kg	1.1			7.07	N	13	N	NMED	1.56E-06	8.46E-02	
Barium	7440-39-3	mg/kg	430			NS	NS	15,600	N	NMED		2.76E-02	
Beryllium	7440-41-7	mg/kg	1			64,400	N	156	N	NMED	1.55E-10	6.41E-03	
Cadmium	7440-43-9	mg/kg	0.32			85,900	N	70.5	N	NMED	3.73E-11	4.54E-03	
Calcium	7440-70-2	mg/kg	36,000			NS	NS	13,000,000	N	NMED		2.77E-03	
Chromium (Total) (2)	7440-47-3	mg/kg	11			96.6	N	45,200	N	NMED	1.14E-06	2.43E-04	
Cobalt	7440-48-4	mg/kg	5.7			17,200	N	23.4	N	NMED	3.31E-09	2.44E-01	Endocrine
Copper	7440-50-8	mg/kg	59			NS	NS	3,130	N	NMED		1.88E-02	
Iron	7439-89-6	mg/kg	12,000			NS	NS	54,800	N	NMED		2.19E-01	GI
Lead	7439-92-1	mg/kg	12			NS	NS	200	N	IEUBK			
Magnesium	7439-95-4	mg/kg	6,200			NS	NS	15,600,000	N	NMED		3.97E-04	
Manganese	7439-96-5	mg/kg	610			NS	NS	10,500	N	NMED		5.81E-02	
Mercury (Elemental)	7439-97-6	mg/kg	0.022	J		NS	NS	23.8	N	NMED		9.24E-04	
Nickel	7440-02-0	mg/kg	14			595,000	N	1,560	N	NMED	2.35E-10	8.97E-03	
Potassium	7440-09-7	mg/kg	1,700			NS	NS	15,600,000	N	NMED		1.09E-04	
Selenium	7782-49-2	mg/kg	1.4			NS	NS	391	N	NMED		3.58E-03	
Silver	7440-22-4	mg/kg	0.046	J		NS	NS	391	N	NMED		1.18E-04	
Sodium	7440-23-5	mg/kg	61			NS	NS	7,820,000	N	NMED		7.80E-06	
Thallium	7440-28-0	mg/kg	0.2			NS	NS	0.782	N	NMED		2.56E-01	Hair/Coat/Eyes
Vanadium	7440-62-2	mg/kg	15			NS	NS	394	N	NMED		3.81E-02	
Zinc	7440-66-6	mg/kg	23			NS	NS	23,500	N	NMED		9.79E-04	
									Cumulative Risk/Hazard		**3E-06**	**1.2**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Residential Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Residential Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. " The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	0.2
Endocrine	0.24
GI	0.22
Hair/Coat	0.26
Eyes	0.26
All Others	0.26

TABLE D1-O27-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID O27
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		5,300	N	7,400	N	RSL		

TABLE D1-O27-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID O27
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	18,000			NS	NS	1,290,000	N	NMED		1.40E-02
Antimony	7440-36-0	mg/kg	0.079	J		NS	NS	519	N	NMED		1.52E-04
Arsenic	7440-38-2	mg/kg	1.1			36	N	208	N	NMED	3.06E-07	5.29E-03
Barium	7440-39-3	mg/kg	430			NS	NS	255,000	N	NMED		1.69E-03
Beryllium	7440-41-7	mg/kg	1			313,000	N	2,580	N	NMED	3.19E-11	3.88E-04
Cadmium	7440-43-9	mg/kg	0.32			417,000	N	1,110	N	NMED	7.67E-12	2.88E-04
Calcium	7440-70-2	mg/kg	36,000			NS	NS	32,400,000	N	NMED		1.11E-03
Chromium (Total) (2)	7440-47-3	mg/kg	11			505	N	314,000	N	NMED	2.18E-07	3.50E-05
Cobalt	7440-48-4	mg/kg	5.7			83,400	N	388	N	NMED	6.83E-10	1.47E-02
Copper	7440-50-8	mg/kg	59			NS	NS	51,900	N	NMED		1.14E-03
Iron	7439-89-6	mg/kg	12,000			NS	NS	908,000	N	NMED		1.32E-02
Lead	7439-92-1	mg/kg	12			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	6,200			NS	NS	5,680,000	N	NMED		1.09E-03
Manganese	7439-96-5	mg/kg	610			NS	NS	160,000	N	NMED		3.81E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.022	J		NS	NS	112	N	NMED		1.96E-04
Nickel	7440-02-0	mg/kg	14			2,890,000	N	25,700	N	NMED	4.84E-11	5.45E-04
Potassium	7440-09-7	mg/kg	1,700			NS	NS	76,200,000	N	NMED		2.23E-05
Selenium	7782-49-2	mg/kg	1.4			NS	NS	6,490	N	NMED		2.16E-04
Silver	7440-22-4	mg/kg	0.046	J		NS	NS	6,490	N	NMED		7.09E-06
Sodium	7440-23-5	mg/kg	61			NS	NS	37,300,000	N	NMED		1.64E-06
Thallium	7440-28-0	mg/kg	0.2			NS	NS	13	N	NMED		1.54E-02
Vanadium	7440-62-2	mg/kg	15			NS	NS	6,530	N	NMED		2.30E-03
Zinc	7440-66-6	mg/kg	23			NS	NS	38,900	N	NMED		5.91E-04
									Cumulative Risk/Hazard		**5E-07**	**0.08**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Industrial Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-O27-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID O27
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		626	N	2,420	N	NMEDC			

TABLE D1-O27-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID O27
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	18,000			NS	NS	41,400	N	NMED		4.35E-01	Nervous
Antimony	7440-36-0	mg/kg	0.079	J		NS	NS	142	N	NMED		5.56E-04	
Arsenic	7440-38-2	mg/kg	1.1			216	N	41	N	NMED		2.67E-02	
Barium	7440-39-3	mg/kg	430			NS	NS	4,390	N	NMED		9.79E-02	
Beryllium	7440-41-7	mg/kg	1			2,710	N	148	N	NMED		6.76E-03	
Cadmium	7440-43-9	mg/kg	0.32			3,610	N	72	N	NMED		4.44E-03	
Calcium	7440-70-2	mg/kg	36,000			NS	NS	8,850,000	N	NMED		4.07E-03	
Chromium (Total) (3)	7440-47-3	mg/kg	11			468	N	134	N	NMED		8.21E-02	
Cobalt	7440-48-4	mg/kg	5.7			722	N	37	N	NMED		1.55E-01	Endocrine
Copper	7440-50-8	mg/kg	59			NS	NS	14,200	N	NMED		4.15E-03	
Iron	7439-89-6	mg/kg	12,000			NS	NS	248,000	N	NMED		4.84E-02	
Lead	7439-92-1	mg/kg	12			NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	6,200			NS	NS	1,550,000	N	NMED		4.00E-03	
Manganese	7439-96-5	mg/kg	610			NS	NS	464	Y	NMED		1.31E+00	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.022	J		NS	NS	21	N	NMED		1.06E-03	
Nickel	7440-02-0	mg/kg	14			20,500	N	753	N	NMED		1.86E-02	
Potassium	7440-09-7	mg/kg	1,700			NS	NS	20,800,000	N	NMED		8.17E-05	
Selenium	7782-49-2	mg/kg	1.4			NS	NS	1,750	N	NMED		8.00E-04	
Silver	7440-22-4	mg/kg	0.046	J		NS	NS	1,770	N	NMED		2.60E-05	
Sodium	7440-23-5	mg/kg	61			NS	NS	10,200,000	N	NMED		5.98E-06	
Thallium	7440-28-0	mg/kg	0.2			NS	NS	4	N	NMED		5.65E-02	
Vanadium	7440-62-2	mg/kg	15			NS	NS	614	N	NMED		2.44E-02	
Zinc	7440-66-6	mg/kg	23			NS	NS	106,000	N	NMED		2.17E-04	
									Cumulative Risk/Hazard		**0E+00**	**2.3**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	1.7
Endocrine	0.16
All Others	0.38

TABLE D1-O32-1
GRID O32 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U		60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U		313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		1,300	N	570	N	RSL		

TABLE D1-O32-1
GRID O32 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	12,000			NS	NS	78,000	N	NMED		1.54E-01
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	31.3	N	NMED		
Arsenic	7440-38-2	mg/kg	1.1			7.07	N	13	N	NMED	1.56E-06	8.46E-02
Barium	7440-39-3	mg/kg	130			NS	NS	15,600	N	NMED		8.33E-03
Beryllium	7440-41-7	mg/kg	0.38	J		64,400	N	156	N	NMED	5.90E-11	2.44E-03
Cadmium	7440-43-9	mg/kg	0.43			85,900	N	70.5	N	NMED	5.01E-11	6.10E-03
Calcium	7440-70-2	mg/kg	3,000			NS	NS	13,000,000	N	NMED		2.31E-04
Chromium (Total) (2)	7440-47-3	mg/kg	9.4			96.6	N	45,200	N	NMED	9.73E-07	2.08E-04
Cobalt	7440-48-4	mg/kg	4.3			17,200	N	23.4	N	NMED	2.50E-09	1.84E-01
Copper	7440-50-8	mg/kg	87	J		NS	NS	3,130	N	NMED		2.78E-02
Iron	7439-89-6	mg/kg	6,200			NS	NS	54,800	N	NMED		1.13E-01
Lead	7439-92-1	mg/kg	9.3			NS	NS	200	N	IEUBK		
Magnesium	7439-95-4	mg/kg	5,200			NS	NS	15,600,000	N	NMED		3.33E-04
Manganese	7439-96-5	mg/kg	290			NS	NS	10,500	N	NMED		2.76E-02
Mercury (Elemental)	7439-97-6	mg/kg	0.024	J		NS	NS	23.8	N	NMED		1.01E-03
Nickel	7440-02-0	mg/kg	7.8			595,000	N	1,560	N	NMED	1.31E-10	5.00E-03
Potassium	7440-09-7	mg/kg	760			NS	NS	15,600,000	N	NMED		4.87E-05
Selenium	7782-49-2	mg/kg	0.78			NS	NS	391	N	NMED		1.99E-03
Silver	7440-22-4	mg/kg	0.059	J		NS	NS	391	N	NMED		1.51E-04
Sodium	7440-23-5	mg/kg	75			NS	NS	7,820,000	N	NMED		9.59E-06
Thallium	7440-28-0	mg/kg	0.04	J		NS	NS	0.782	N	NMED		5.12E-02
Vanadium	7440-62-2	mg/kg	11			NS	NS	394	N	NMED		2.79E-02
Zinc	7440-66-6	mg/kg	23			NS	NS	23,500	N	NMED		9.79E-04
									Cumulative Risk/Hazard		**3E-06**	**0.7**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Residential Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Residential Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-O32-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID O32
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		5,300	N	7,400	N	RSL		

TABLE D1-O32-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID O32
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	12,000			NS	NS	1,290,000	N	NMED		9.30E-03
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	519	N	NMED		
Arsenic	7440-38-2	mg/kg	1.1			36	N	208	N	NMED	3.06E-07	5.29E-03
Barium	7440-39-3	mg/kg	130			NS	NS	255,000	N	NMED		5.10E-04
Beryllium	7440-41-7	mg/kg	0.38	J		313,000	N	2,580	N	NMED	1.21E-11	1.47E-04
Cadmium	7440-43-9	mg/kg	0.43			417,000	N	1,110	N	NMED	1.03E-11	3.87E-04
Calcium	7440-70-2	mg/kg	3,000			NS	NS	32,400,000	N	NMED		5.29E-03
Chromium (Total) (2)	7440-47-3	mg/kg	9.4			505	N	314,000	N	NMED	1.86E-07	2.99E-05
Cobalt	7440-48-4	mg/kg	4.3			83,400	N	388	N	NMED	5.16E-10	1.11E-02
Copper	7440-50-8	mg/kg	87	J		NS	NS	51,900	N	NMED		1.68E-03
Iron	7439-89-6	mg/kg	6,200			NS	NS	908,000	N	NMED		6.83E-03
Lead	7439-92-1	mg/kg	9.3			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	5,200			NS	NS	5,680,000	N	NMED		9.15E-04
Manganese	7439-96-5	mg/kg	290			NS	NS	160,000	N	NMED		1.81E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.024	J		NS	NS	112	N	NMED		2.14E-04
Nickel	7440-02-0	mg/kg	7.8			2,890,000	N	25,700	N	NMED	2.70E-11	3.04E-04
Potassium	7440-09-7	mg/kg	760			NS	NS	76,200,000	N	NMED		9.97E-06
Selenium	7782-49-2	mg/kg	0.78			NS	NS	6,490	N	NMED		1.20E-04
Silver	7440-22-4	mg/kg	0.059	J		NS	NS	6,490	N	NMED		9.09E-06
Sodium	7440-23-5	mg/kg	75			NS	NS	37,300,000	N	NMED		2.01E-06
Thallium	7440-28-0	mg/kg	0.04	J		NS	NS	13	N	NMED		3.08E-03
Vanadium	7440-62-2	mg/kg	11			NS	NS	6,530	N	NMED		1.68E-03
Zinc	7440-66-6	mg/kg	23			NS	NS	38,900	N	NMED		5.91E-04
									Cumulative Risk/Hazard		**5E-07**	**0.05**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Industrial Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-O32-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID O32
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		626	N	2,420	N	NMEDC			

TABLE D1-O32-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID O32
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	12,000			NS	NS	41,400	N	NMED		2.90E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	142	N	NMED			
Arsenic	7440-38-2	mg/kg	1.1			216	N	41	N	NMED	5.09E-08	2.67E-02	
Barium	7440-39-3	mg/kg	130			NS	NS	4,390	N	NMED		2.96E-02	
Beryllium	7440-41-7	mg/kg	0.38	J		2,710	N	148	N	NMED	1.40E-09	2.57E-03	
Cadmium	7440-43-9	mg/kg	0.43			3,610	N	72	N	NMED	1.19E-09	5.96E-03	
Calcium	7440-70-2	mg/kg	3,000			NS	NS	8,850,000	N	NMED		3.39E-04	
Chromium (Total) (3)	7440-47-3	mg/kg	9.4			468	N	134	N	NMED	2.01E-07	7.01E-02	
Cobalt	7440-48-4	mg/kg	4.3			722	N	37	N	NMED	5.96E-08	1.17E-01	Endocrine
Copper	7440-50-8	mg/kg	87	J		NS	NS	14,200	N	NMED		6.13E-03	
Iron	7439-89-6	mg/kg	6,200			NS	NS	248,000	N	NMED		2.50E-02	
Lead	7439-92-1	mg/kg	9.3			NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	5,200			NS	NS	1,550,000	N	NMED		3.35E-03	
Manganese	7439-96-5	mg/kg	290			NS	NS	464	N	NMED		6.25E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.024	J		NS	NS	21	N	NMED		1.16E-03	
Nickel	7440-02-0	mg/kg	7.8			20,500	N	753	N	NMED	3.80E-09	1.04E-02	
Potassium	7440-09-7	mg/kg	760			NS	NS	20,800,000	N	NMED		3.65E-05	
Selenium	7782-49-2	mg/kg	0.78			NS	NS	1,750	N	NMED		4.46E-04	
Silver	7440-22-4	mg/kg	0.059	J		NS	NS	1,770	N	NMED		3.33E-05	
Sodium	7440-23-5	mg/kg	75			NS	NS	10,200,000	N	NMED		7.35E-06	
Thallium	7440-28-0	mg/kg	0.04	J		NS	NS	4	N	NMED		1.13E-02	
Vanadium	7440-62-2	mg/kg	11			NS	NS	614	N	NMED		1.79E-02	
Zinc	7440-66-6	mg/kg	23			NS	NS	106,000	N	NMED		2.17E-04	
									Cumulative Risk/Hazard		**3E-07**	**1.2**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	0.9
Endocrine	0.12
All Others	0.21

TABLE D1-O37-1
GRID O37 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	2,200	N	RSL			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	6.3	N	RSL			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		211	N	36	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		3.56	N	18.5	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	7.7	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		31.6	N	70.4	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	6.16	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	7.64	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		333	N	247	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		83.1	N	301	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	156	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U		60.4	N	131	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U		313	N	6.16	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	3,850	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		1,300	N	570	N	RSL			

TABLE D1-O37-1
GRID O37 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	14,000			NS	NS	78,000	N	NMED		1.79E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	31.3	N	NMED			
Arsenic	7440-38-2	mg/kg	2.3			7.07	N	13	N	NMED	3.25E-06	1.77E-01	Heart/Endocrine
Barium	7440-39-3	mg/kg	200			NS	NS	15,600	N	NMED		1.28E-02	
Beryllium	7440-41-7	mg/kg	0.67	J		64,400	N	156	N	NMED	1.04E-10	4.29E-03	
Cadmium	7440-43-9	mg/kg	0.21			85,900	N	70.5	N	NMED	2.44E-11	2.98E-03	
Calcium	7440-70-2	mg/kg	3,300			NS	NS	13,000,000	N	NMED		2.54E-04	
Chromium (Total) (2)	7440-47-3	mg/kg	12			96.6	N	45,200	N	NMED	1.24E-06	2.65E-04	
Cobalt	7440-48-4	mg/kg	5.6			17,200	N	23.4	N	NMED	3.26E-09	2.39E-01	Endocrine
Copper	7440-50-8	mg/kg	44			NS	NS	3,130	N	NMED		1.41E-02	
Iron	7439-89-6	mg/kg	11,000			NS	NS	54,800	N	NMED		2.01E-01	GI
Lead	7439-92-1	mg/kg	10			NS	NS	200	N	IEUBK			
Magnesium	7439-95-4	mg/kg	4,000			NS	NS	15,600,000	N	NMED		2.56E-04	
Manganese	7439-96-5	mg/kg	440			NS	NS	10,500	N	NMED		4.19E-02	
Mercury (Elemental)	7439-97-6	mg/kg	0.021	J		NS	NS	23.8	N	NMED		8.82E-04	
Nickel	7440-02-0	mg/kg	10			595,000	N	1,560	N	NMED	1.68E-10	6.41E-03	
Potassium	7440-09-7	mg/kg	1,600			NS	NS	15,600,000	N	NMED		1.03E-04	
Selenium	7782-49-2	mg/kg	1.3			NS	NS	391	N	NMED		3.32E-03	
Silver	7440-22-4	mg/kg	0.05	U		NS	NS	391	N	NMED			
Sodium	7440-23-5	mg/kg	44			NS	NS	7,820,000	N	NMED		5.63E-06	
Thallium	7440-28-0	mg/kg	0.065	J		NS	NS	0.782	N	NMED		8.31E-02	
Vanadium	7440-62-2	mg/kg	25			NS	NS	394	N	NMED		6.35E-02	
Zinc	7440-66-6	mg/kg	25			NS	NS	23,500	N	NMED		1.06E-03	
									Cumulative Risk/Hazard		**4E-06**	**1.0**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Residential Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Residential Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	0.2
Endocrine	0.42
GI	0.20
Heart	0.18
All Others	0.24

TABLE D1-O37-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID O37
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		5,300	N	7,400	N	RSL		

TABLE D1-O37-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID O37
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	14,000			NS	NS	1,290,000	N	NMED		1.09E-02
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	519	N	NMED		
Arsenic	7440-38-2	mg/kg	2.3			36	N	208	N	NMED	6.41E-07	1.11E-02
Barium	7440-39-3	mg/kg	200			NS	NS	255,000	N	NMED		7.84E-04
Beryllium	7440-41-7	mg/kg	0.67	J		313,000	N	2,580	N	NMED	2.14E-11	2.60E-04
Cadmium	7440-43-9	mg/kg	0.21			417,000	N	1,110	N	NMED	5.04E-12	1.89E-04
Calcium	7440-70-2	mg/kg	3,300			NS	NS	32,400,000	N	NMED		1.02E-04
Chromium (Total) (2)	7440-47-3	mg/kg	12			505	N	314,000	N	NMED	2.38E-07	3.82E-05
Cobalt	7440-48-4	mg/kg	5.6			83,400	N	388	N	NMED	6.71E-10	1.44E-02
Copper	7440-50-8	mg/kg	44			NS	NS	51,900	N	NMED		8.48E-04
Iron	7439-89-6	mg/kg	11,000			NS	NS	908,000	N	NMED		1.21E-02
Lead	7439-92-1	mg/kg	10			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	4,000			NS	NS	5,680,000	N	NMED		7.04E-04
Manganese	7439-96-5	mg/kg	440			NS	NS	160,000	N	NMED		2.75E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.021	J		NS	NS	112	N	NMED		1.88E-04
Nickel	7440-02-0	mg/kg	10			2,890,000	N	25,700	N	NMED	3.46E-11	3.89E-04
Potassium	7440-09-7	mg/kg	1,600			NS	NS	76,200,000	N	NMED		2.10E-05
Selenium	7782-49-2	mg/kg	1.3			NS	NS	6,490	N	NMED		2.00E-04
Silver	7440-22-4	mg/kg	0.05	U		NS	NS	6,490	N	NMED		
Sodium	7440-23-5	mg/kg	44			NS	NS	37,300,000	N	NMED		1.18E-06
Thallium	7440-28-0	mg/kg	0.065	J		NS	NS	13	N	NMED		5.00E-03
Vanadium	7440-62-2	mg/kg	25			NS	NS	6,530	N	NMED		3.83E-03
Zinc	7440-66-6	mg/kg	25			NS	NS	38,900	N	NMED		6.43E-04
									Cumulative Risk/Hazard		**9E-07**	**0.06**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Industrial Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-O37-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID O37
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		626	N	2,420	N	NMEDC			

TABLE D1-O37-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID O37
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	14,000			NS	NS	41,400	N	NMED		3.38E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	142	N	NMED			
Arsenic	7440-38-2	mg/kg	2.3			216	N	41	N	NMED		5.58E-02	
Barium	7440-39-3	mg/kg	200			NS	NS	4,390	N	NMED		4.56E-02	
Beryllium	7440-41-7	mg/kg	0.67	J		2,710	N	148	N	NMED		4.53E-03	
Cadmium	7440-43-9	mg/kg	0.21			3,610	N	72	N	NMED		2.91E-03	
Calcium	7440-70-2	mg/kg	3,300			NS	NS	8,850,000	N	NMED		3.73E-04	
Chromium (Total) (3)	7440-47-3	mg/kg	12			468	N	134	N	NMED		8.96E-02	
Cobalt	7440-48-4	mg/kg	5.6			722	N	37	N	NMED		1.53E-01	Endocrine
Copper	7440-50-8	mg/kg	44			NS	NS	14,200	N	NMED		3.10E-03	
Iron	7439-89-6	mg/kg	11,000			NS	NS	248,000	N	NMED		4.44E-02	
Lead	7439-92-1	mg/kg	10			NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	4,000			NS	NS	1,550,000	N	NMED		2.58E-03	
Manganese	7439-96-5	mg/kg	440			NS	NS	464	N	NMED		9.48E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.021	J		NS	NS	21	N	NMED		1.01E-03	
Nickel	7440-02-0	mg/kg	10			20,500	N	753	N	NMED		1.33E-02	
Potassium	7440-09-7	mg/kg	1,600			NS	NS	20,800,000	N	NMED		7.69E-05	
Selenium	7782-49-2	mg/kg	1.3			NS	NS	1,750	N	NMED		7.43E-04	
Silver	7440-22-4	mg/kg	0.05	U		NS	NS	1,770	N	NMED			
Sodium	7440-23-5	mg/kg	44			NS	NS	10,200,000	N	NMED		4.31E-06	
Thallium	7440-28-0	mg/kg	0.065	J		NS	NS	4	N	NMED		1.84E-02	
Vanadium	7440-62-2	mg/kg	25			NS	NS	614	N	NMED		4.07E-02	
Zinc	7440-66-6	mg/kg	25			NS	NS	106,000	N	NMED		2.36E-04	
									Cumulative Risk/Hazard		**0E+00**	**1.8**	
									Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	1.3
Endocrine	0.15
All Others	0.32

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-P32-1
GRID P32 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U		60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U		313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		1,300	N	570	N	RSL		

TABLE D1-P32-1
GRID P32 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	12,000			NS	NS	78,000	N	NMED		1.54E-01
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	31.3	N	NMED		
Arsenic	7440-38-2	mg/kg	1.2			7.07	N	13	N	NMED	1.70E-06	9.23E-02
Barium	7440-39-3	mg/kg	120			NS	NS	15,600	N	NMED		7.69E-03
Beryllium	7440-41-7	mg/kg	0.34	J		64,400	N	156	N	NMED	5.28E-11	2.18E-03
Cadmium	7440-43-9	mg/kg	0.4			85,900	N	70.5	N	NMED	4.66E-11	5.67E-03
Calcium	7440-70-2	mg/kg	3,200			NS	NS	13,000,000	N	NMED		2.46E-04
Chromium (Total) (3)	7440-47-3	mg/kg	9.4			96.6	N	45,200	N	NMED	9.73E-07	2.08E-04
Cobalt	7440-48-4	mg/kg	4.2			17,200	N	23.4	N	NMED	2.44E-09	1.79E-01
Copper	7440-50-8	mg/kg	82	J		NS	NS	3,130	N	NMED		2.62E-02
Iron	7439-89-6	mg/kg	5,900			NS	NS	54,800	N	NMED		1.08E-01
Lead	7439-92-1	mg/kg	9.8			NS	NS	200	N	IEUBK		
Magnesium	7439-95-4	mg/kg	5,300			NS	NS	15,600,000	N	NMED		3.40E-04
Manganese	7439-96-5	mg/kg	260			NS	NS	10,500	N	NMED		2.48E-02
Mercury (Elemental)	7439-97-6	mg/kg	0.024	J		NS	NS	23.8	N	NMED		1.01E-03
Nickel	7440-02-0	mg/kg	7.8			595,000	N	1,560	N	NMED	1.31E-10	5.00E-03
Potassium	7440-09-7	mg/kg	820			NS	NS	15,600,000	N	NMED		5.26E-05
Selenium	7782-49-2	mg/kg	0.87			NS	NS	391	N	NMED		2.23E-03
Silver	7440-22-4	mg/kg	0.048	J		NS	NS	391	N	NMED		1.23E-04
Sodium	7440-23-5	mg/kg	120			NS	NS	7,820,000	N	NMED		1.53E-05
Thallium	7440-28-0	mg/kg	0.14			NS	NS	0.782	N	NMED		1.79E-01
Vanadium	7440-62-2	mg/kg	11			NS	NS	394	N	NMED		2.79E-02
Zinc	7440-66-6	mg/kg	26			NS	NS	23,500	N	NMED		1.11E-03
									Cumulative Risk/Hazard		**3E-06**	**0.82**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Residential Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Residential Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-P32-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID P32
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		5,300	N	7,400	N	RSL		

TABLE D1-P32-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID P32
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	12,000			NS	NS	1,290,000	N	NMED		9.30E-03
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	519	N	NMED		
Arsenic	7440-38-2	mg/kg	1.2			36	N	208	N	NMED	3.34E-07	5.77E-03
Barium	7440-39-3	mg/kg	120			NS	NS	255,000	N	NMED		4.71E-04
Beryllium	7440-41-7	mg/kg	0.34	J		313,000	N	2,580	N	NMED	1.09E-11	1.32E-04
Cadmium	7440-43-9	mg/kg	0.4			417,000	N	1,110	N	NMED	9.59E-12	3.60E-04
Calcium	7440-70-2	mg/kg	3,200			NS	NS	32,400,000	N	NMED		9.88E-05
Chromium (Total) (2)	7440-47-3	mg/kg	9.4			505	N	314,000	N	NMED	1.86E-07	2.99E-05
Cobalt	7440-48-4	mg/kg	4.2			83,400	N	388	N	NMED	5.04E-10	1.08E-02
Copper	7440-50-8	mg/kg	82	J		NS	NS	51,900	N	NMED		1.58E-03
Iron	7439-89-6	mg/kg	5,900			NS	NS	908,000	N	NMED		6.50E-03
Lead	7439-92-1	mg/kg	9.8			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	5,300			NS	NS	5,680,000	N	NMED		9.33E-04
Manganese	7439-96-5	mg/kg	260			NS	NS	160,000	N	NMED		1.63E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.024	J		NS	NS	112	N	NMED		2.14E-04
Nickel	7440-02-0	mg/kg	7.8			2,890,000	N	25,700	N	NMED	2.70E-11	3.04E-04
Potassium	7440-09-7	mg/kg	820			NS	NS	76,200,000	N	NMED		1.08E-05
Selenium	7782-49-2	mg/kg	0.87			NS	NS	6,490	N	NMED		1.34E-04
Silver	7440-22-4	mg/kg	0.048	J		NS	NS	6,490	N	NMED		7.40E-06
Sodium	7440-23-5	mg/kg	120			NS	NS	37,300,000	N	NMED		3.22E-06
Thallium	7440-28-0	mg/kg	0.14			NS	NS	13	N	NMED		1.08E-02
Vanadium	7440-62-2	mg/kg	11			NS	NS	6,530	N	NMED		1.68E-03
Zinc	7440-66-6	mg/kg	26			NS	NS	38,900	N	NMED		6.68E-04
									Cumulative Risk/Hazard		**5E-07**	**0.05**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Industrial Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-P32-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID P32
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[2,3]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		626	N	2,420	N	NMEDC			

TABLE D1-P32-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID P32
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[2,3]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	12,000			NS	NS	41,400	N	NMED		2.90E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	142	N	NMED			
Arsenic	7440-38-2	mg/kg	1.2			216	N	41	N	NMED	5.56E-08	2.91E-02	
Barium	7440-39-3	mg/kg	120			NS	NS	4,390	N	NMED		2.73E-02	
Beryllium	7440-41-7	mg/kg	0.34	J		2,710	N	148	N	NMED	1.25E-09	2.30E-03	
Cadmium	7440-43-9	mg/kg	0.4			3,610	N	72	N	NMED	1.11E-09	5.55E-03	
Calcium	7440-70-2	mg/kg	3,200			NS	NS	8,850,000	N	NMED			
Chromium (Total) (3)	7440-47-3	mg/kg	9.4			468	N	134	N	NMED	2.01E-07	7.01E-02	
Cobalt	7440-48-4	mg/kg	4.2			722	N	37	N	NMED	5.82E-08	1.14E-01	Endocrine
Copper	7440-50-8	mg/kg	82	J		NS	NS	14,200	N	NMED		5.77E-03	
Iron	7439-89-6	mg/kg	5,900			NS	NS	248,000	N	NMED		2.38E-02	
Lead	7439-92-1	mg/kg	9.8			NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	5,300			NS	NS	1,550,000	N	NMED		3.42E-03	
Manganese	7439-96-5	mg/kg	260			NS	NS	464	N	NMED		5.60E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.024	J		NS	NS	21	N	NMED		1.16E-03	
Nickel	7440-02-0	mg/kg	7.8			20,500	N	753	N	NMED	3.80E-09	1.04E-02	
Potassium	7440-09-7	mg/kg	820			NS	NS	20,800,000	N	NMED			
Selenium	7782-49-2	mg/kg	0.87			NS	NS	1,750	N	NMED		4.97E-04	
Silver	7440-22-4	mg/kg	0.048	J		NS	NS	1,770	N	NMED		2.71E-05	
Sodium	7440-23-5	mg/kg	120			NS	NS	10,200,000	N	NMED		1.18E-05	
Thallium	7440-28-0	mg/kg	0.14			NS	NS	4	N	NMED		3.95E-02	
Vanadium	7440-62-2	mg/kg	11			NS	NS	614	N	NMED		1.79E-02	
Zinc	7440-66-6	mg/kg	26			NS	NS	106,000	N	NMED		2.45E-04	
									Cumulative Risk/Hazard		**3E-07**	**1.2**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	0.9
Endocrine	0.11
All Others	0.24

TABLE D1-P33-1
GRID P33 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U		60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U		313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		1,300	N	570	N	RSL		

TABLE D1-P33-1
GRID P33 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	15,000			NS	NS	78,000	N	NMED		1.92E-01
Antimony	7440-36-0	mg/kg	0.12	J		NS	NS	31.3	N	NMED		3.83E-03
Arsenic	7440-38-2	mg/kg	1.1	J		7.07	N	13	N	NMED	1.56E-06	8.46E-02
Barium	7440-39-3	mg/kg	120			NS	NS	15,600	N	NMED		7.69E-03
Beryllium	7440-41-7	mg/kg	0.38	J		64,400	N	156	N	NMED	5.90E-11	2.44E-03
Cadmium	7440-43-9	mg/kg	0.44	J		85,900	N	70.5	N	NMED	5.12E-11	6.24E-03
Calcium	7440-70-2	mg/kg	2,600	J		NS	NS	13,000,000	N	NMED		2.00E-04
Chromium (Total) (2)	7440-47-3	mg/kg	11	J		96.6	N	45,200	N	NMED	1.14E-06	2.43E-04
Cobalt	7440-48-4	mg/kg	5.1	J		17,200	N	23.4	N	NMED	2.97E-09	2.18E-01
Copper	7440-50-8	mg/kg	110	J		NS	NS	3,130	N	NMED		3.51E-02
Iron	7439-89-6	mg/kg	6,600			NS	NS	54,800	N	NMED		1.20E-01
Lead	7439-92-1	mg/kg	9.9	J		NS	NS	200	N	IEUBK		
Magnesium	7439-95-4	mg/kg	7,000	J		NS	NS	15,600,000	N	NMED		4.49E-04
Manganese	7439-96-5	mg/kg	270			NS	NS	10,500	N	NMED		2.57E-02
Mercury (Elemental)	7439-97-6	mg/kg	0.022	J		NS	NS	23.8	N	NMED		9.24E-04
Nickel	7440-02-0	mg/kg	9	J		595,000	N	1,560	N	NMED	1.51E-10	5.77E-03
Potassium	7440-09-7	mg/kg	770	J		NS	NS	15,600,000	N	NMED		4.94E-05
Selenium	7782-49-2	mg/kg	1	J		NS	NS	391	N	NMED		2.56E-03
Silver	7440-22-4	mg/kg	0.075	J		NS	NS	391	N	NMED		1.92E-04
Sodium	7440-23-5	mg/kg	78			NS	NS	7,820,000	N	NMED		9.97E-06
Thallium	7440-28-0	mg/kg	0.062	J		NS	NS	0.782	N	NMED		7.93E-02
Vanadium	7440-62-2	mg/kg	13	J		NS	NS	394	N	NMED		3.30E-02
Zinc	7440-66-6	mg/kg	26	J		NS	NS	23,500	N	NMED		1.11E-03
									Cumulative Risk/Hazard		**3E-06**	**0.8**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Residential Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Residential Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-P33-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID P33
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		5,300	N	7,400	N	RSL		

TABLE D1-P33-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID P33
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	15,000			NS	NS	1,290,000	N	NMED		1.16E-02
Antimony	7440-36-0	mg/kg	0.12	J		NS	NS	519	N	NMED		2.31E-04
Arsenic	7440-38-2	mg/kg	1.1	J		36	N	208	N	NMED	3.06E-07	5.29E-03
Barium	7440-39-3	mg/kg	120			NS	NS	255,000	N	NMED		4.71E-04
Beryllium	7440-41-7	mg/kg	0.38	J		313,000	N	2,580	N	NMED	1.21E-11	1.47E-04
Cadmium	7440-43-9	mg/kg	0.44	J		417,000	N	1,110	N	NMED	1.06E-11	3.96E-04
Calcium	7440-70-2	mg/kg	2,600	J		NS	NS	32,400,000	N	NMED		8.02E-05
Chromium (Total) (2)	7440-47-3	mg/kg	11	J		505	N	314,000	N	NMED	2.18E-07	3.50E-05
Cobalt	7440-48-4	mg/kg	5.1	J		83,400	N	388	N	NMED	6.12E-10	1.31E-02
Copper	7440-50-8	mg/kg	110	J		NS	NS	51,900	N	NMED		2.12E-03
Iron	7439-89-6	mg/kg	6,600			NS	NS	908,000	N	NMED		7.27E-03
Lead	7439-92-1	mg/kg	9.9	J		NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	7,000	J		NS	NS	5,680,000	N	NMED		1.23E-03
Manganese	7439-96-5	mg/kg	270			NS	NS	160,000	N	NMED		1.69E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.022	J		NS	NS	112	N	NMED		1.96E-04
Nickel	7440-02-0	mg/kg	9	J		2,890,000	N	25,700	N	NMED	3.11E-11	3.50E-04
Potassium	7440-09-7	mg/kg	770	J		NS	NS	76,200,000	N	NMED		1.01E-05
Selenium	7782-49-2	mg/kg	1	J		NS	NS	6,490	N	NMED		1.54E-04
Silver	7440-22-4	mg/kg	0.075	J		NS	NS	6,490	N	NMED		1.16E-05
Sodium	7440-23-5	mg/kg	78			NS	NS	37,300,000	N	NMED		2.09E-06
Thallium	7440-28-0	mg/kg	0.062	J		NS	NS	13	N	NMED		4.77E-03
Vanadium	7440-62-2	mg/kg	13	J		NS	NS	6,530	N	NMED		1.99E-03
Zinc	7440-66-6	mg/kg	26	J		NS	NS	38,900	N	NMED		6.68E-04
									Cumulative Risk/Hazard		**5E-07**	**0.05**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Industrial Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-P33-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID P33
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		626	N	2,420	N	NMEDC			

TABLE D1-P33-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID P33
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	15,000			NS	NS	41,400	N	NMED		3.62E-01	Nervous
Antimony	7440-36-0	mg/kg	0.12	J		NS	NS	142	N	NMED		8.45E-04	
Arsenic	7440-38-2	mg/kg	1.1	J		216	N	41	N	NMED	5.09E-08	2.67E-02	
Barium	7440-39-3	mg/kg	120			NS	NS	4,390	N	NMED		2.73E-02	
Beryllium	7440-41-7	mg/kg	0.38	J		2,710	N	148	N	NMED	1.40E-09	2.57E-03	
Cadmium	7440-43-9	mg/kg	0.44	J		3,610	N	72	N	NMED	1.22E-09	6.10E-03	
Calcium	7440-70-2	mg/kg	2,600	J		NS	NS	8,850,000	N	NMED		2.94E-04	
Chromium (Total) (3)	7440-47-3	mg/kg	11	J		468	N	134	N	NMED	2.35E-07	8.21E-02	
Cobalt	7440-48-4	mg/kg	5.1	J		722	N	37	N	NMED	7.06E-08	1.39E-01	Endocrine
Copper	7440-50-8	mg/kg	110	J		NS	NS	14,200	N	NMED		7.75E-03	
Iron	7439-89-6	mg/kg	6,600			NS	NS	248,000	N	NMED		2.66E-02	
Lead	7439-92-1	mg/kg	9.9	J		NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	7,000	J		NS	NS	1,550,000	N	NMED		4.52E-03	
Manganese	7439-96-5	mg/kg	270			NS	NS	464	N	NMED		5.82E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.022	J		NS	NS	21	N	NMED		1.06E-03	
Nickel	7440-02-0	mg/kg	9	J		20,500	N	753	N	NMED	4.39E-09	1.20E-02	
Potassium	7440-09-7	mg/kg	770	J		NS	NS	20,800,000	N	NMED		3.70E-05	
Selenium	7782-49-2	mg/kg	1	J		NS	NS	1,750	N	NMED		5.71E-04	
Silver	7440-22-4	mg/kg	0.075	J		NS	NS	1,770	N	NMED		4.24E-05	
Sodium	7440-23-5	mg/kg	78			NS	NS	10,200,000	N	NMED		7.65E-06	
Thallium	7440-28-0	mg/kg	0.062	J		NS	NS	4	N	NMED		1.75E-02	
Vanadium	7440-62-2	mg/kg	13	J		NS	NS	614	N	NMED		2.12E-02	
Zinc	7440-66-6	mg/kg	26	J		NS	NS	106,000	N	NMED		2.45E-04	
									Cumulative Risk/Hazard		**4E-07**	**1.3**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	0.9
Endocrine	0.14
All Others	0.24

TABLE D1-Q26-1
GRID Q26 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	2,200	N	RSL			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	6.3	N	RSL			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		211	N	36	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		3.56	N	18.5	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	7.7	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		31.6	N	70.4	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	6.16	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	7.64	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		333	N	247	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		83.1	N	301	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	156	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		60.4	N	131	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		313	N	6.16	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	3,850	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		1,300	N	570	N	RSL			

TABLE D1-Q26-1
GRID Q26 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	18,000			NS	NS	78,000	N	NMED		2.31E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	31.3	N	NMED			
Arsenic	7440-38-2	mg/kg	1.1			7.07	N	13	N	NMED	1.56E-06	8.46E-02	
Barium	7440-39-3	mg/kg	450			NS	NS	15,600	N	NMED		2.88E-02	
Beryllium	7440-41-7	mg/kg	1.1			64,400	N	156	N	NMED	1.71E-10	7.05E-03	
Cadmium	7440-43-9	mg/kg	0.65			85,900	N	70.5	N	NMED	7.57E-11	9.22E-03	
Calcium	7440-70-2	mg/kg	26,000			NS	NS	13,000,000	N	NMED		2.00E-03	
Chromium (Total) (3)	7440-47-3	mg/kg	13			96.6	N	45,200	N	NMED	1.35E-06	2.88E-04	
Cobalt	7440-48-4	mg/kg	5.2			17,200	N	23.4	N	NMED	3.02E-09	2.22E-01	Endocrine
Copper	7440-50-8	mg/kg	120			NS	NS	3,130	N	NMED		3.83E-02	
Iron	7439-89-6	mg/kg	12,000			NS	NS	54,800	N	NMED		2.19E-01	GI
Lead	7439-92-1	mg/kg	14			NS	NS	200	N	IEUBK			
Magnesium	7439-95-4	mg/kg	5,300			NS	NS	15,600,000	N	NMED		3.40E-04	
Manganese	7439-96-5	mg/kg	490			NS	NS	10,500	N	NMED		4.67E-02	
Mercury (Elemental)	7439-97-6	mg/kg	0.023	J		NS	NS	23.8	N	NMED		9.66E-04	
Nickel	7440-02-0	mg/kg	14			595,000	N	1,560	N	NMED	2.35E-10	8.97E-03	
Potassium	7440-09-7	mg/kg	2,000			NS	NS	15,600,000	N	NMED		1.28E-04	
Selenium	7782-49-2	mg/kg	1.6			NS	NS	391	N	NMED		4.09E-03	
Silver	7440-22-4	mg/kg	0.031	J		NS	NS	391	N	NMED		7.93E-05	
Sodium	7440-23-5	mg/kg	52			NS	NS	7,820,000	N	NMED		6.65E-06	
Thallium	7440-28-0	mg/kg	0.059	J		NS	NS	0.782	N	NMED		7.54E-02	
Vanadium	7440-62-2	mg/kg	13			NS	NS	394	N	NMED		3.30E-02	
Zinc	7440-66-6	mg/kg	25			NS	NS	23,500	N	NMED		1.06E-03	
									Cumulative Risk/Hazard		**3E-06**	**1.0**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Residential Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Residential Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	0.2
Endocrine	0.22
GI	0.22
All Others	0.34

TABLE D1-Q26-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID Q26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		5,300	N	7,400	N	RSL		

TABLE D1-Q26-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID Q26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	18,000			NS	NS	1,290,000	N	NMED		1.40E-02
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	519	N	NMED		
Arsenic	7440-38-2	mg/kg	1.1			36	N	208	N	NMED	3.06E-07	5.29E-03
Barium	7440-39-3	mg/kg	450			NS	NS	255,000	N	NMED		1.76E-03
Beryllium	7440-41-7	mg/kg	1.1			313,000	N	2,580	N	NMED	3.51E-11	4.26E-04
Cadmium	7440-43-9	mg/kg	0.65			417,000	N	1,110	N	NMED	1.56E-11	5.86E-04
Calcium	7440-70-2	mg/kg	26,000			NS	NS	32,400,000	N	NMED		8.02E-04
Chromium (Total) (2)	7440-47-3	mg/kg	13			505	N	314,000	N	NMED	2.57E-07	4.14E-05
Cobalt	7440-48-4	mg/kg	5.2			83,400	N	388	N	NMED	6.24E-10	1.34E-02
Copper	7440-50-8	mg/kg	120			NS	NS	51,900	N	NMED		2.31E-03
Iron	7439-89-6	mg/kg	12,000			NS	NS	908,000	N	NMED		1.32E-02
Lead	7439-92-1	mg/kg	14			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	5,300			NS	NS	5,680,000	N	NMED		9.33E-04
Manganese	7439-96-5	mg/kg	490			NS	NS	160,000	N	NMED		3.06E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.023	J		NS	NS	112	N	NMED		2.05E-04
Nickel	7440-02-0	mg/kg	14			2,890,000	N	25,700	N	NMED	4.84E-11	5.45E-04
Potassium	7440-09-7	mg/kg	2,000			NS	NS	76,200,000	N	NMED		2.62E-05
Selenium	7782-49-2	mg/kg	1.6			NS	NS	6,490	N	NMED		2.47E-04
Silver	7440-22-4	mg/kg	0.031	J		NS	NS	6,490	N	NMED		4.78E-06
Sodium	7440-23-5	mg/kg	52			NS	NS	37,300,000	N	NMED		1.39E-06
Thallium	7440-28-0	mg/kg	0.059	J		NS	NS	13	N	NMED		4.54E-03
Vanadium	7440-62-2	mg/kg	13			NS	NS	6,530	N	NMED		1.99E-03
Zinc	7440-66-6	mg/kg	25			NS	NS	38,900	N	NMED		6.43E-04
									Cumulative Risk/Hazard		**6E-07**	**0.06**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Industrial Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-Q26-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID Q26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		626	N	2,420	N	NMEDC			

TABLE D1-Q26-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID Q26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	18,000			NS	NS	41,400	N	NMED		4.35E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	142	N	NMED			
Arsenic	7440-38-2	mg/kg	1.1			216	N	41	N	NMED	5.09E-08	2.67E-02	
Barium	7440-39-3	mg/kg	450			NS	NS	4,390	N	NMED		1.03E-01	Kidneys
Beryllium	7440-41-7	mg/kg	1.1			2,710	N	148	N	NMED	4.06E-09	7.43E-03	
Cadmium	7440-43-9	mg/kg	0.65			3,610	N	72	N	NMED	1.80E-09	9.02E-03	
Calcium	7440-70-2	mg/kg	26,000			NS	NS	8,850,000	N	NMED		2.94E-03	
Chromium (Total) (3)	7440-47-3	mg/kg	13			468	N	134	N	NMED	2.78E-07	9.70E-02	
Cobalt	7440-48-4	mg/kg	5.2			722	N	37	N	NMED	7.20E-08	1.42E-01	Endocrine
Copper	7440-50-8	mg/kg	120			NS	NS	14,200	N	NMED		8.45E-03	
Iron	7439-89-6	mg/kg	12,000			NS	NS	248,000	N	NMED		4.84E-02	
Lead	7439-92-1	mg/kg	14			NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	5,300			NS	NS	1,550,000	N	NMED		3.42E-03	
Manganese	7439-96-5	mg/kg	490			NS	NS	464	Y	NMED		1.06E+00	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.023	J		NS	NS	21	N	NMED		1.11E-03	
Nickel	7440-02-0	mg/kg	14			20,500	N	753	N	NMED	6.83E-09	1.86E-02	
Potassium	7440-09-7	mg/kg	2,000			NS	NS	20,800,000	N	NMED		9.62E-05	
Selenium	7782-49-2	mg/kg	1.6			NS	NS	1,750	N	NMED		9.14E-04	
Silver	7440-22-4	mg/kg	0.031	J		NS	NS	1,770	N	NMED		1.75E-05	
Sodium	7440-23-5	mg/kg	52			NS	NS	10,200,000	N	NMED		5.10E-06	
Thallium	7440-28-0	mg/kg	0.059	J		NS	NS	4	N	NMED		1.67E-02	
Vanadium	7440-62-2	mg/kg	13			NS	NS	614	N	NMED		2.12E-02	
Zinc	7440-66-6	mg/kg	25			NS	NS	106,000	N	NMED		2.36E-04	
									Cumulative Risk/Hazard		**4E-07**	**2.0**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent	NS = No Standard
CAS = Chemical Abstracts Service	RAG = Risk Assessment Guidance
HI = Hazard Index	SSL = soil screening level
J = Estimated	U = Nondetect
mg/kg = milligrams per kilogram	UJ = Estimated Nondetect
N = no	UTL = upper tolerance limit
NA = not applicable	Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	1.5
Endocrine	0.14
Kidneys	0.10
All Others	0.26

TABLE D1-Q29-1
GRID Q29 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		1,300	N	570	N	RSL		

TABLE D1-Q29-1
GRID Q29 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	12,000			NS	NS	78,000	N	NMED		1.54E-01
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	31.3	N	NMED		
Arsenic	7440-38-2	mg/kg	1.4			7.07	N	13	N	NMED	1.98E-06	1.08E-01
Barium	7440-39-3	mg/kg	140			NS	NS	15,600	N	NMED		8.97E-03
Beryllium	7440-41-7	mg/kg	0.46	J		64,400	N	156	N	NMED	7.14E-11	2.95E-03
Cadmium	7440-43-9	mg/kg	0.61	J		85,900	N	70.5	N	NMED	7.10E-11	8.65E-03
Calcium	7440-70-2	mg/kg	2,900			NS	NS	13,000,000	N	NMED		2.23E-04
Chromium (Total) (2)	7440-47-3	mg/kg	12			96.6	N	45,200	N	NMED	1.24E-06	2.65E-04
Cobalt	7440-48-4	mg/kg	4.6			17,200	N	23.4	N	NMED	2.67E-09	1.97E-01
Copper	7440-50-8	mg/kg	140	J		NS	NS	3,130	N	NMED		4.47E-02
Iron	7439-89-6	mg/kg	9,000			NS	NS	54,800	N	NMED		1.64E-01
Lead	7439-92-1	mg/kg	12			NS	NS	200	N	IEUBK		
Magnesium	7439-95-4	mg/kg	4,800			NS	NS	15,600,000	N	NMED		3.08E-04
Manganese	7439-96-5	mg/kg	340			NS	NS	10,500	N	NMED		3.24E-02
Mercury (Elemental)	7439-97-6	mg/kg	0.028	J		NS	NS	23.8	N	NMED		1.18E-03
Nickel	7440-02-0	mg/kg	8.5			595,000	N	1,560	N	NMED	1.43E-10	5.45E-03
Potassium	7440-09-7	mg/kg	870			NS	NS	15,600,000	N	NMED		5.58E-05
Selenium	7782-49-2	mg/kg	0.95			NS	NS	391	N	NMED		2.43E-03
Silver	7440-22-4	mg/kg	0.02	J		NS	NS	391	N	NMED		5.12E-05
Sodium	7440-23-5	mg/kg	61			NS	NS	7,820,000	N	NMED		7.80E-06
Thallium	7440-28-0	mg/kg	0.04	J		NS	NS	0.782	N	NMED		5.12E-02
Vanadium	7440-62-2	mg/kg	16			NS	NS	394	N	NMED		4.06E-02
Zinc	7440-66-6	mg/kg	28			NS	NS	23,500	N	NMED		1.19E-03
									Cumulative Risk/Hazard		**3E-06**	**0.8**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Residential Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Residential Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-Q29-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID Q29
FORT WINGATE DEPOT ACTIVIVTY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		5,300	N	7,400	N	RSL		

TABLE D1-Q29-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID Q29
FORT WINGATE DEPOT ACTIVIVTY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	12,000			NS	NS	1,290,000	N	NMED		9.30E-03
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	519	N	NMED		
Arsenic	7440-38-2	mg/kg	1.4			36	N	208	N	NMED	3.90E-07	6.73E-03
Barium	7440-39-3	mg/kg	140			NS	NS	255,000	N	NMED		5.49E-04
Beryllium	7440-41-7	mg/kg	0.46	J		313,000	N	2,580	N	NMED	1.47E-11	1.78E-04
Cadmium	7440-43-9	mg/kg	0.61	J		417,000	N	1,110	N	NMED	1.46E-11	5.50E-04
Calcium	7440-70-2	mg/kg	2,900			NS	NS	32,400,000	N	NMED		8.95E-05
Chromium (Total) (2)	7440-47-3	mg/kg	12			505	N	314,000	N	NMED	2.38E-07	3.82E-05
Cobalt	7440-48-4	mg/kg	4.6			83,400	N	388	N	NMED	5.52E-10	1.19E-02
Copper	7440-50-8	mg/kg	140	J		NS	NS	51,900	N	NMED		2.70E-03
Iron	7439-89-6	mg/kg	9,000			NS	NS	908,000	N	NMED		9.91E-03
Lead	7439-92-1	mg/kg	12			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	4,800			NS	NS	5,680,000	N	NMED		8.45E-04
Manganese	7439-96-5	mg/kg	340			NS	NS	160,000	N	NMED		2.13E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.028	J		NS	NS	112	N	NMED		2.50E-04
Nickel	7440-02-0	mg/kg	8.5			2,890,000	N	25,700	N	NMED	2.94E-11	3.31E-04
Potassium	7440-09-7	mg/kg	870			NS	NS	76,200,000	N	NMED		1.14E-05
Selenium	7782-49-2	mg/kg	0.95			NS	NS	6,490	N	NMED		1.46E-04
Silver	7440-22-4	mg/kg	0.02	J		NS	NS	6,490	N	NMED		3.08E-06
Sodium	7440-23-5	mg/kg	61			NS	NS	37,300,000	N	NMED		1.64E-06
Thallium	7440-28-0	mg/kg	0.04	J		NS	NS	13	N	NMED		3.08E-03
Vanadium	7440-62-2	mg/kg	16			NS	NS	6,530	N	NMED		2.45E-03
Zinc	7440-66-6	mg/kg	28			NS	NS	38,900	N	NMED		7.20E-04
									Cumulative Risk/Hazard		**6E-07**	**0.05**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Industrial Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-Q29-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID Q29
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		626	N	2,420	N	NMEDC			

TABLE D1-Q29-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID Q29
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	12,000			NS	NS	41,400	N	NMED		2.90E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	142	N	NMED			
Arsenic	7440-38-2	mg/kg	1.4			216	N	41	N	NMED	6.48E-08	3.40E-02	
Barium	7440-39-3	mg/kg	140			NS	NS	4,390	N	NMED		3.19E-02	
Beryllium	7440-41-7	mg/kg	0.46	J		2,710	N	148	N	NMED	1.70E-09	3.11E-03	
Cadmium	7440-43-9	mg/kg	0.61	J		3,610	N	72	N	NMED	1.69E-09	8.46E-03	
Calcium	7440-70-2	mg/kg	2,900			NS	NS	8,850,000	N	NMED		3.28E-04	
Chromium (Total) (3)	7440-47-3	mg/kg	12			468	N	134	N	NMED	2.56E-07	8.96E-02	
Cobalt	7440-48-4	mg/kg	4.6			722	N	37	N	NMED	6.37E-08	1.25E-01	Endocrine
Copper	7440-50-8	mg/kg	140	J		NS	NS	14,200	N	NMED		9.86E-03	
Iron	7439-89-6	mg/kg	9,000			NS	NS	248,000	N	NMED		3.63E-02	
Lead	7439-92-1	mg/kg	12			NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	4,800			NS	NS	1,550,000	N	NMED		3.10E-03	
Manganese	7439-96-5	mg/kg	340			NS	NS	464	N	NMED		7.33E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.028	J		NS	NS	21	N	NMED		1.35E-03	
Nickel	7440-02-0	mg/kg	8.5			20,500	N	753	N	NMED	4.15E-09	1.13E-02	
Potassium	7440-09-7	mg/kg	870			NS	NS	20,800,000	N	NMED		4.18E-05	
Selenium	7782-49-2	mg/kg	0.95			NS	NS	1,750	N	NMED		5.43E-04	
Silver	7440-22-4	mg/kg	0.02	J		NS	NS	1,770	N	NMED		1.13E-05	
Sodium	7440-23-5	mg/kg	61			NS	NS	10,200,000	N	NMED		5.98E-06	
Thallium	7440-28-0	mg/kg	0.04	J		NS	NS	4	N	NMED		1.13E-02	
Vanadium	7440-62-2	mg/kg	16			NS	NS	614	N	NMED		2.61E-02	
Zinc	7440-66-6	mg/kg	28			NS	NS	106,000	N	NMED		2.64E-04	
									Cumulative Risk/Hazard		**4E-07**	**1.4**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1]NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent	NS = No Standard
CAS = Chemical Abstracts Service	RAG = Risk Assessment Guidance
HI = Hazard Index	SSL = soil screening level
J = Estimated	U = Nondetect
mg/kg = milligrams per kilogram	UJ = Estimated Nondetect
N = no	UTL = upper tolerance limit
NA = not applicable	Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	1.0
Endocrine	0.13
All Others	0.27

TABLE D1-Q38-1
GRID Q38 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		1,300	N	570	N	RSL		

TABLE D1-Q38-1
GRID Q38 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	11,000			NS	NS	78,000	N	NMED		1.41E-01
Antimony	7440-36-0	mg/kg	0.095	J		NS	NS	31.3	N	NMED		3.04E-03
Arsenic	7440-38-2	mg/kg	1.9	J		7.07	N	13	N	NMED	2.69E-06	1.46E-01
Barium	7440-39-3	mg/kg	130	J		NS	NS	15,600	N	NMED		8.33E-03
Beryllium	7440-41-7	mg/kg	0.55	J		64,400	N	156	N	NMED	8.54E-11	3.53E-03
Cadmium	7440-43-9	mg/kg	0.22			85,900	N	70.5	N	NMED	2.56E-11	3.12E-03
Calcium	7440-70-2	mg/kg	2,700	J		NS	NS	13,000,000	N	NMED		2.08E-04
Chromium (Total) (2)	7440-47-3	mg/kg	9.7			96.6	N	45,200	N	NMED	1.00E-06	2.15E-04
Cobalt	7440-48-4	mg/kg	4.3			17,200	N	23.4	N	NMED	2.50E-09	1.84E-01
Copper	7440-50-8	mg/kg	40	J		NS	NS	3,130	N	NMED		1.28E-02
Iron	7439-89-6	mg/kg	9,100			NS	NS	54,800	N	NMED		1.66E-01
Lead	7439-92-1	mg/kg	8.4	J		NS	NS	200	N	IEUBK		
Magnesium	7439-95-4	mg/kg	3,000	J		NS	NS	15,600,000	N	NMED		1.92E-04
Manganese	7439-96-5	mg/kg	270	J		NS	NS	10,500	N	NMED		2.57E-02
Mercury (Elemental)	7439-97-6	mg/kg	0.021	J		NS	NS	23.8	N	NMED		8.82E-04
Nickel	7440-02-0	mg/kg	7.6			595,000	N	1,560	N	NMED	1.28E-10	4.87E-03
Potassium	7440-09-7	mg/kg	1,300	J		NS	NS	15,600,000	N	NMED		8.33E-05
Selenium	7782-49-2	mg/kg	0.85	J		NS	NS	391	N	NMED		2.17E-03
Silver	7440-22-4	mg/kg	0.042	J		NS	NS	391	N	NMED		1.07E-04
Sodium	7440-23-5	mg/kg	38			NS	NS	7,820,000	N	NMED		4.86E-06
Thallium	7440-28-0	mg/kg	0.086	J		NS	NS	0.782	N	NMED		1.10E-01
Vanadium	7440-62-2	mg/kg	17			NS	NS	394	N	NMED		4.31E-02
Zinc	7440-66-6	mg/kg	21			NS	NS	23,500	N	NMED		8.94E-04
									Cumulative Risk/Hazard		**4E-06**	**0.9**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Residential Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Residential Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-Q38-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID Q38
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		5,300	N	7,400	N	RSL		

TABLE D1-Q38-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID Q38
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	11,000			NS	NS	1,290,000	N	NMED		8.53E-03
Antimony	7440-36-0	mg/kg	0.095	J		NS	NS	519	N	NMED		1.83E-04
Arsenic	7440-38-2	mg/kg	1.9	J		36	N	208	N	NMED	5.29E-07	9.13E-03
Barium	7440-39-3	mg/kg	130	J		NS	NS	255,000	N	NMED		5.10E-04
Beryllium	7440-41-7	mg/kg	0.55	J		313,000	N	2,580	N	NMED	1.76E-11	2.13E-04
Cadmium	7440-43-9	mg/kg	0.22			417,000	N	1,110	N	NMED	5.28E-12	1.98E-04
Calcium	7440-70-2	mg/kg	2,700	J		NS	NS	32,400,000	N	NMED		8.33E-05
Chromium (Total) (2)	7440-47-3	mg/kg	9.7			505	N	314,000	N	NMED	1.92E-07	3.09E-05
Cobalt	7440-48-4	mg/kg	4.3			83,400	N	388	N	NMED	5.16E-10	1.11E-02
Copper	7440-50-8	mg/kg	40	J		NS	NS	51,900	N	NMED		7.71E-04
Iron	7439-89-6	mg/kg	9,100			NS	NS	908,000	N	NMED		1.00E-02
Lead	7439-92-1	mg/kg	8.4	J		NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	3,000	J		NS	NS	5,680,000	N	NMED		5.28E-04
Manganese	7439-96-5	mg/kg	270	J		NS	NS	160,000	N	NMED		1.69E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.021	J		NS	NS	112	N	NMED		1.88E-04
Nickel	7440-02-0	mg/kg	7.6			2,890,000	N	25,700	N	NMED	2.63E-11	2.96E-04
Potassium	7440-09-7	mg/kg	1,300	J		NS	NS	76,200,000	N	NMED		1.71E-05
Selenium	7782-49-2	mg/kg	0.85	J		NS	NS	6,490	N	NMED		1.31E-04
Silver	7440-22-4	mg/kg	0.042	J		NS	NS	6,490	N	NMED		6.47E-06
Sodium	7440-23-5	mg/kg	38			NS	NS	37,300,000	N	NMED		1.02E-06
Thallium	7440-28-0	mg/kg	0.086	J		NS	NS	13	N	NMED		6.62E-03
Vanadium	7440-62-2	mg/kg	17			NS	NS	6,530	N	NMED		2.60E-03
Zinc	7440-66-6	mg/kg	21			NS	NS	38,900	N	NMED		5.40E-04
									Cumulative Risk/Hazard		**7E-07**	**0.05**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Industrial Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-Q38-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID Q38
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		626	N	2,420	N	NMEDC			

TABLE D1-Q38-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID Q38
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	11,000			NS	NS	41,400	N	NMED		2.66E-01	Nervous
Antimony	7440-36-0	mg/kg	0.095	J		NS	NS	142	N	NMED		6.69E-04	
Arsenic	7440-38-2	mg/kg	1.9	J		216	N	41	N	NMED	8.80E-08	4.61E-02	
Barium	7440-39-3	mg/kg	130	J		NS	NS	4,390	N	NMED		2.96E-02	
Beryllium	7440-41-7	mg/kg	0.55	J		2,710	N	148	N	NMED	2.03E-09	3.72E-03	
Cadmium	7440-43-9	mg/kg	0.22			3,610	N	72	N	NMED	6.09E-10	3.05E-03	
Calcium	7440-70-2	mg/kg	2,700	J		NS	NS	8,850,000	N	NMED		3.05E-04	
Chromium (Total) (3)	7440-47-3	mg/kg	9.7			468	N	134	N	NMED	2.07E-07	7.24E-02	
Cobalt	7440-48-4	mg/kg	4.3			722	N	37	N	NMED	5.96E-08	1.17E-01	Endocrine
Copper	7440-50-8	mg/kg	40	J		NS	NS	14,200	N	NMED		2.82E-03	
Iron	7439-89-6	mg/kg	9,100			NS	NS	248,000	N	NMED		3.67E-02	
Lead	7439-92-1	mg/kg	8.4	J		NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	3,000	J		NS	NS	1,550,000	N	NMED		1.94E-03	
Manganese	7439-96-5	mg/kg	270	J		NS	NS	464	N	NMED		5.82E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.021	J		NS	NS	21	N	NMED		1.01E-03	
Nickel	7440-02-0	mg/kg	7.6			20,500	N	753	N	NMED	3.71E-09	1.01E-02	
Potassium	7440-09-7	mg/kg	1,300	J		NS	NS	20,800,000	N	NMED		6.25E-05	
Selenium	7782-49-2	mg/kg	0.85	J		NS	NS	1,750	N	NMED		4.86E-04	
Silver	7440-22-4	mg/kg	0.042	J		NS	NS	1,770	N	NMED		2.37E-05	
Sodium	7440-23-5	mg/kg	38			NS	NS	10,200,000	N	NMED		3.73E-06	
Thallium	7440-28-0	mg/kg	0.086	J		NS	NS	4	N	NMED		2.43E-02	
Vanadium	7440-62-2	mg/kg	17			NS	NS	614	N	NMED		2.77E-02	
Zinc	7440-66-6	mg/kg	21			NS	NS	106,000	N	NMED		1.98E-04	
									Cumulative Risk/Hazard		**4E-07**	**1.2**	
									Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	0.8
Endocrine	0.12
All Others	0.26

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-Q39-1
GRID Q39 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	2,200	N	RSL			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	6.3	N	RSL			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		211	N	36	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		3.56	N	18.5	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	7.7	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		31.6	N	70.4	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	6.16	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	7.64	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		333	N	247	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		83.1	N	301	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	156	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		60.4	N	131	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		313	N	6.16	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	3,850	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		1,300	N	570	N	RSL			

TABLE D1-Q39-1
GRID Q39 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	18,000			NS	NS	78,000	N	NMED		2.31E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	31.3	N	NMED			
Arsenic	7440-38-2	mg/kg	1.4			7.07	N	13	N	NMED	1.98E-06	1.08E-01	Heart/Endocrine
Barium	7440-39-3	mg/kg	210			NS	NS	15,600	N	NMED		1.35E-02	
Beryllium	7440-41-7	mg/kg	0.59	J		64,400	N	156	N	NMED	9.16E-11	3.78E-03	
Cadmium	7440-43-9	mg/kg	0.18			85,900	N	70.5	N	NMED	2.10E-11	2.55E-03	
Calcium	7440-70-2	mg/kg	3,300			NS	NS	13,000,000	N	NMED		2.54E-04	
Chromium (Total) (2)	7440-47-3	mg/kg	12			96.6	N	45,200	N	NMED	1.24E-06	2.65E-04	
Cobalt	7440-48-4	mg/kg	5.6			17,200	N	23.4	N	NMED	3.26E-09	2.39E-01	Endocrine
Copper	7440-50-8	mg/kg	27			NS	NS	3,130	N	NMED		8.63E-03	
Iron	7439-89-6	mg/kg	11,000			NS	NS	54,800	N	NMED		2.01E-01	GI
Lead	7439-92-1	mg/kg	9			NS	NS	200	N	IEUBK			
Magnesium	7439-95-4	mg/kg	5,800			NS	NS	15,600,000	N	NMED		3.72E-04	
Manganese	7439-96-5	mg/kg	410			NS	NS	10,500	N	NMED		3.90E-02	
Mercury (Elemental)	7439-97-6	mg/kg	0.019	J		NS	NS	23.8	N	NMED		7.98E-04	
Nickel	7440-02-0	mg/kg	9.6			595,000	N	1,560	N	NMED	1.61E-10	6.15E-03	
Potassium	7440-09-7	mg/kg	1,600			NS	NS	15,600,000	N	NMED		1.03E-04	
Selenium	7782-49-2	mg/kg	1.2			NS	NS	391	N	NMED		3.07E-03	
Silver	7440-22-4	mg/kg	0.043	J		NS	NS	391	N	NMED		1.10E-04	
Sodium	7440-23-5	mg/kg	52			NS	NS	7,820,000	N	NMED		6.65E-06	
Thallium	7440-28-0	mg/kg	0.069	J		NS	NS	0.782	N	NMED		8.82E-02	
Vanadium	7440-62-2	mg/kg	24			NS	NS	394	N	NMED		6.09E-02	
Zinc	7440-66-6	mg/kg	25			NS	NS	23,500	N	NMED		1.06E-03	
									Cumulative Risk/Hazard		**3E-06**	**1.0**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Residential Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Residential Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	0.2
Endocrine	0.35
GI	0.20
Heart	0.11
All Others	0.23

TABLE D1-Q39-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID Q39
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		5,300	N	7,400	N	RSL		

TABLE D1-Q39-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID Q39
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	18,000			NS	NS	1,290,000	N	NMED		1.40E-02
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	519	N	NMED		
Arsenic	7440-38-2	mg/kg	1.4			36	N	208	N	NMED	3.90E-07	6.73E-03
Barium	7440-39-3	mg/kg	210			NS	NS	255,000	N	NMED		8.24E-04
Beryllium	7440-41-7	mg/kg	0.59	J		313,000	N	2,580	N	NMED	1.88E-11	2.29E-04
Cadmium	7440-43-9	mg/kg	0.18			417,000	N	1,110	N	NMED	4.32E-12	1.62E-04
Calcium	7440-70-2	mg/kg	3,300			NS	NS	32,400,000	N	NMED		1.02E-04
Chromium (Total) (2)	7440-47-3	mg/kg	12			505	N	314,000	N	NMED	2.38E-07	3.82E-05
Cobalt	7440-48-4	mg/kg	5.6			83,400	N	388	N	NMED	6.71E-10	1.44E-02
Copper	7440-50-8	mg/kg	27			NS	NS	51,900	N	NMED		5.20E-04
Iron	7439-89-6	mg/kg	11,000			NS	NS	908,000	N	NMED		1.21E-02
Lead	7439-92-1	mg/kg	9			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	5,800			NS	NS	5,680,000	N	NMED		1.02E-03
Manganese	7439-96-5	mg/kg	410			NS	NS	160,000	N	NMED		2.56E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.019	J		NS	NS	112	N	NMED		1.70E-04
Nickel	7440-02-0	mg/kg	9.6			2,890,000	N	25,700	N	NMED	3.32E-11	3.74E-04
Potassium	7440-09-7	mg/kg	1,600			NS	NS	76,200,000	N	NMED		2.10E-05
Selenium	7782-49-2	mg/kg	1.2			NS	NS	6,490	N	NMED		1.85E-04
Silver	7440-22-4	mg/kg	0.043	J		NS	NS	6,490	N	NMED		6.63E-06
Sodium	7440-23-5	mg/kg	52			NS	NS	37,300,000	N	NMED		1.39E-06
Thallium	7440-28-0	mg/kg	0.069	J		NS	NS	13	N	NMED		5.31E-03
Vanadium	7440-62-2	mg/kg	24			NS	NS	6,530	N	NMED		3.68E-03
Zinc	7440-66-6	mg/kg	25			NS	NS	38,900	N	NMED		6.43E-04
									Cumulative Risk/Hazard		**6E-07**	**0.06**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Industrial Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-Q39-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID Q39
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		626	N	2,420	N	NMEDC			

TABLE D1-Q39-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID Q39
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	18,000			NS	NS	41,400	N	NMED		4.35E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	142	N	NMED			
Arsenic	7440-38-2	mg/kg	1.4			216	N	41	N	NMED	6.48E-08	3.40E-02	
Barium	7440-39-3	mg/kg	210			NS	NS	4,390	N	NMED		4.78E-02	
Beryllium	7440-41-7	mg/kg	0.59	J		2,710	N	148	N	NMED	2.18E-09	3.99E-03	
Cadmium	7440-43-9	mg/kg	0.18			3,610	N	72	N	NMED	4.99E-10	2.50E-03	
Calcium	7440-70-2	mg/kg	3,300			NS	NS	8,850,000	N	NMED			
Chromium (Total) (3)	7440-47-3	mg/kg	12			468	N	134	N	NMED	2.56E-07	8.96E-02	
Cobalt	7440-48-4	mg/kg	5.6			722	N	37	N	NMED	7.76E-08	1.53E-01	Endocrine
Copper	7440-50-8	mg/kg	27			NS	NS	14,200	N	NMED		1.90E-03	
Iron	7439-89-6	mg/kg	11,000			NS	NS	248,000	N	NMED		4.44E-02	
Lead	7439-92-1	mg/kg	9			NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	5,800			NS	NS	1,550,000	N	NMED		3.74E-03	
Manganese	7439-96-5	mg/kg	410			NS	NS	464	N	NMED		8.84E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.019	J		NS	NS	21	N	NMED		9.18E-04	
Nickel	7440-02-0	mg/kg	9.6			20,500	N	753	N	NMED	4.68E-09	1.27E-02	
Potassium	7440-09-7	mg/kg	1,600			NS	NS	20,800,000	N	NMED		7.69E-05	
Selenium	7782-49-2	mg/kg	1.2			NS	NS	1,750	N	NMED		6.86E-04	
Silver	7440-22-4	mg/kg	0.043	J		NS	NS	1,770	N	NMED		2.43E-05	
Sodium	7440-23-5	mg/kg	52			NS	NS	10,200,000	N	NMED		5.10E-06	
Thallium	7440-28-0	mg/kg	0.069	J		NS	NS	4	N	NMED		1.95E-02	
Vanadium	7440-62-2	mg/kg	24			NS	NS	614	N	NMED		3.91E-02	
Zinc	7440-66-6	mg/kg	25			NS	NS	106,000	N	NMED		2.36E-04	
									Cumulative Risk/Hazard		**4E-07**	**1.8**	
									Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	1.3
Endocrine	0.15
All Others	0.30

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-R24-1
GRID R24 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U		60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U		313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		1,300	N	570	N	RSL		

TABLE D1-R24-1
GRID R24 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	17,000			NS	NS	78,000	N	NMED		2.18E-01
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	31.3	N	NMED		
Arsenic	7440-38-2	mg/kg	0.94			7.07	N	13	N	NMED	1.33E-06	7.23E-02
Barium	7440-39-3	mg/kg	280			NS	NS	15,600	N	NMED		1.79E-02
Beryllium	7440-41-7	mg/kg	0.78	J		64,400	N	156	N	NMED	1.21E-10	5.00E-03
Cadmium	7440-43-9	mg/kg	0.47			85,900	N	70.5	N	NMED	5.47E-11	6.67E-03
Calcium	7440-70-2	mg/kg	34,000			NS	NS	13,000,000	N	NMED		2.62E-03
Chromium (Total) (2)	7440-47-3	mg/kg	11			96.6	N	45,200	N	NMED	1.14E-06	2.43E-04
Cobalt	7440-48-4	mg/kg	4.5			17,200	N	23.4	N	NMED	2.62E-09	1.92E-01
Copper	7440-50-8	mg/kg	93			NS	NS	3,130	N	NMED		2.97E-02
Iron	7439-89-6	mg/kg	7,300			NS	NS	54,800	N	NMED		1.33E-01
Lead	7439-92-1	mg/kg	9.6			NS	NS	200	N	IEUBK		
Magnesium	7439-95-4	mg/kg	5,300			NS	NS	15,600,000	N	NMED		3.40E-04
Manganese	7439-96-5	mg/kg	600			NS	NS	10,500	N	NMED		5.71E-02
Mercury (Elemental)	7439-97-6	mg/kg	0.027	J		NS	NS	23.8	N	NMED		1.13E-03
Nickel	7440-02-0	mg/kg	11			595,000	N	1,560	N	NMED	1.85E-10	7.05E-03
Potassium	7440-09-7	mg/kg	1,600			NS	NS	15,600,000	N	NMED		1.03E-04
Selenium	7782-49-2	mg/kg	1.5			NS	NS	391	N	NMED		3.84E-03
Silver	7440-22-4	mg/kg	0.08	J		NS	NS	391	N	NMED		2.05E-04
Sodium	7440-23-5	mg/kg	67			NS	NS	7,820,000	N	NMED		8.57E-06
Thallium	7440-28-0	mg/kg	0.065	J		NS	NS	0.782	N	NMED		8.31E-02
Vanadium	7440-62-2	mg/kg	11			NS	NS	394	N	NMED		2.79E-02
Zinc	7440-66-6	mg/kg	19			NS	NS	23,500	N	NMED		8.09E-04
									Cumulative Risk/Hazard		**2E-06**	**0.86**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Residential Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Residential Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-R24-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID R24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		5,300	N	7,400	N	RSL		

TABLE D1-R24-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID R24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	17,000			NS	NS	1,290,000	N	NMED		1.32E-02
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	519	N	NMED		
Arsenic	7440-38-2	mg/kg	0.94			36	N	208	N	NMED	2.62E-07	4.52E-03
Barium	7440-39-3	mg/kg	280			NS	NS	255,000	N	NMED		1.10E-03
Beryllium	7440-41-7	mg/kg	0.78	J		313,000	N	2,580	N	NMED	2.49E-11	3.02E-04
Cadmium	7440-43-9	mg/kg	0.47			417,000	N	1,110	N	NMED	1.13E-11	4.23E-04
Calcium	7440-70-2	mg/kg	34,000			NS	NS	32,400,000	N	NMED		1.05E-03
Chromium (Total) (2)	7440-47-3	mg/kg	11			505	N	314,000	N	NMED	2.18E-07	3.50E-05
Cobalt	7440-48-4	mg/kg	4.5			83,400	N	388	N	NMED	5.40E-10	1.16E-02
Copper	7440-50-8	mg/kg	93			NS	NS	51,900	N	NMED		1.79E-03
Iron	7439-89-6	mg/kg	7,300			NS	NS	908,000	N	NMED		8.04E-03
Lead	7439-92-1	mg/kg	9.6			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	5,300			NS	NS	5,680,000	N	NMED		9.33E-04
Manganese	7439-96-5	mg/kg	600			NS	NS	160,000	N	NMED		3.75E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.027	J		NS	NS	112	N	NMED		2.41E-04
Nickel	7440-02-0	mg/kg	11			2,890,000	N	25,700	N	NMED	3.81E-11	4.28E-04
Potassium	7440-09-7	mg/kg	1,600			NS	NS	76,200,000	N	NMED		2.10E-05
Selenium	7782-49-2	mg/kg	1.5			NS	NS	6,490	N	NMED		2.31E-04
Silver	7440-22-4	mg/kg	0.08	J		NS	NS	6,490	N	NMED		1.23E-05
Sodium	7440-23-5	mg/kg	67			NS	NS	37,300,000	N	NMED		1.80E-06
Thallium	7440-28-0	mg/kg	0.065	J		NS	NS	13	N	NMED		5.00E-03
Vanadium	7440-62-2	mg/kg	11			NS	NS	6,530	N	NMED		1.68E-03
Zinc	7440-66-6	mg/kg	19			NS	NS	38,900	N	NMED		4.88E-04
									Cumulative Risk/Hazard		**5E-07**	**0.05**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Industrial Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-R24-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID R24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		626	N	2,420	N	NMEDC			

TABLE D1-R24-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID R24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	17,000			NS	NS	41,400	N	NMED		4.11E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	142	N	NMED			
Arsenic	7440-38-2	mg/kg	0.94			216	N	41	N	NMED	4.35E-08	2.28E-02	
Barium	7440-39-3	mg/kg	280			NS	NS	4,390	N	NMED		6.38E-02	
Beryllium	7440-41-7	mg/kg	0.78	J		2,710	N	148	N	NMED	2.88E-09	5.27E-03	
Cadmium	7440-43-9	mg/kg	0.47			3,610	N	72	N	NMED	1.30E-09	6.52E-03	
Calcium	7440-70-2	mg/kg	34,000			NS	NS	8,850,000	N	NMED		3.84E-03	
Chromium (Total) (3)	7440-47-3	mg/kg	11			468	N	134	N	NMED	2.35E-07	8.21E-02	
Cobalt	7440-48-4	mg/kg	4.5			722	N	37	N	NMED	6.23E-08	1.23E-01	Endocrine
Copper	7440-50-8	mg/kg	93			NS	NS	14,200	N	NMED		6.55E-03	
Iron	7439-89-6	mg/kg	7,300			NS	NS	248,000	N	NMED		2.94E-02	
Lead	7439-92-1	mg/kg	9.6			NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	5,300			NS	NS	1,550,000	N	NMED		3.42E-03	
Manganese	7439-96-5	mg/kg	600			NS	NS	464	Y	NMED		1.29E+00	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.027	J		NS	NS	21	N	NMED		1.30E-03	
Nickel	7440-02-0	mg/kg	11			20,500	N	753	N	NMED	5.37E-09	1.46E-02	
Potassium	7440-09-7	mg/kg	1,600			NS	NS	20,800,000	N	NMED		7.69E-05	
Selenium	7782-49-2	mg/kg	1.5			NS	NS	1,750	N	NMED		8.57E-04	
Silver	7440-22-4	mg/kg	0.08	J		NS	NS	1,770	N	NMED		4.52E-05	
Sodium	7440-23-5	mg/kg	67			NS	NS	10,200,000	N	NMED		6.57E-06	
Thallium	7440-28-0	mg/kg	0.065	J		NS	NS	4	N	NMED		1.84E-02	
Vanadium	7440-62-2	mg/kg	11			NS	NS	614	N	NMED		1.79E-02	
Zinc	7440-66-6	mg/kg	19			NS	NS	106,000	N	NMED		1.79E-04	
									Cumulative Risk/Hazard		**4E-07**	**2.1**	
									Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	1.7
Endocrine	0.12
All Others	0.28

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-R32-1
GRID R32 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U		60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U		313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		1,300	N	570	N	RSL		

TABLE D1-R32-1
GRID R32 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	13,000			NS	NS	78,000	N	NMED		1.67E-01
Antimony	7440-36-0	mg/kg	0.08	J		NS	NS	31.3	N	NMED		2.56E-03
Arsenic	7440-38-2	mg/kg	1.3			7.07	N	13	N	NMED	1.84E-06	1.00E-01
Barium	7440-39-3	mg/kg	170			NS	NS	15,600	N	NMED		1.09E-02
Beryllium	7440-41-7	mg/kg	0.5	J		64,400	N	156	N	NMED	7.76E-11	3.21E-03
Cadmium	7440-43-9	mg/kg	0.35			85,900	N	70.5	N	NMED	4.07E-11	4.96E-03
Calcium	7440-70-2	mg/kg	2,600			NS	NS	13,000,000	N	NMED		2.00E-04
Chromium (Total) (2)	7440-47-3	mg/kg	11			96.6	N	45,200	N	NMED	1.14E-06	2.43E-04
Cobalt	7440-48-4	mg/kg	4.9			17,200	N	23.4	N	NMED	2.85E-09	2.09E-01
Copper	7440-50-8	mg/kg	68	J		NS	NS	3,130	N	NMED		2.17E-02
Iron	7439-89-6	mg/kg	8,600			NS	NS	54,800	N	NMED		1.57E-01
Lead	7439-92-1	mg/kg	10			NS	NS	200	N	IEUBK		
Magnesium	7439-95-4	mg/kg	4,900			NS	NS	15,600,000	N	NMED		3.14E-04
Manganese	7439-96-5	mg/kg	440			NS	NS	10,500	N	NMED		4.19E-02
Mercury (Elemental)	7439-97-6	mg/kg	0.025	J		NS	NS	23.8	N	NMED		1.05E-03
Nickel	7440-02-0	mg/kg	8.7			595,000	N	1,560	N	NMED	1.46E-10	5.58E-03
Potassium	7440-09-7	mg/kg	1,100			NS	NS	15,600,000	N	NMED		7.05E-05
Selenium	7782-49-2	mg/kg	1.2			NS	NS	391	N	NMED		3.07E-03
Silver	7440-22-4	mg/kg	0.037	J		NS	NS	391	N	NMED		9.46E-05
Sodium	7440-23-5	mg/kg	51			NS	NS	7,820,000	N	NMED		6.52E-06
Thallium	7440-28-0	mg/kg	0.15			NS	NS	0.782	N	NMED		1.92E-01
Vanadium	7440-62-2	mg/kg	15			NS	NS	394	N	NMED		3.81E-02
Zinc	7440-66-6	mg/kg	24			NS	NS	23,500	N	NMED		1.02E-03
									Cumulative Risk/Hazard		**3E-06**	**0.96**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Residential Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Residential Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-R32-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID R32
FORT WINGTE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		5,300	N	7,400	N	RSL		

TABLE D1-R32-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID R32
FORT WINGTE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	13,000			NS	NS	1,290,000	N	NMED		1.01E-02
Antimony	7440-36-0	mg/kg	0.08	J		NS	NS	519	N	NMED		1.54E-04
Arsenic	7440-38-2	mg/kg	1.3			36	N	208	N	NMED	3.62E-07	6.25E-03
Barium	7440-39-3	mg/kg	170			NS	NS	255,000	N	NMED		6.67E-04
Beryllium	7440-41-7	mg/kg	0.5	J		313,000	N	2,580	N	NMED	1.60E-11	1.94E-04
Cadmium	7440-43-9	mg/kg	0.35			417,000	N	1,110	N	NMED	8.39E-12	3.15E-04
Calcium	7440-70-2	mg/kg	2,600			NS	NS	32,400,000	N	NMED		8.02E-05
Chromium (Total) (2)	7440-47-3	mg/kg	11			505	N	314,000	N	NMED	2.18E-07	3.50E-05
Cobalt	7440-48-4	mg/kg	4.9			83,400	N	388	N	NMED	5.88E-10	1.26E-02
Copper	7440-50-8	mg/kg	68	J		NS	NS	51,900	N	NMED		1.31E-03
Iron	7439-89-6	mg/kg	8,600			NS	NS	908,000	N	NMED		9.47E-03
Lead	7439-92-1	mg/kg	10			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	4,900			NS	NS	5,680,000	N	NMED		8.63E-04
Manganese	7439-96-5	mg/kg	440			NS	NS	160,000	N	NMED		2.75E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.025	J		NS	NS	112	N	NMED		2.23E-04
Nickel	7440-02-0	mg/kg	8.7			2,890,000	N	25,700	N	NMED	3.01E-11	3.39E-04
Potassium	7440-09-7	mg/kg	1,100			NS	NS	76,200,000	N	NMED		1.44E-05
Selenium	7782-49-2	mg/kg	1.2			NS	NS	6,490	N	NMED		1.85E-04
Silver	7440-22-4	mg/kg	0.037	J		NS	NS	6,490	N	NMED		5.70E-06
Sodium	7440-23-5	mg/kg	51			NS	NS	37,300,000	N	NMED		1.37E-06
Thallium	7440-28-0	mg/kg	0.15			NS	NS	13	N	NMED		1.15E-02
Vanadium	7440-62-2	mg/kg	15			NS	NS	6,530	N	NMED		2.30E-03
Zinc	7440-66-6	mg/kg	24			NS	NS	38,900	N	NMED		6.17E-04
									Cumulative Risk/Hazard		**6E-07**	**0.06**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Industrial Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-R32-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID R32
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		626	N	2,420	N	NMEDC			

TABLE D1-R32-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID R32
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	13,000			NS	NS	41,400	N	NMED		3.14E-01	Nervous
Antimony	7440-36-0	mg/kg	0.08	J		NS	NS	142	N	NMED		5.63E-04	
Arsenic	7440-38-2	mg/kg	1.3			216	N	41	N	NMED	6.02E-08	3.16E-02	
Barium	7440-39-3	mg/kg	170			NS	NS	4,390	N	NMED		3.87E-02	
Beryllium	7440-41-7	mg/kg	0.5	J		2,710	N	148	N	NMED	1.85E-09	3.38E-03	
Cadmium	7440-43-9	mg/kg	0.35			3,610	N	72	N	NMED	9.70E-10	4.85E-03	
Calcium	7440-70-2	mg/kg	2,600			NS	NS	8,850,000	N	NMED		2.94E-04	
Chromium (Total) (3)	7440-47-3	mg/kg	11			468	N	134	N	NMED	2.35E-07	8.21E-02	
Cobalt	7440-48-4	mg/kg	4.9			722	N	37	N	NMED	6.79E-08	1.34E-01	Endocrine
Copper	7440-50-8	mg/kg	68	J		NS	NS	14,200	N	NMED		4.79E-03	
Iron	7439-89-6	mg/kg	8,600			NS	NS	248,000	N	NMED		3.47E-02	
Lead	7439-92-1	mg/kg	10			NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	4,900			NS	NS	1,550,000	N	NMED		3.16E-03	
Manganese	7439-96-5	mg/kg	440			NS	NS	464	N	NMED		9.48E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.025	J		NS	NS	21	N	NMED		1.21E-03	
Nickel	7440-02-0	mg/kg	8.7			20,500	N	753	N	NMED	4.24E-09	1.16E-02	
Potassium	7440-09-7	mg/kg	1,100			NS	NS	20,800,000	N	NMED		5.29E-05	
Selenium	7782-49-2	mg/kg	1.2			NS	NS	1,750	N	NMED		6.86E-04	
Silver	7440-22-4	mg/kg	0.037	J		NS	NS	1,770	N	NMED		2.09E-05	
Sodium	7440-23-5	mg/kg	51			NS	NS	10,200,000	N	NMED		5.00E-06	
Thallium	7440-28-0	mg/kg	0.15			NS	NS	4	N	NMED		4.24E-02	
Vanadium	7440-62-2	mg/kg	15			NS	NS	614	N	NMED		2.44E-02	
Zinc	7440-66-6	mg/kg	24			NS	NS	106,000	N	NMED		2.26E-04	
									Cumulative Risk/Hazard		**4E-07**	**1.7**	
									Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	1.3
Endocrine	0.13
All Others	0.28

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-S26-1
GRID S26 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	2,200	N	RSL			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	6.3	N	RSL			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		211	N	36	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		3.56	N	18.5	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	7.7	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		31.6	N	70.4	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	6.16	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	7.64	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		333	N	247	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		83.1	N	301	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	43	J		NS	NS	156	N	NMED		2.76E-01	
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		60.4	N	131	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		313	N	6.16	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	3,850	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		1,300	N	570	N	RSL			

TABLE D1-S26-1
GRID S26 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	23,000			NS	NS	78,000	N	NMED		2.95E-01	Nervous
Antimony	7440-36-0	mg/kg	0.17	J		NS	NS	31.3	N	NMED		5.43E-03	
Arsenic	7440-38-2	mg/kg	1.5			7.07	N	13	N	NMED	2.12E-06	1.15E-01	Heart/Endocrine
Barium	7440-39-3	mg/kg	280			NS	NS	15,600	N	NMED		1.79E-02	
Beryllium	7440-41-7	mg/kg	0.83	J		64,400	N	156	N	NMED	1.29E-10	5.32E-03	
Cadmium	7440-43-9	mg/kg	0.71	J		85,900	N	70.5	N	NMED	8.27E-11	1.01E-02	
Calcium	7440-70-2	mg/kg	5,300			NS	NS	13,000,000	N	NMED		4.08E-04	
Chromium (Total) (2)	7440-47-3	mg/kg	19			96.6	N	45,200	N	NMED	1.97E-06	4.20E-04	
Cobalt	7440-48-4	mg/kg	6.2			17,200	N	23.4	N	NMED	3.60E-09	2.65E-01	Endocrine
Copper	7440-50-8	mg/kg	180	J		NS	NS	3,130	N	NMED		5.75E-02	
Iron	7439-89-6	mg/kg	14,000			NS	NS	54,800	N	NMED		2.55E-01	GI
Lead	7439-92-1	mg/kg	12			NS	NS	200	N	IEUBK			
Magnesium	7439-95-4	mg/kg	7,500			NS	NS	15,600,000	N	NMED		4.81E-04	
Manganese	7439-96-5	mg/kg	420			NS	NS	10,500	N	NMED		4.00E-02	
Mercury (Elemental)	7439-97-6	mg/kg	0.026	J		NS	NS	23.8	N	NMED		1.09E-03	
Nickel	7440-02-0	mg/kg	14			595,000	N	1,560	N	NMED	2.35E-10	8.97E-03	
Potassium	7440-09-7	mg/kg	2,400			NS	NS	15,600,000	N	NMED		1.54E-04	
Selenium	7782-49-2	mg/kg	1.2			NS	NS	391	N	NMED		3.07E-03	
Silver	7440-22-4	mg/kg	0.14			NS	NS	391	N	NMED		3.58E-04	
Sodium	7440-23-5	mg/kg	71			NS	NS	7,820,000	N	NMED		9.08E-06	
Thallium	7440-28-0	mg/kg	0.084	J		NS	NS	0.782	N	NMED		1.07E-01	Hair/Coat/Eyes
Vanadium	7440-62-2	mg/kg	24			NS	NS	394	N	NMED		6.09E-02	
Zinc	7440-66-6	mg/kg	32			NS	NS	23,500	N	NMED		1.36E-03	
									Cumulative Risk/Hazard		**4E-06**	**1.5**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Residential Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Residential Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	0.29
Endocrine	0.38
GI	0.26
Heart	0.12
Hair/Coat	0.11
Eyes	0.11
All Others	0.21

TABLE D1-S26-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID S26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	43	J		NS	NS	2,590	N	NMED		1.66E-02
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		5,300	N	7,400	N	RSL		

TABLE D1-S26-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID S26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	23,000			NS	NS	1,290,000	N	NMED		1.78E-02
Antimony	7440-36-0	mg/kg	0.17	J		NS	NS	519	N	NMED		3.28E-04
Arsenic	7440-38-2	mg/kg	1.5			36	N	208	N	NMED	4.18E-07	7.21E-03
Barium	7440-39-3	mg/kg	280			NS	NS	255,000	N	NMED		1.10E-03
Beryllium	7440-41-7	mg/kg	0.83	J		313,000	N	2,580	N	NMED	2.65E-11	3.22E-04
Cadmium	7440-43-9	mg/kg	0.71	J		417,000	N	1,110	N	NMED	1.70E-11	6.40E-04
Calcium	7440-70-2	mg/kg	5,300			NS	NS	32,400,000	N	NMED		1.64E-04
Chromium (Total) (2)	7440-47-3	mg/kg	19			505	N	314,000	N	NMED	3.76E-07	6.05E-05
Cobalt	7440-48-4	mg/kg	6.2			83,400	N	388	N	NMED	7.43E-10	1.60E-02
Copper	7440-50-8	mg/kg	180	J		NS	NS	51,900	N	NMED		3.47E-03
Iron	7439-89-6	mg/kg	14,000			NS	NS	908,000	N	NMED		1.54E-02
Lead	7439-92-1	mg/kg	12			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	7,500			NS	NS	5,680,000	N	NMED		1.32E-03
Manganese	7439-96-5	mg/kg	420			NS	NS	160,000	N	NMED		2.63E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.026	J		NS	NS	112	N	NMED		2.32E-04
Nickel	7440-02-0	mg/kg	14			2,890,000	N	25,700	N	NMED	4.84E-11	5.45E-04
Potassium	7440-09-7	mg/kg	2,400			NS	NS	76,200,000	N	NMED		3.15E-05
Selenium	7782-49-2	mg/kg	1.2			NS	NS	6,490	N	NMED		1.85E-04
Silver	7440-22-4	mg/kg	0.14			NS	NS	6,490	N	NMED		2.16E-05
Sodium	7440-23-5	mg/kg	71			NS	NS	37,300,000	N	NMED		1.90E-06
Thallium	7440-28-0	mg/kg	0.084	J		NS	NS	13	N	NMED		6.46E-03
Vanadium	7440-62-2	mg/kg	24			NS	NS	6,530	N	NMED		3.68E-03
Zinc	7440-66-6	mg/kg	32			NS	NS	38,900	N	NMED		8.23E-04
									Cumulative Risk/Hazard		**8E-07**	**0.10**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Industrial Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-S26-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID S26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	43	J		NS	NS	706	N	NMED		6.09E-02	
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		626	N	2,420	N	NMEDC			

TABLE D1-S26-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID S26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	23,000			NS	NS	41,400	N	NMED		5.56E-01	Nervous
Antimony	7440-36-0	mg/kg	0.17	J		NS	NS	142	N	NMED		1.20E-03	
Arsenic	7440-38-2	mg/kg	1.5			216	N	41	N	NMED	6.94E-08	3.64E-02	
Barium	7440-39-3	mg/kg	280			NS	NS	4,390	N	NMED		6.38E-02	
Beryllium	7440-41-7	mg/kg	0.83	J		2,710	N	148	N	NMED	3.06E-09	5.61E-03	
Cadmium	7440-43-9	mg/kg	0.71	J		3,610	N	72	N	NMED	1.97E-09	9.85E-03	
Calcium	7440-70-2	mg/kg	5,300			NS	NS	8,850,000	N	NMED		5.99E-04	
Chromium (Total) (3)	7440-47-3	mg/kg	19			468	N	134	N	NMED	4.06E-07	1.42E-01	GI, Blood
Cobalt	7440-48-4	mg/kg	6.2			722	N	37	N	NMED	8.59E-08	1.69E-01	Endocrine
Copper	7440-50-8	mg/kg	180	J		NS	NS	14,200	N	NMED		1.27E-02	
Iron	7439-89-6	mg/kg	14,000			NS	NS	248,000	N	NMED		5.65E-02	
Lead	7439-92-1	mg/kg	12			NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	7,500			NS	NS	1,550,000	N	NMED		4.84E-03	
Manganese	7439-96-5	mg/kg	420			NS	NS	464	N	NMED		9.05E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.026	J		NS	NS	21	N	NMED		1.26E-03	
Nickel	7440-02-0	mg/kg	14			20,500	N	753	N	NMED	6.83E-09	1.86E-02	
Potassium	7440-09-7	mg/kg	2,400			NS	NS	20,800,000	N	NMED		1.15E-04	
Selenium	7782-49-2	mg/kg	1.2			NS	NS	1,750	N	NMED		6.86E-04	
Silver	7440-22-4	mg/kg	0.14			NS	NS	1,770	N	NMED		7.91E-05	
Sodium	7440-23-5	mg/kg	71			NS	NS	10,200,000	N	NMED		6.96E-06	
Thallium	7440-28-0	mg/kg	0.084	J		NS	NS	4	N	NMED		2.37E-02	
Vanadium	7440-62-2	mg/kg	24			NS	NS	614	N	NMED		3.91E-02	
Zinc	7440-66-6	mg/kg	32			NS	NS	106,000	N	NMED		3.02E-04	
									Cumulative Risk/Hazard		**6E-07**	**2.1**	
									Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	1.5
Endocrine	0.17
GI	0.14
Blood	0.14
All Others	0.28

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-S29-1
GRID S29 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		1,300	N	570	N	RSL		

TABLE D1-S29-1
GRID S29 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	15,000			NS	NS	78,000	N	NMED		1.92E-01
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	31.3	N	NMED		
Arsenic	7440-38-2	mg/kg	1.5			7.07	N	13	N	NMED	2.12E-06	1.15E-01
Barium	7440-39-3	mg/kg	250			NS	NS	15,600	N	NMED		1.60E-02
Beryllium	7440-41-7	mg/kg	0.56	J		64,400	N	156	N	NMED	8.70E-11	3.59E-03
Cadmium	7440-43-9	mg/kg	0.54			85,900	N	70.5	N	NMED	6.29E-11	7.66E-03
Calcium	7440-70-2	mg/kg	7,500	J		NS	NS	13,000,000	N	NMED		5.77E-04
Chromium (Total) (2)	7440-47-3	mg/kg	13			96.6	N	45,200	N	NMED	1.35E-06	2.88E-04
Cobalt	7440-48-4	mg/kg	5			17,200	N	23.4	N	NMED	2.91E-09	2.14E-01
Copper	7440-50-8	mg/kg	140	J		NS	NS	3,130	N	NMED		4.47E-02
Iron	7439-89-6	mg/kg	11,000			NS	NS	54,800	N	NMED		2.01E-01
Lead	7439-92-1	mg/kg	11			NS	NS	200	N	IEUBK		
Magnesium	7439-95-4	mg/kg	5,500			NS	NS	15,600,000	N	NMED		3.53E-04
Manganese	7439-96-5	mg/kg	270			NS	NS	10,500	N	NMED		2.57E-02
Mercury (Elemental)	7439-97-6	mg/kg	0.027	J		NS	NS	23.8	N	NMED		1.13E-03
Nickel	7440-02-0	mg/kg	10			595,000	N	1,560	N	NMED	1.68E-10	6.41E-03
Potassium	7440-09-7	mg/kg	980			NS	NS	15,600,000	N	NMED		6.28E-05
Selenium	7782-49-2	mg/kg	1			NS	NS	391	N	NMED		2.56E-03
Silver	7440-22-4	mg/kg	0.02	J		NS	NS	391	N	NMED		5.12E-05
Sodium	7440-23-5	mg/kg	61			NS	NS	7,820,000	N	NMED		7.80E-06
Thallium	7440-28-0	mg/kg	0.034	J		NS	NS	0.782	N	NMED		4.35E-02
Vanadium	7440-62-2	mg/kg	19			NS	NS	394	N	NMED		4.82E-02
Zinc	7440-66-6	mg/kg	28			NS	NS	23,500	N	NMED		1.19E-03
									Cumulative Risk/Hazard		**3E-06**	**0.9**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Residential Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Residential Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-S29-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID S29
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		5,300	N	7,400	N	RSL		

TABLE D1-S29-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID S29
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	15,000			NS	NS	1,290,000	N	NMED		1.16E-02
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	519	N	NMED		
Arsenic	7440-38-2	mg/kg	1.5			36	N	208	N	NMED	4.18E-07	7.21E-03
Barium	7440-39-3	mg/kg	250			NS	NS	255,000	N	NMED		9.80E-04
Beryllium	7440-41-7	mg/kg	0.56	J		313,000	N	2,580	N	NMED	1.79E-11	2.17E-04
Cadmium	7440-43-9	mg/kg	0.54			417,000	N	1,110	N	NMED	1.29E-11	4.86E-04
Calcium	7440-70-2	mg/kg	7,500	J		NS	NS	32,400,000	N	NMED		2.31E-04
Chromium (Total) (2)	7440-47-3	mg/kg	13			505	N	314,000	N	NMED	2.57E-07	4.14E-05
Cobalt	7440-48-4	mg/kg	5			83,400	N	388	N	NMED	6.00E-10	1.29E-02
Copper	7440-50-8	mg/kg	140	J		NS	NS	51,900	N	NMED		2.70E-03
Iron	7439-89-6	mg/kg	11,000			NS	NS	908,000	N	NMED		1.21E-02
Lead	7439-92-1	mg/kg	11			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	5,500			NS	NS	5,680,000	N	NMED		9.68E-04
Manganese	7439-96-5	mg/kg	270			NS	NS	160,000	N	NMED		1.69E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.027	J		NS	NS	112	N	NMED		2.41E-04
Nickel	7440-02-0	mg/kg	10			2,890,000	N	25,700	N	NMED	3.46E-11	3.89E-04
Potassium	7440-09-7	mg/kg	980			NS	NS	76,200,000	N	NMED		1.29E-05
Selenium	7782-49-2	mg/kg	1			NS	NS	6,490	N	NMED		1.54E-04
Silver	7440-22-4	mg/kg	0.02	J		NS	NS	6,490	N	NMED		3.08E-06
Sodium	7440-23-5	mg/kg	61			NS	NS	37,300,000	N	NMED		1.64E-06
Thallium	7440-28-0	mg/kg	0.034	J		NS	NS	13	N	NMED		2.62E-03
Vanadium	7440-62-2	mg/kg	19			NS	NS	6,530	N	NMED		2.91E-03
Zinc	7440-66-6	mg/kg	28			NS	NS	38,900	N	NMED		7.20E-04
									Cumulative Risk/Hazard		**7E-07**	**0.06**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Industrial Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-S29-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID S29
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		626	N	2,420	N	NMEDC			

TABLE D1-S29-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID S29
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	15,000			NS	NS	41,400	N	NMED		3.62E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	142	N	NMED			
Arsenic	7440-38-2	mg/kg	1.5			216	N	41	N	NMED	6.94E-08	3.64E-02	
Barium	7440-39-3	mg/kg	250			NS	NS	4,390	N	NMED		5.69E-02	
Beryllium	7440-41-7	mg/kg	0.56	J		2,710	N	148	N	NMED	2.07E-09	3.78E-03	
Cadmium	7440-43-9	mg/kg	0.54			3,610	N	72	N	NMED	1.50E-09	7.49E-03	
Calcium	7440-70-2	mg/kg	7,500	J		NS	NS	8,850,000	N	NMED		8.47E-04	
Chromium (Total) (3)	7440-47-3	mg/kg	13			468	N	134	N	NMED	2.78E-07	9.70E-02	
Cobalt	7440-48-4	mg/kg	5			722	N	37	N	NMED	6.93E-08	1.36E-01	Endocrine
Copper	7440-50-8	mg/kg	140	J		NS	NS	14,200	N	NMED		9.86E-03	
Iron	7439-89-6	mg/kg	11,000			NS	NS	248,000	N	NMED		4.44E-02	
Lead	7439-92-1	mg/kg	11			NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	5,500			NS	NS	1,550,000	N	NMED		3.55E-03	
Manganese	7439-96-5	mg/kg	270			NS	NS	464	N	NMED		5.82E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.027	J		NS	NS	21	N	NMED		1.30E-03	
Nickel	7440-02-0	mg/kg	10			20,500	N	753	N	NMED	4.88E-09	1.33E-02	
Potassium	7440-09-7	mg/kg	980			NS	NS	20,800,000	N	NMED		4.71E-05	
Selenium	7782-49-2	mg/kg	1			NS	NS	1,750	N	NMED		5.71E-04	
Silver	7440-22-4	mg/kg	0.02	J		NS	NS	1,770	N	NMED		1.13E-05	
Sodium	7440-23-5	mg/kg	61			NS	NS	10,200,000	N	NMED		5.98E-06	
Thallium	7440-28-0	mg/kg	0.034	J		NS	NS	4	N	NMED		9.60E-03	
Vanadium	7440-62-2	mg/kg	19			NS	NS	614	N	NMED		3.09E-02	
Zinc	7440-66-6	mg/kg	28			NS	NS	106,000	N	NMED		2.64E-04	
									Cumulative Risk/Hazard		**4E-07**	**1.4**	
									Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	0.9
Endocrine	0.14
All Others	0.32

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-S36-1
GRID S36 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		1,300	N	570	N	RSL		

TABLE D1-S36-1
GRID S36 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	14,000			NS	NS	78,000	N	NMED		1.79E-01
Antimony	7440-36-0	mg/kg	0.23	J		NS	NS	31.3	N	NMED		7.35E-03
Arsenic	7440-38-2	mg/kg	1.5	J		7.07	N	13	N	NMED	2.12E-06	1.15E-01
Barium	7440-39-3	mg/kg	170			NS	NS	15,600	N	NMED		1.09E-02
Beryllium	7440-41-7	mg/kg	0.63	J		64,400	N	156	N	NMED	9.78E-11	4.04E-03
Cadmium	7440-43-9	mg/kg	0.21			85,900	N	70.5	N	NMED	2.44E-11	2.98E-03
Calcium	7440-70-2	mg/kg	6,800	J		NS	NS	13,000,000	N	NMED		5.23E-04
Chromium (Total) (2)	7440-47-3	mg/kg	10			96.6	N	45,200	N	NMED	1.04E-06	2.21E-04
Cobalt	7440-48-4	mg/kg	5.6	J		17,200	N	23.4	N	NMED	3.26E-09	2.39E-01
Copper	7440-50-8	mg/kg	30	J		NS	NS	3,130	N	NMED		9.58E-03
Iron	7439-89-6	mg/kg	10,000			NS	NS	54,800	N	NMED		1.82E-01
Lead	7439-92-1	mg/kg	9	J		NS	NS	200	N	IEUBK		
Magnesium	7439-95-4	mg/kg	4,400			NS	NS	15,600,000	N	NMED		2.82E-04
Manganese	7439-96-5	mg/kg	410			NS	NS	10,500	N	NMED		3.90E-02
Mercury (Elemental)	7439-97-6	mg/kg	0.037	J		NS	NS	23.8	N	NMED		1.55E-03
Nickel	7440-02-0	mg/kg	8.8			595,000	N	1,560	N	NMED	1.48E-10	5.64E-03
Potassium	7440-09-7	mg/kg	1,500	J		NS	NS	15,600,000	N	NMED		9.62E-05
Selenium	7782-49-2	mg/kg	1.1	J		NS	NS	391	N	NMED		2.81E-03
Silver	7440-22-4	mg/kg	0.044	J		NS	NS	391	N	NMED		1.13E-04
Sodium	7440-23-5	mg/kg	50			NS	NS	7,820,000	N	NMED		6.39E-06
Thallium	7440-28-0	mg/kg	0.087	J		NS	NS	0.782	N	NMED		1.11E-01
Vanadium	7440-62-2	mg/kg	18	J		NS	NS	394	N	NMED		4.57E-02
Zinc	7440-66-6	mg/kg	25	J		NS	NS	23,500	N	NMED		1.06E-03
									Cumulative Risk/Hazard		**3E-06**	**0.96**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Residential Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Residential Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-S36-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID S36
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		5,300	N	7,400	N	RSL		

TABLE D1-S36-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID S36
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	14,000			NS	NS	1,290,000	N	NMED		1.09E-02
Antimony	7440-36-0	mg/kg	0.23	J		NS	NS	519	N	NMED		4.43E-04
Arsenic	7440-38-2	mg/kg	1.5	J		36	N	208	N	NMED	4.18E-07	7.21E-03
Barium	7440-39-3	mg/kg	170			NS	NS	255,000	N	NMED		6.67E-04
Beryllium	7440-41-7	mg/kg	0.63	J		313,000	N	2,580	N	NMED	2.01E-11	2.44E-04
Cadmium	7440-43-9	mg/kg	0.21			417,000	N	1,110	N	NMED	5.04E-12	1.89E-04
Calcium	7440-70-2	mg/kg	6,800	J		NS	NS	32,400,000	N	NMED		2.10E-04
Chromium (Total) (2)	7440-47-3	mg/kg	10			505	N	314,000	N	NMED	1.98E-07	3.18E-05
Cobalt	7440-48-4	mg/kg	5.6	J		83,400	N	388	N	NMED	6.71E-10	1.44E-02
Copper	7440-50-8	mg/kg	30	J		NS	NS	51,900	N	NMED		5.78E-04
Iron	7439-89-6	mg/kg	10,000			NS	NS	908,000	N	NMED		1.10E-02
Lead	7439-92-1	mg/kg	9	J		NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	4,400			NS	NS	5,680,000	N	NMED		7.75E-04
Manganese	7439-96-5	mg/kg	410			NS	NS	160,000	N	NMED		2.56E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.037	J		NS	NS	112	N	NMED		3.30E-04
Nickel	7440-02-0	mg/kg	8.8			2,890,000	N	25,700	N	NMED	3.04E-11	3.42E-04
Potassium	7440-09-7	mg/kg	1,500	J		NS	NS	76,200,000	N	NMED		1.97E-05
Selenium	7782-49-2	mg/kg	1.1	J		NS	NS	6,490	N	NMED		1.69E-04
Silver	7440-22-4	mg/kg	0.044	J		NS	NS	6,490	N	NMED		6.78E-06
Sodium	7440-23-5	mg/kg	50			NS	NS	37,300,000	N	NMED		1.34E-06
Thallium	7440-28-0	mg/kg	0.087	J		NS	NS	13	N	NMED		6.69E-03
Vanadium	7440-62-2	mg/kg	18	J		NS	NS	6,530	N	NMED		2.76E-03
Zinc	7440-66-6	mg/kg	25	J		NS	NS	38,900	N	NMED		6.43E-04
									Cumulative Risk/Hazard		**6E-07**	**0.06**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Industrial Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-S36-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID S36
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		626	N	2,420	N	NMEDC			

TABLE D1-S36-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID S36
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	14,000			NS	NS	41,400	N	NMED		3.38E-01	Nervous
Antimony	7440-36-0	mg/kg	0.23	J		NS	NS	142	N	NMED		1.62E-03	
Arsenic	7440-38-2	mg/kg	1.5	J		216	N	41	N	NMED	6.94E-08	3.64E-02	
Barium	7440-39-3	mg/kg	170			NS	NS	4,390	N	NMED		3.87E-02	
Beryllium	7440-41-7	mg/kg	0.63	J		2,710	N	148	N	NMED	2.32E-09	4.26E-03	
Cadmium	7440-43-9	mg/kg	0.21			3,610	N	72	N	NMED	5.82E-10	2.91E-03	
Calcium	7440-70-2	mg/kg	6,800	J		NS	NS	8,850,000	N	NMED		7.68E-04	
Chromium (Total) (3)	7440-47-3	mg/kg	10			468	N	134	N	NMED	2.14E-07	7.46E-02	
Cobalt	7440-48-4	mg/kg	5.6	J		722	N	37	N	NMED	7.76E-08	1.53E-01	Endocrine
Copper	7440-50-8	mg/kg	30	J		NS	NS	14,200	N	NMED		2.11E-03	
Iron	7439-89-6	mg/kg	10,000			NS	NS	248,000	N	NMED		4.03E-02	
Lead	7439-92-1	mg/kg	9	J		NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	4,400			NS	NS	1,550,000	N	NMED		2.84E-03	
Manganese	7439-96-5	mg/kg	410			NS	NS	464	N	NMED		8.84E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.037	J		NS	NS	21	N	NMED		1.79E-03	
Nickel	7440-02-0	mg/kg	8.8			20,500	N	753	N	NMED	4.29E-09	1.17E-02	
Potassium	7440-09-7	mg/kg	1,500	J		NS	NS	20,800,000	N	NMED		7.21E-05	
Selenium	7782-49-2	mg/kg	1.1	J		NS	NS	1,750	N	NMED		6.29E-04	
Silver	7440-22-4	mg/kg	0.044	J		NS	NS	1,770	N	NMED		2.49E-05	
Sodium	7440-23-5	mg/kg	50			NS	NS	10,200,000	N	NMED		4.90E-06	
Thallium	7440-28-0	mg/kg	0.087	J		NS	NS	4	N	NMED		2.46E-02	
Vanadium	7440-62-2	mg/kg	18	J		NS	NS	614	N	NMED		2.93E-02	
Zinc	7440-66-6	mg/kg	25	J		NS	NS	106,000	N	NMED		2.36E-04	
									Cumulative Risk/Hazard		**4E-07**	**1.6**	
									Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	1.2
Endocrine	0.15
All Others	0.27

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-T23-1
GRID T23 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	2,200	N	RSL			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	6.3	N	RSL			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		211	N	36	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		3.56	N	18.5	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	7.7	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		31.6	N	70.4	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	6.16	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	7.64	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		333	N	247	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		83.1	N	301	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	156	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		60.4	N	131	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		313	N	6.16	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	3,850	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		1,300	N	570	N	RSL			

TABLE D1-T23-1
GRID T23 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	15,000			NS	NS	78,000	N	NMED		1.92E-01	Nervous
Antimony	7440-36-0	mg/kg	0.36	J		NS	NS	31.3	N	NMED		1.15E-02	
Arsenic	7440-38-2	mg/kg	1.9			7.07	N	13	N	NMED	2.69E-06	1.46E-01	
Barium	7440-39-3	mg/kg	270			NS	NS	15,600	N	NMED		1.73E-02	
Beryllium	7440-41-7	mg/kg	0.69	J		64,400	N	156	N	NMED	1.07E-10	4.42E-03	
Cadmium	7440-43-9	mg/kg	1.1			85,900	N	70.5	N	NMED	1.28E-10	1.56E-02	
Calcium	7440-70-2	mg/kg	7,000			NS	NS	13,000,000	N	NMED		5.38E-04	
Chromium (Total) (2)	7440-47-3	mg/kg	22			96.6	N	45,200	N	NMED	2.28E-06	4.87E-04	
Cobalt	7440-48-4	mg/kg	5.3			17,200	N	23.4	N	NMED	3.08E-09	2.26E-01	Endocrine
Copper	7440-50-8	mg/kg	220			NS	NS	3,130	N	NMED		7.03E-02	
Iron	7439-89-6	mg/kg	11,000			NS	NS	54,800	N	NMED		2.01E-01	GI
Lead	7439-92-1	mg/kg	14			NS	NS	200	N	IEUBK			
Magnesium	7439-95-4	mg/kg	5,000			NS	NS	15,600,000	N	NMED		3.21E-04	
Manganese	7439-96-5	mg/kg	480			NS	NS	10,500	N	NMED		4.57E-02	
Mercury (Elemental)	7439-97-6	mg/kg	0.022	J		NS	NS	23.8	N	NMED		9.24E-04	
Nickel	7440-02-0	mg/kg	14			595,000	N	1,560	N	NMED	2.35E-10	8.97E-03	
Potassium	7440-09-7	mg/kg	1,800			NS	NS	15,600,000	N	NMED		1.15E-04	
Selenium	7782-49-2	mg/kg	1			NS	NS	391	N	NMED		2.56E-03	
Silver	7440-22-4	mg/kg	0.22			NS	NS	391	N	NMED		5.63E-04	
Sodium	7440-23-5	mg/kg	59			NS	NS	7,820,000	N	NMED		7.54E-06	
Thallium	7440-28-0	mg/kg	0.077	J		NS	NS	0.782	N	NMED		9.85E-02	
Vanadium	7440-62-2	mg/kg	20			NS	NS	394	N	NMED		5.08E-02	
Zinc	7440-66-6	mg/kg	40			NS	NS	23,500	N	NMED		1.70E-03	
									Cumulative Risk/Hazard		**5E-06**	**1.1**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Residential Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Residential Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	0.19
Endocrine	0.23
GI	0.20
All Others	0.48

TABLE D1-T23-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID T23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		5,300	N	7,400	N	RSL		

TABLE D1-T23-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID T23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	15,000			NS	NS	1,290,000	N	NMED		1.16E-02
Antimony	7440-36-0	mg/kg	0.36	J		NS	NS	519	N	NMED		6.94E-04
Arsenic	7440-38-2	mg/kg	1.9			36	N	208	N	NMED	5.29E-07	9.13E-03
Barium	7440-39-3	mg/kg	270			NS	NS	255,000	N	NMED		1.06E-03
Beryllium	7440-41-7	mg/kg	0.69	J		313,000	N	2,580	N	NMED	2.20E-11	2.67E-04
Cadmium	7440-43-9	mg/kg	1.1			417,000	N	1,110	N	NMED	2.64E-11	9.91E-04
Calcium	7440-70-2	mg/kg	7,000			NS	NS	32,400,000	N	NMED		2.16E-04
Chromium (Total) (2)	7440-47-3	mg/kg	22			505	N	314,000	N	NMED	4.36E-07	7.01E-05
Cobalt	7440-48-4	mg/kg	5.3			83,400	N	388	N	NMED	6.35E-10	1.37E-02
Copper	7440-50-8	mg/kg	220			NS	NS	51,900	N	NMED		4.24E-03
Iron	7439-89-6	mg/kg	11,000			NS	NS	908,000	N	NMED		1.21E-02
Lead	7439-92-1	mg/kg	14			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	5,000			NS	NS	5,680,000	N	NMED		8.80E-04
Manganese	7439-96-5	mg/kg	480			NS	NS	160,000	N	NMED		3.00E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.022	J		NS	NS	112	N	NMED		1.96E-04
Nickel	7440-02-0	mg/kg	14			2,890,000	N	25,700	N	NMED	4.84E-11	5.45E-04
Potassium	7440-09-7	mg/kg	1,800			NS	NS	76,200,000	N	NMED		2.36E-05
Selenium	7782-49-2	mg/kg	1			NS	NS	6,490	N	NMED		1.54E-04
Silver	7440-22-4	mg/kg	0.22			NS	NS	6,490	N	NMED		3.39E-05
Sodium	7440-23-5	mg/kg	59			NS	NS	37,300,000	N	NMED		1.58E-06
Thallium	7440-28-0	mg/kg	0.077	J		NS	NS	13	N	NMED		5.92E-03
Vanadium	7440-62-2	mg/kg	20			NS	NS	6,530	N	NMED		3.06E-03
Zinc	7440-66-6	mg/kg	40			NS	NS	38,900	N	NMED		1.03E-03
									Cumulative Risk/Hazard		**1E-06**	**0.07**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Industrial Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-T23-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID T23
FORT WINGATE DEPOT ACTIVTY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		626	N	2,420	N	NMEDC			

TABLE D1-T23-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID T23
FORT WINGATE DEPOT ACTIVTY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	15,000			NS	NS	41,400	N	NMED		3.62E-01	Nervous
Antimony	7440-36-0	mg/kg	0.36	J		NS	NS	142	N	NMED		2.54E-03	
Arsenic	7440-38-2	mg/kg	1.9			216	N	41	N	NMED	8.80E-08	4.61E-02	
Barium	7440-39-3	mg/kg	270			NS	NS	4,390	N	NMED		6.15E-02	
Beryllium	7440-41-7	mg/kg	0.69	J		2,710	N	148	N	NMED	2.55E-09	4.66E-03	
Cadmium	7440-43-9	mg/kg	1.1			3,610	N	72	N	NMED	3.05E-09	1.53E-02	
Calcium	7440-70-2	mg/kg	7,000			NS	NS	8,850,000	N	NMED		7.91E-04	
Chromium (Total) (3)	7440-47-3	mg/kg	22			468	N	134	N	NMED	4.70E-07	1.64E-01	GI, Blood
Cobalt	7440-48-4	mg/kg	5.3			722	N	37	N	NMED	7.34E-08	1.44E-01	Endocrine
Copper	7440-50-8	mg/kg	220			NS	NS	14,200	N	NMED		1.55E-02	
Iron	7439-89-6	mg/kg	11,000			NS	NS	248,000	N	NMED		4.44E-02	
Lead	7439-92-1	mg/kg	14			NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	5,000			NS	NS	1,550,000	N	NMED		3.23E-03	
Manganese	7439-96-5	mg/kg	480			NS	NS	464	Y	NMED		1.03E+00	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.022	J		NS	NS	21	N	NMED		1.06E-03	
Nickel	7440-02-0	mg/kg	14			20,500	N	753	N	NMED	6.83E-09	1.86E-02	
Potassium	7440-09-7	mg/kg	1,800			NS	NS	20,800,000	N	NMED		8.65E-05	
Selenium	7782-49-2	mg/kg	1			NS	NS	1,750	N	NMED		5.71E-04	
Silver	7440-22-4	mg/kg	0.22			NS	NS	1,770	N	NMED		1.24E-04	
Sodium	7440-23-5	mg/kg	59			NS	NS	10,200,000	N	NMED		5.78E-06	
Thallium	7440-28-0	mg/kg	0.077	J		NS	NS	4	N	NMED		2.18E-02	
Vanadium	7440-62-2	mg/kg	20			NS	NS	614	N	NMED		3.26E-02	
Zinc	7440-66-6	mg/kg	40			NS	NS	106,000	N	NMED		3.77E-04	
									Cumulative Risk/Hazard		**6E-07**	**2.0**	
									Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	1.4
Endocrine	0.14
GI	0.16
Blood	0.16
All Others	0.27

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-T28-1
GRID T28 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	2,200	N	RSL			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	6.3	N	RSL			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		211	N	36	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		3.56	N	18.5	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	7.7	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		31.6	N	70.4	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	6.16	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	7.64	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		333	N	247	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		83.1	N	301	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	156	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		60.4	N	131	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		313	N	6.16	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	3,850	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		1,300	N	570	N	RSL			

TABLE D1-T28-1
GRID T28 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	22,000			NS	NS	78,000	N	NMED		2.82E-01	Nervous
Antimony	7440-36-0	mg/kg	0.089	J		NS	NS	31.3	N	NMED		2.84E-03	
Arsenic	7440-38-2	mg/kg	1.9	J		7.07	N	13	N	NMED	2.69E-06	1.46E-01	Heart/Endocrine
Barium	7440-39-3	mg/kg	340			NS	NS	15,600	N	NMED		2.18E-02	
Beryllium	7440-41-7	mg/kg	0.91	J		64,400	N	156	N	NMED	1.41E-10	5.83E-03	
Cadmium	7440-43-9	mg/kg	0.66	J		85,900	N	70.5	N	NMED	7.68E-11	9.36E-03	
Calcium	7440-70-2	mg/kg	19,000			NS	NS	13,000,000	N	NMED		1.46E-03	
Chromium (Total) (2)	7440-47-3	mg/kg	15			96.6	N	45,200	N	NMED	1.55E-06	3.32E-04	
Cobalt	7440-48-4	mg/kg	6.4	J		17,200	N	23.4	N	NMED	3.72E-09	2.74E-01	Endocrine
Copper	7440-50-8	mg/kg	130	J		NS	NS	3,130	N	NMED		4.15E-02	
Iron	7439-89-6	mg/kg	15,000			NS	NS	54,800	N	NMED		2.74E-01	GI
Lead	7439-92-1	mg/kg	12			NS	NS	200	N	IEUBK			
Magnesium	7439-95-4	mg/kg	7,200			NS	NS	15,600,000	N	NMED		4.62E-04	
Manganese	7439-96-5	mg/kg	290			NS	NS	10,500	N	NMED		2.76E-02	
Mercury (Elemental)	7439-97-6	mg/kg	0.025	J		NS	NS	23.8	N	NMED		1.05E-03	
Nickel	7440-02-0	mg/kg	13			595,000	N	1,560	N	NMED	2.18E-10	8.33E-03	
Potassium	7440-09-7	mg/kg	2,000			NS	NS	15,600,000	N	NMED		1.28E-04	
Selenium	7782-49-2	mg/kg	1.5	J		NS	NS	391	N	NMED		3.84E-03	
Silver	7440-22-4	mg/kg	0.12			NS	NS	391	N	NMED		3.07E-04	
Sodium	7440-23-5	mg/kg	54			NS	NS	7,820,000	N	NMED		6.91E-06	
Thallium	7440-28-0	mg/kg	0.086	J		NS	NS	0.782	N	NMED		1.10E-01	
Vanadium	7440-62-2	mg/kg	22			NS	NS	394	N	NMED		5.58E-02	
Zinc	7440-66-6	mg/kg	42	J		NS	NS	23,500	N	NMED		1.79E-03	
									Cumulative Risk/Hazard		**4E-06**	**1.3**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Residential Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Residential Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	0.3
Endocrine	0.42
GI	0.27
Heart	0.15
All Others	0.29

TABLE D1-T28-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID T28
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		5,300	N	7,400	N	RSL		

TABLE D1-T28-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID T28
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	22,000			NS	NS	1,290,000	N	NMED		1.71E-02
Antimony	7440-36-0	mg/kg	0.089	J		NS	NS	519	N	NMED		1.71E-04
Arsenic	7440-38-2	mg/kg	1.9	J		36	N	208	N	NMED	5.29E-07	9.13E-03
Barium	7440-39-3	mg/kg	340			NS	NS	255,000	N	NMED		1.33E-03
Beryllium	7440-41-7	mg/kg	0.91	J		313,000	N	2,580	N	NMED	2.91E-11	3.53E-04
Cadmium	7440-43-9	mg/kg	0.66	J		417,000	N	1,110	N	NMED	1.58E-11	5.95E-04
Calcium	7440-70-2	mg/kg	19,000			NS	NS	32,400,000	N	NMED		5.86E-04
Chromium (Total) (2)	7440-47-3	mg/kg	15			505	N	314,000	N	NMED	2.97E-07	4.78E-05
Cobalt	7440-48-4	mg/kg	6.4	J		83,400	N	388	N	NMED	7.67E-10	1.65E-02
Copper	7440-50-8	mg/kg	130	J		NS	NS	51,900	N	NMED		2.50E-03
Iron	7439-89-6	mg/kg	15,000			NS	NS	908,000	N	NMED		1.65E-02
Lead	7439-92-1	mg/kg	12			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	7,200			NS	NS	5,680,000	N	NMED		1.27E-03
Manganese	7439-96-5	mg/kg	290			NS	NS	160,000	N	NMED		1.81E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.025	J		NS	NS	112	N	NMED		2.23E-04
Nickel	7440-02-0	mg/kg	13			2,890,000	N	25,700	N	NMED	4.50E-11	5.06E-04
Potassium	7440-09-7	mg/kg	2,000			NS	NS	76,200,000	N	NMED		2.62E-05
Selenium	7782-49-2	mg/kg	1.5	J		NS	NS	6,490	N	NMED		2.31E-04
Silver	7440-22-4	mg/kg	0.12			NS	NS	6,490	N	NMED		1.85E-05
Sodium	7440-23-5	mg/kg	54			NS	NS	37,300,000	N	NMED		1.45E-06
Thallium	7440-28-0	mg/kg	0.086	J		NS	NS	13	N	NMED		6.62E-03
Vanadium	7440-62-2	mg/kg	22			NS	NS	6,530	N	NMED		3.37E-03
Zinc	7440-66-6	mg/kg	42	J		NS	NS	38,900	N	NMED		1.08E-03
									Cumulative Risk/Hazard		**8E-07**	**0.08**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Industrial Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-T28-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID T28
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		626	N	2,420	N	NMEDC			

TABLE D1-T28-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID T28
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	22,000			NS	NS	41,400	N	NMED		5.31E-01	Nervous
Antimony	7440-36-0	mg/kg	0.089	J		NS	NS	142	N	NMED		6.27E-04	
Arsenic	7440-38-2	mg/kg	1.9	J		216	N	41	N	NMED	8.80E-08	4.61E-02	
Barium	7440-39-3	mg/kg	340			NS	NS	4,390	N	NMED		7.74E-02	
Beryllium	7440-41-7	mg/kg	0.91	J		2,710	N	148	N	NMED	3.36E-09	6.15E-03	
Cadmium	7440-43-9	mg/kg	0.66	J		3,610	N	72	N	NMED	1.83E-09	9.15E-03	
Calcium	7440-70-2	mg/kg	19,000			NS	NS	8,850,000	N	NMED		2.15E-03	
Chromium (Total) (3)	7440-47-3	mg/kg	15			468	N	134	N	NMED	3.21E-07	1.12E-01	GI, Blood
Cobalt	7440-48-4	mg/kg	6.4	J		722	N	37	N	NMED	8.86E-08	1.74E-01	Endocrine
Copper	7440-50-8	mg/kg	130	J		NS	NS	14,200	N	NMED		9.15E-03	
Iron	7439-89-6	mg/kg	15,000			NS	NS	248,000	N	NMED		6.05E-02	
Lead	7439-92-1	mg/kg	12			NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	7,200			NS	NS	1,550,000	N	NMED		4.65E-03	
Manganese	7439-96-5	mg/kg	290			NS	NS	464	N	NMED		6.25E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.025	J		NS	NS	21	N	NMED		1.21E-03	
Nickel	7440-02-0	mg/kg	13			20,500	N	753	N	NMED	6.34E-09	1.73E-02	
Potassium	7440-09-7	mg/kg	2,000			NS	NS	20,800,000	N	NMED		9.62E-05	
Selenium	7782-49-2	mg/kg	1.5	J		NS	NS	1,750	N	NMED		8.57E-04	
Silver	7440-22-4	mg/kg	0.12			NS	NS	1,770	N	NMED		6.78E-05	
Sodium	7440-23-5	mg/kg	54			NS	NS	10,200,000	N	NMED		5.29E-06	
Thallium	7440-28-0	mg/kg	0.086	J		NS	NS	4	N	NMED		2.43E-02	
Vanadium	7440-62-2	mg/kg	22			NS	NS	614	N	NMED		3.58E-02	
Zinc	7440-66-6	mg/kg	42	J		NS	NS	106,000	N	NMED		3.96E-04	
									Cumulative Risk/Hazard		**5E-07**	**1.7**	
									Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	1.2
Endocrine	0.17
GI	0.11
Blood	0.11
All Others	0.30

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-T32-1
GRID T32 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U		60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U		313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		1,300	N	570	N	RSL		

TABLE D1-T32-1
GRID T32 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	15,000			NS	NS	78,000	N	NMED		1.92E-01
Antimony	7440-36-0	mg/kg	0.11	J		NS	NS	31.3	N	NMED		3.51E-03
Arsenic	7440-38-2	mg/kg	1.3			7.07	N	13	N	NMED	1.84E-06	1.00E-01
Barium	7440-39-3	mg/kg	170			NS	NS	15,600	N	NMED		1.09E-02
Beryllium	7440-41-7	mg/kg	0.52	J		64,400	N	156	N	NMED	8.07E-11	3.33E-03
Cadmium	7440-43-9	mg/kg	0.45	J		85,900	N	70.5	N	NMED	5.24E-11	6.38E-03
Calcium	7440-70-2	mg/kg	2,800			NS	NS	13,000,000	N	NMED		2.15E-04
Chromium (Total) (2)	7440-47-3	mg/kg	11			96.6	N	45,200	N	NMED	1.14E-06	2.43E-04
Cobalt	7440-48-4	mg/kg	4.8			17,200	N	23.4	N	NMED	2.79E-09	2.05E-01
Copper	7440-50-8	mg/kg	79	J		NS	NS	3,130	N	NMED		2.52E-02
Iron	7439-89-6	mg/kg	9,600			NS	NS	54,800	N	NMED		1.75E-01
Lead	7439-92-1	mg/kg	11			NS	NS	200	N	IEUBK		
Magnesium	7439-95-4	mg/kg	5,500			NS	NS	15,600,000	N	NMED		3.53E-04
Manganese	7439-96-5	mg/kg	460			NS	NS	10,500	N	NMED		4.38E-02
Mercury (Elemental)	7439-97-6	mg/kg	0.038	J		NS	NS	23.8	N	NMED		1.60E-03
Nickel	7440-02-0	mg/kg	8.3			595,000	N	1,560	N	NMED	1.39E-10	5.32E-03
Potassium	7440-09-7	mg/kg	960			NS	NS	15,600,000	N	NMED		6.15E-05
Selenium	7782-49-2	mg/kg	0.95			NS	NS	391	N	NMED		2.43E-03
Silver	7440-22-4	mg/kg	0.055	J		NS	NS	391	N	NMED		1.41E-04
Sodium	7440-23-5	mg/kg	61			NS	NS	7,820,000	N	NMED		7.80E-06
Thallium	7440-28-0	mg/kg	0.045	J		NS	NS	0.782	N	NMED		5.75E-02
Vanadium	7440-62-2	mg/kg	19			NS	NS	394	N	NMED		4.82E-02
Zinc	7440-66-6	mg/kg	27			NS	NS	23,500	N	NMED		1.15E-03
									Cumulative Risk/Hazard		**3E-06**	**0.88**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Resdential Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Residential Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-T32-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID T32
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[2]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		5,300	N	7,400	N	RSL		

TABLE D1-T32-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID T32
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[2]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	15,000			NS	NS	1,290,000	N	NMED		1.16E-02
Antimony	7440-36-0	mg/kg	0.11	J		NS	NS	519	N	NMED		2.12E-04
Arsenic	7440-38-2	mg/kg	1.3			36	N	208	N	NMED	3.62E-07	6.25E-03
Barium	7440-39-3	mg/kg	170			NS	NS	255,000	N	NMED		6.67E-04
Beryllium	7440-41-7	mg/kg	0.52	J		313,000	N	2,580	N	NMED	1.66E-11	2.02E-04
Cadmium	7440-43-9	mg/kg	0.45	J		417,000	N	1,110	N	NMED	1.08E-11	4.05E-04
Calcium	7440-70-2	mg/kg	2,800			NS	NS	32,400,000	N	NMED		8.64E-05
Chromium (Total) (2)	7440-47-3	mg/kg	11			505	N	314,000	N	NMED	2.18E-07	3.50E-05
Cobalt	7440-48-4	mg/kg	4.8			83,400	N	388	N	NMED	5.76E-10	1.24E-02
Copper	7440-50-8	mg/kg	79	J		NS	NS	51,900	N	NMED		1.52E-03
Iron	7439-89-6	mg/kg	9,600			NS	NS	908,000	N	NMED		1.06E-02
Lead	7439-92-1	mg/kg	11			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	5,500			NS	NS	5,680,000	N	NMED		9.68E-04
Manganese	7439-96-5	mg/kg	460			NS	NS	160,000	N	NMED		2.88E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.038	J		NS	NS	112	N	NMED		3.39E-04
Nickel	7440-02-0	mg/kg	8.3			2,890,000	N	25,700	N	NMED	2.87E-11	3.23E-04
Potassium	7440-09-7	mg/kg	960			NS	NS	76,200,000	N	NMED		1.26E-05
Selenium	7782-49-2	mg/kg	0.95			NS	NS	6,490	N	NMED		1.46E-04
Silver	7440-22-4	mg/kg	0.055	J		NS	NS	6,490	N	NMED		8.47E-06
Sodium	7440-23-5	mg/kg	61			NS	NS	37,300,000	N	NMED		1.64E-06
Thallium	7440-28-0	mg/kg	0.045	J		NS	NS	13	N	NMED		3.46E-03
Vanadium	7440-62-2	mg/kg	19			NS	NS	6,530	N	NMED		2.91E-03
Zinc	7440-66-6	mg/kg	27			NS	NS	38,900	N	NMED		6.94E-04
									Cumulative Risk/Hazard		**6E-07**	**0.06**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Industrial Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-T32-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID T32
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		626	N	2,420	N	NMEDC			

TABLE D1-T32-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID T32
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	15,000			NS	NS	41,400	N	NMED		3.62E-01	Nervous
Antimony	7440-36-0	mg/kg	0.11	J		NS	NS	142	N	NMED		7.75E-04	
Arsenic	7440-38-2	mg/kg	1.3			216	N	41	N	NMED	6.02E-08	3.16E-02	
Barium	7440-39-3	mg/kg	170			NS	NS	4,390	N	NMED		3.87E-02	
Beryllium	7440-41-7	mg/kg	0.52	J		2,710	N	148	N	NMED	1.92E-09	3.51E-03	
Cadmium	7440-43-9	mg/kg	0.45	J		3,610	N	72	N	NMED	1.25E-09	6.24E-03	
Calcium	7440-70-2	mg/kg	2,800			NS	NS	8,850,000	N	NMED		3.16E-04	
Chromium (Total) (3)	7440-47-3	mg/kg	11			468	N	134	N	NMED	2.35E-07	8.21E-02	
Cobalt	7440-48-4	mg/kg	4.8			722	N	37	N	NMED	6.65E-08	1.31E-01	Endocrine
Copper	7440-50-8	mg/kg	79	J		NS	NS	14,200	N	NMED		5.56E-03	
Iron	7439-89-6	mg/kg	9,600			NS	NS	248,000	N	NMED		3.87E-02	
Lead	7439-92-1	mg/kg	11			NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	5,500			NS	NS	1,550,000	N	NMED		3.55E-03	
Manganese	7439-96-5	mg/kg	460			NS	NS	464	N	NMED		9.91E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.038	J		NS	NS	21	N	NMED		1.84E-03	
Nickel	7440-02-0	mg/kg	8.3			20,500	N	753	N	NMED	4.05E-09	1.10E-02	
Potassium	7440-09-7	mg/kg	960			NS	NS	20,800,000	N	NMED		4.62E-05	
Selenium	7782-49-2	mg/kg	0.95			NS	NS	1,750	N	NMED		5.43E-04	
Silver	7440-22-4	mg/kg	0.055	J		NS	NS	1,770	N	NMED		3.11E-05	
Sodium	7440-23-5	mg/kg	61			NS	NS	10,200,000	N	NMED		5.98E-06	
Thallium	7440-28-0	mg/kg	0.045	J		NS	NS	4	N	NMED		1.27E-02	
Vanadium	7440-62-2	mg/kg	19			NS	NS	614	N	NMED		3.09E-02	
Zinc	7440-66-6	mg/kg	27			NS	NS	106,000	N	NMED		2.55E-04	
									Cumulative Risk/Hazard		**4E-07**	**1.8**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent	NS = No Standard
CAS = Chemical Abstracts Service	RAG = Risk Assessment Guidance
HI = Hazard Index	SSL = soil screening level
J = Estimated	U = Nondetect
mg/kg = milligrams per kilogram	UTL = upper tolerance limit
N = no	Y = yes
NA = not applicable	

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	1.4
Endocrine	0.13
All Others	0.27

TABLE D1-T39-1
GRID T39 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	2,200	N	RSL			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	6.3	N	RSL			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		211	N	36	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		3.56	N	18.5	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	7.7	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		31.6	N	70.4	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	6.16	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	7.64	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		333	N	247	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		83.1	N	301	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	156	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		60.4	N	131	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		313	N	6.16	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	3,850	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		1,300	N	570	N	RSL			

TABLE D1-T39-1
GRID T39 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	20,000			NS	NS	78,000	N	NMED		2.56E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	J		NS	NS	31.3	N	NMED		4.79E-03	
Arsenic	7440-38-2	mg/kg	1.3			7.07	N	13	N	NMED	1.84E-06	1.00E-01	Heart/Endocrine
Barium	7440-39-3	mg/kg	180			NS	NS	15,600	N	NMED		1.15E-02	
Beryllium	7440-41-7	mg/kg	0.73	J		64,400	N	156	N	NMED	1.13E-10	4.68E-03	
Cadmium	7440-43-9	mg/kg	0.19			85,900	N	70.5	N	NMED	2.21E-11	2.70E-03	
Calcium	7440-70-2	mg/kg	22,000			NS	NS	13,000,000	N	NMED		1.69E-03	
Chromium (Total) (2)	7440-47-3	mg/kg	12			96.6	N	45,200	N	NMED	1.24E-06	2.65E-04	
Cobalt	7440-48-4	mg/kg	5.6			17,200	N	23.4	N	NMED	3.26E-09	2.39E-01	Endocrine
Copper	7440-50-8	mg/kg	28			NS	NS	3,130	N	NMED		8.95E-03	
Iron	7439-89-6	mg/kg	12,000			NS	NS	54,800	N	NMED		2.19E-01	GI
Lead	7439-92-1	mg/kg	7.9			NS	NS	200	N	IEUBK			
Magnesium	7439-95-4	mg/kg	7,500			NS	NS	15,600,000	N	NMED		4.81E-04	
Manganese	7439-96-5	mg/kg	430			NS	NS	10,500	N	NMED		4.10E-02	
Mercury (Elemental)	7439-97-6	mg/kg	0.02	J		NS	NS	23.8	N	NMED		8.40E-04	
Nickel	7440-02-0	mg/kg	11			595,000	N	1,560	N	NMED	1.85E-10	7.05E-03	
Potassium	7440-09-7	mg/kg	1,500			NS	NS	15,600,000	N	NMED		9.62E-05	
Selenium	7782-49-2	mg/kg	1.2			NS	NS	391	N	NMED		3.07E-03	
Silver	7440-22-4	mg/kg	0.032	J		NS	NS	391	N	NMED		8.18E-05	
Sodium	7440-23-5	mg/kg	61			NS	NS	7,820,000	N	NMED		7.80E-06	
Thallium	7440-28-0	mg/kg	0.064	J		NS	NS	0.782	N	NMED		8.18E-02	
Vanadium	7440-62-2	mg/kg	22			NS	NS	394	N	NMED		5.58E-02	
Zinc	7440-66-6	mg/kg	25			NS	NS	23,500	N	NMED		1.06E-03	
									Cumulative Risk/Hazard		**3E-06**	**1.0**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Residential Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Residential Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	0.26
Endocrine	0.34
Heart	0.10
GI	0.22
All Others	0.23

TABLE D1-T39-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID T39
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		5,300	N	7,400	N	RSL		

TABLE D1-T39-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID T39
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	20,000			NS	NS	1,290,000	N	NMED		1.55E-02
Antimony	7440-36-0	mg/kg	0.15	J		NS	NS	519	N	NMED		2.89E-04
Arsenic	7440-38-2	mg/kg	1.3			36	N	208	N	NMED	3.62E-07	6.25E-03
Barium	7440-39-3	mg/kg	180			NS	NS	255,000	N	NMED		7.06E-04
Beryllium	7440-41-7	mg/kg	0.73	J		313,000	N	2,580	N	NMED	2.33E-11	2.83E-04
Cadmium	7440-43-9	mg/kg	0.19			417,000	N	1,110	N	NMED	4.56E-12	1.71E-04
Calcium	7440-70-2	mg/kg	22,000			NS	NS	32,400,000	N	NMED		6.79E-04
Chromium (Total) (2)	7440-47-3	mg/kg	12			505	N	314,000	N	NMED	2.38E-07	3.82E-05
Cobalt	7440-48-4	mg/kg	5.6			83,400	N	388	N	NMED	6.71E-10	1.44E-02
Copper	7440-50-8	mg/kg	28			NS	NS	51,900	N	NMED		5.39E-04
Iron	7439-89-6	mg/kg	12,000			NS	NS	908,000	N	NMED		1.32E-02
Lead	7439-92-1	mg/kg	7.9			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	7,500			NS	NS	5,680,000	N	NMED		1.32E-03
Manganese	7439-96-5	mg/kg	430			NS	NS	160,000	N	NMED		2.69E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.02	J		NS	NS	112	N	NMED		1.79E-04
Nickel	7440-02-0	mg/kg	11			2,890,000	N	25,700	N	NMED	3.81E-11	4.28E-04
Potassium	7440-09-7	mg/kg	1,500			NS	NS	76,200,000	N	NMED		1.97E-05
Selenium	7782-49-2	mg/kg	1.2			NS	NS	6,490	N	NMED		1.85E-04
Silver	7440-22-4	mg/kg	0.032	J		NS	NS	6,490	N	NMED		4.93E-06
Sodium	7440-23-5	mg/kg	61			NS	NS	37,300,000	N	NMED		1.64E-06
Thallium	7440-28-0	mg/kg	0.064	J		NS	NS	13	N	NMED		4.92E-03
Vanadium	7440-62-2	mg/kg	22			NS	NS	6,530	N	NMED		3.37E-03
Zinc	7440-66-6	mg/kg	25			NS	NS	38,900	N	NMED		6.43E-04
									Cumulative Risk/Hazard		**6E-07**	**0.07**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Industrial Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-T39-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID T39
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		626	N	2,420	N	NMEDC			

TABLE D1-T39-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID T39
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	20,000			NS	NS	41,400	N	NMED		4.83E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	J		NS	NS	142	N	NMED		1.06E-03	
Arsenic	7440-38-2	mg/kg	1.3			216	N	41	N	NMED	6.02E-08	3.16E-02	
Barium	7440-39-3	mg/kg	180			NS	NS	4,390	N	NMED		4.10E-02	
Beryllium	7440-41-7	mg/kg	0.73	J		2,710	N	148	N	NMED	2.69E-09	4.93E-03	
Cadmium	7440-43-9	mg/kg	0.19			3,610	N	72	N	NMED	5.26E-10	2.64E-03	
Calcium	7440-70-2	mg/kg	22,000			NS	NS	8,850,000	N	NMED		2.49E-03	
Chromium (Total) (3)	7440-47-3	mg/kg	12			468	N	134	N	NMED	2.56E-07	8.96E-02	
Cobalt	7440-48-4	mg/kg	5.6			722	N	37	N	NMED	7.76E-08	1.53E-01	Endocrine
Copper	7440-50-8	mg/kg	28			NS	NS	14,200	N	NMED		1.97E-03	
Iron	7439-89-6	mg/kg	12,000			NS	NS	248,000	N	NMED		4.84E-02	
Lead	7439-92-1	mg/kg	7.9			NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	7,500			NS	NS	1,550,000	N	NMED		4.84E-03	
Manganese	7439-96-5	mg/kg	430			NS	NS	464	N	NMED		9.27E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.02	J		NS	NS	21	N	NMED		9.66E-04	
Nickel	7440-02-0	mg/kg	11			20,500	N	753	N	NMED	5.37E-09	1.46E-02	
Potassium	7440-09-7	mg/kg	1,500			NS	NS	20,800,000	N	NMED		7.21E-05	
Selenium	7782-49-2	mg/kg	1.2			NS	NS	1,750	N	NMED		6.86E-04	
Silver	7440-22-4	mg/kg	0.032	J		NS	NS	1,770	N	NMED		1.81E-05	
Sodium	7440-23-5	mg/kg	61			NS	NS	10,200,000	N	NMED		5.98E-06	
Thallium	7440-28-0	mg/kg	0.064	J		NS	NS	4	N	NMED		1.81E-02	
Vanadium	7440-62-2	mg/kg	22			NS	NS	614	N	NMED		3.58E-02	
Zinc	7440-66-6	mg/kg	25			NS	NS	106,000	N	NMED		2.36E-04	
									Cumulative Risk/Hazard		**4E-07**	**1.9**	
									Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	1.4
Endocrine	0.15
All Others	0.30

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
N = no
NA = not applicable

NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-U28-1
GRID U28 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	2,200	N	RSL			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	6.3	N	RSL			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		211	N	36	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		3.56	N	18.5	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	7.7	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		31.6	N	70.4	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	6.16	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	7.64	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		333	N	247	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		83.1	N	301	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	156	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		60.4	N	131	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		313	N	6.16	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	3,850	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		1,300	N	570	N	RSL			

TABLE D1-U28-1
GRID U28 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	24,000			NS	NS	78,000	N	NMED		3.08E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15			NS	NS	31.3	N	NMED		4.79E-03	
Arsenic	7440-38-2	mg/kg	1.1			7.07	N	13	N	NMED	1.56E-06	8.46E-02	
Barium	7440-39-3	mg/kg	670			NS	NS	15,600	N	NMED		4.29E-02	
Beryllium	7440-41-7	mg/kg	1.1			64,400	N	156	N	NMED	1.71E-10	7.05E-03	
Cadmium	7440-43-9	mg/kg	0.2			85,900	N	70.5	N	NMED	2.33E-11	2.84E-03	
Calcium	7440-70-2	mg/kg	27,000			NS	NS	13,000,000	N	NMED		2.08E-03	
Chromium (Total) (2)	7440-47-3	mg/kg	14			96.6	N	45,200	N	NMED	1.45E-06	3.10E-04	
Cobalt	7440-48-4	mg/kg	6.6			17,200	N	23.4	N	NMED	3.84E-09	2.82E-01	Endocrine
Copper	7440-50-8	mg/kg	48	J		NS	NS	3,130	N	NMED		1.53E-02	
Iron	7439-89-6	mg/kg	15,000			NS	NS	54,800	N	NMED		2.74E-01	GI
Lead	7439-92-1	mg/kg	12			NS	NS	200	N	IEUBK			
Magnesium	7439-95-4	mg/kg	8,000			NS	NS	15,600,000	N	NMED		5.13E-04	
Manganese	7439-96-5	mg/kg	320			NS	NS	10,500	N	NMED		3.05E-02	
Mercury (Elemental)	7439-97-6	mg/kg	0.016	J		NS	NS	23.8	N	NMED		6.72E-04	
Nickel	7440-02-0	mg/kg	16			595,000	N	1,560	N	NMED	2.69E-10	1.03E-02	
Potassium	7440-09-7	mg/kg	3,000			NS	NS	15,600,000	N	NMED		1.92E-04	
Selenium	7782-49-2	mg/kg	1.6			NS	NS	391	N	NMED		4.09E-03	
Silver	7440-22-4	mg/kg	0.049	J		NS	NS	391	N	NMED		1.25E-04	
Sodium	7440-23-5	mg/kg	86			NS	NS	7,820,000	N	NMED		1.10E-05	
Thallium	7440-28-0	mg/kg	0.1			NS	NS	0.782	N	NMED		1.28E-01	Hair/Coat/Eyes
Vanadium	7440-62-2	mg/kg	17			NS	NS	394	N	NMED		4.31E-02	
Zinc	7440-66-6	mg/kg	26			NS	NS	23,500	N	NMED		1.11E-03	
									Cumulative Risk/Hazard		**3E-06**	**1.2**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Residential Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Residential Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	0.31
Endocrine	0.28
GI	0.27
Hair/Coat	0.13
Eyes	0.13
All Others	0.25

TABLE D1-U28-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID U28
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		5,300	N	7,400	N	RSL		

TABLE D1-U28-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID U28
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	24,000			NS	NS	1,290,000	N	NMED		1.86E-02
Antimony	7440-36-0	mg/kg	0.15			NS	NS	519	N	NMED		2.89E-04
Arsenic	7440-38-2	mg/kg	1.1			36	N	208	N	NMED	3.06E-07	5.29E-03
Barium	7440-39-3	mg/kg	670			NS	NS	255,000	N	NMED		2.63E-03
Beryllium	7440-41-7	mg/kg	1.1			313,000	N	2,580	N	NMED	3.51E-11	4.26E-04
Cadmium	7440-43-9	mg/kg	0.2			417,000	N	1,110	N	NMED	4.80E-12	1.80E-04
Calcium	7440-70-2	mg/kg	27,000			NS	NS	32,400,000	N	NMED		8.33E-04
Chromium (Total) (2)	7440-47-3	mg/kg	14			505	N	314,000	N	NMED	2.77E-07	4.46E-05
Cobalt	7440-48-4	mg/kg	6.6			83,400	N	388	N	NMED	7.91E-10	1.70E-02
Copper	7440-50-8	mg/kg	48	J		NS	NS	51,900	N	NMED		9.25E-04
Iron	7439-89-6	mg/kg	15,000			NS	NS	908,000	N	NMED		1.65E-02
Lead	7439-92-1	mg/kg	12			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	8,000			NS	NS	5,680,000	N	NMED		1.41E-03
Manganese	7439-96-5	mg/kg	320			NS	NS	160,000	N	NMED		2.00E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.016	J		NS	NS	112	N	NMED		1.43E-04
Nickel	7440-02-0	mg/kg	16			2,890,000	N	25,700	N	NMED	5.54E-11	6.23E-04
Potassium	7440-09-7	mg/kg	3,000			NS	NS	76,200,000	N	NMED		3.94E-05
Selenium	7782-49-2	mg/kg	1.6			NS	NS	6,490	N	NMED		2.47E-04
Silver	7440-22-4	mg/kg	0.049	J		NS	NS	6,490	N	NMED		7.55E-06
Sodium	7440-23-5	mg/kg	86			NS	NS	37,300,000	N	NMED		2.31E-06
Thallium	7440-28-0	mg/kg	0.1			NS	NS	13	N	NMED		7.69E-03
Vanadium	7440-62-2	mg/kg	17			NS	NS	6,530	N	NMED		2.60E-03
Zinc	7440-66-6	mg/kg	26			NS	NS	38,900	N	NMED		6.68E-04
									Cumulative Risk/Hazard		**6E-07**	**0.08**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Industrial Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-U28-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID U28
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		626	N	2,420	N	NMEDC			

TABLE D1-U28-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID U28
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	24,000			NS	NS	41,400	N	NMED		5.80E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15			NS	NS	142	N	NMED		1.06E-03	
Arsenic	7440-38-2	mg/kg	1.1			216	N	41	N	NMED	5.09E-08	2.67E-02	
Barium	7440-39-3	mg/kg	670			NS	NS	4,390	N	NMED		1.53E-01	Kidneys
Beryllium	7440-41-7	mg/kg	1.1			2,710	N	148	N	NMED	4.06E-09	7.43E-03	
Cadmium	7440-43-9	mg/kg	0.2			3,610	N	72	N	NMED	5.54E-10	2.77E-03	
Calcium	7440-70-2	mg/kg	27,000			NS	NS	8,850,000	N	NMED		3.05E-03	
Chromium (Total) (3)	7440-47-3	mg/kg	14			468	N	134	N	NMED	2.99E-07	1.04E-01	GI, Blood
Cobalt	7440-48-4	mg/kg	6.6			722	N	37	N	NMED	9.14E-08	1.80E-01	Endocrine
Copper	7440-50-8	mg/kg	48	J		NS	NS	14,200	N	NMED		3.38E-03	
Iron	7439-89-6	mg/kg	15,000			NS	NS	248,000	N	NMED		6.05E-02	
Lead	7439-92-1	mg/kg	12			NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	8,000			NS	NS	1,550,000	N	NMED		5.16E-03	
Manganese	7439-96-5	mg/kg	320			NS	NS	464	N	NMED		6.90E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.016	J		NS	NS	21	N	NMED		7.73E-04	
Nickel	7440-02-0	mg/kg	16			20,500	N	753	N	NMED	7.80E-09	2.12E-02	
Potassium	7440-09-7	mg/kg	3,000			NS	NS	20,800,000	N	NMED		1.44E-04	
Selenium	7782-49-2	mg/kg	1.6			NS	NS	1,750	N	NMED		9.14E-04	
Silver	7440-22-4	mg/kg	0.049	J		NS	NS	1,770	N	NMED		2.77E-05	
Sodium	7440-23-5	mg/kg	86			NS	NS	10,200,000	N	NMED		8.43E-06	
Thallium	7440-28-0	mg/kg	0.1			NS	NS	4	N	NMED		2.82E-02	
Vanadium	7440-62-2	mg/kg	17			NS	NS	614	N	NMED		2.77E-02	
Zinc	7440-66-6	mg/kg	26			NS	NS	106,000	N	NMED		2.45E-04	
									Cumulative Risk/Hazard		**5E-07**	**1.9**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	1.3
Endocrine	0.18
Kidneys	0.15
GI	0.10
Blood	0.10
All Others	0.19

TABLE D1-U32-1
GRID U32 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U		60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U		313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		1,300	N	570	N	RSL		

TABLE D1-U32-1
GRID U32 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	15,000			NS	NS	78,000	N	NMED		1.92E-01
Antimony	7440-36-0	mg/kg	0.22			NS	NS	31.3	N	NMED		7.03E-03
Arsenic	7440-38-2	mg/kg	1.2			7.07	N	13	N	NMED	1.70E-06	9.23E-02
Barium	7440-39-3	mg/kg	160			NS	NS	15,600	N	NMED		1.03E-02
Beryllium	7440-41-7	mg/kg	0.5	J		64,400	N	156	N	NMED	7.76E-11	3.21E-03
Cadmium	7440-43-9	mg/kg	0.47			85,900	N	70.5	N	NMED	5.47E-11	6.67E-03
Calcium	7440-70-2	mg/kg	2,500			NS	NS	13,000,000	N	NMED		1.92E-04
Chromium (Total) (2)	7440-47-3	mg/kg	11			96.6	N	45,200	N	NMED	1.14E-06	2.43E-04
Cobalt	7440-48-4	mg/kg	5			17,200	N	23.4	N	NMED	2.91E-09	2.14E-01
Copper	7440-50-8	mg/kg	96	J		NS	NS	3,130	N	NMED		3.07E-02
Iron	7439-89-6	mg/kg	9,600			NS	NS	54,800	N	NMED		1.75E-01
Lead	7439-92-1	mg/kg	11			NS	NS	200	N	IEUBK		
Magnesium	7439-95-4	mg/kg	5,600			NS	NS	15,600,000	N	NMED		3.59E-04
Manganese	7439-96-5	mg/kg	470			NS	NS	10,500	N	NMED		4.48E-02
Mercury (Elemental)	7439-97-6	mg/kg	0.039	J		NS	NS	23.8	N	NMED		1.64E-03
Nickel	7440-02-0	mg/kg	8.3			595,000	N	1,560	N	NMED	1.39E-10	5.32E-03
Potassium	7440-09-7	mg/kg	930			NS	NS	15,600,000	N	NMED		5.96E-05
Selenium	7782-49-2	mg/kg	0.86			NS	NS	391	N	NMED		2.20E-03
Silver	7440-22-4	mg/kg	0.06	J		NS	NS	391	N	NMED		1.53E-04
Sodium	7440-23-5	mg/kg	60			NS	NS	7,820,000	N	NMED		7.67E-06
Thallium	7440-28-0	mg/kg	0.052	J		NS	NS	0.782	N	NMED		6.65E-02
Vanadium	7440-62-2	mg/kg	20			NS	NS	394	N	NMED		5.08E-02
Zinc	7440-66-6	mg/kg	26			NS	NS	23,500	N	NMED		1.11E-03
									Cumulative Risk/Hazard		**3E-06**	**0.9**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Residential Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Residential Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-U32-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID U32
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		5,300	N	7,400	N	RSL		

TABLE D1-U32-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID U32
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	15,000			NS	NS	1,290,000	N	NMED		1.16E-02
Antimony	7440-36-0	mg/kg	0.22			NS	NS	519	N	NMED		4.24E-04
Arsenic	7440-38-2	mg/kg	1.2			36	N	208	N	NMED	3.34E-07	5.77E-03
Barium	7440-39-3	mg/kg	160			NS	NS	255,000	N	NMED		6.27E-04
Beryllium	7440-41-7	mg/kg	0.5	J		313,000	N	2,580	N	NMED	1.60E-11	1.94E-04
Cadmium	7440-43-9	mg/kg	0.47			417,000	N	1,110	N	NMED	1.13E-11	4.23E-04
Calcium	7440-70-2	mg/kg	2,500			NS	NS	32,400,000	N	NMED		7.72E-05
Chromium (Total) (2)	7440-47-3	mg/kg	11			505	N	314,000	N	NMED	2.18E-07	3.50E-05
Cobalt	7440-48-4	mg/kg	5			83,400	N	388	N	NMED	6.00E-10	1.29E-02
Copper	7440-50-8	mg/kg	96	J		NS	NS	51,900	N	NMED		1.85E-03
Iron	7439-89-6	mg/kg	9,600			NS	NS	908,000	N	NMED		1.06E-02
Lead	7439-92-1	mg/kg	11			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	5,600			NS	NS	5,680,000	N	NMED		9.86E-04
Manganese	7439-96-5	mg/kg	470			NS	NS	160,000	N	NMED		2.94E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.039	J		NS	NS	112	N	NMED		3.48E-04
Nickel	7440-02-0	mg/kg	8.3			2,890,000	N	25,700	N	NMED	2.87E-11	3.23E-04
Potassium	7440-09-7	mg/kg	930			NS	NS	76,200,000	N	NMED		1.22E-05
Selenium	7782-49-2	mg/kg	0.86			NS	NS	6,490	N	NMED		1.33E-04
Silver	7440-22-4	mg/kg	0.06	J		NS	NS	6,490	N	NMED		9.24E-06
Sodium	7440-23-5	mg/kg	60			NS	NS	37,300,000	N	NMED		1.61E-06
Thallium	7440-28-0	mg/kg	0.052	J		NS	NS	13	N	NMED		4.00E-03
Vanadium	7440-62-2	mg/kg	20			NS	NS	6,530	N	NMED		3.06E-03
Zinc	7440-66-6	mg/kg	26			NS	NS	38,900	N	NMED		6.68E-04
									Cumulative Risk/Hazard		**6E-07**	**0.06**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Industrial Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-U32-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID U32
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		626	N	2,420	N	NMEDC			

TABLE D1-U32-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID U32
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	15,000			NS	NS	41,400	N	NMED		3.62E-01	Nervous
Antimony	7440-36-0	mg/kg	0.22			NS	NS	142	N	NMED		1.55E-03	
Arsenic	7440-38-2	mg/kg	1.2			216	N	41	N	NMED	5.56E-08	2.91E-02	
Barium	7440-39-3	mg/kg	160			NS	NS	4,390	N	NMED		3.64E-02	
Beryllium	7440-41-7	mg/kg	0.5	J		2,710	N	148	N	NMED	1.85E-09	3.38E-03	
Cadmium	7440-43-9	mg/kg	0.47			3,610	N	72	N	NMED	1.30E-09	6.52E-03	
Calcium	7440-70-2	mg/kg	2,500			NS	NS	8,850,000	N	NMED		2.82E-04	
Chromium (Total) (3)	7440-47-3	mg/kg	11			468	N	134	N	NMED	2.35E-07	8.21E-02	
Cobalt	7440-48-4	mg/kg	5			722	N	37	N	NMED	6.93E-08	1.36E-01	Endocrine
Copper	7440-50-8	mg/kg	96	J		NS	NS	14,200	N	NMED		6.76E-03	
Iron	7439-89-6	mg/kg	9,600			NS	NS	248,000	N	NMED		3.87E-02	
Lead	7439-92-1	mg/kg	11			NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	5,600			NS	NS	1,550,000	N	NMED		3.61E-03	
Manganese	7439-96-5	mg/kg	470			NS	NS	464	Y	NMED		1.01E+00	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.039	J		NS	NS	21	N	NMED		1.88E-03	
Nickel	7440-02-0	mg/kg	8.3			20,500	N	753	N	NMED	4.05E-09	1.10E-02	
Potassium	7440-09-7	mg/kg	930			NS	NS	20,800,000	N	NMED		4.47E-05	
Selenium	7782-49-2	mg/kg	0.86			NS	NS	1,750	N	NMED		4.91E-04	
Silver	7440-22-4	mg/kg	0.06	J		NS	NS	1,770	N	NMED		3.39E-05	
Sodium	7440-23-5	mg/kg	60			NS	NS	10,200,000	N	NMED		5.88E-06	
Thallium	7440-28-0	mg/kg	0.052	J		NS	NS	4	N	NMED		1.47E-02	
Vanadium	7440-62-2	mg/kg	20			NS	NS	614	N	NMED		3.26E-02	
Zinc	7440-66-6	mg/kg	26			NS	NS	106,000	N	NMED		2.45E-04	
									Cumulative Risk/Hazard		**4E-07**	**1.8**	
									Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	1.4
Endocrine	0.14
All Others	0.27

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-U33-1
GRID U33 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U		60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U		313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		1,300	N	570	N	RSL		

TABLE D1-U33-1
GRID U33 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	11,000			NS	NS	78,000	N	NMED		1.41E-01
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	31.3	N	NMED		
Arsenic	7440-38-2	mg/kg	1.2			7.07	N	13	N	NMED	1.70E-06	9.23E-02
Barium	7440-39-3	mg/kg	210			NS	NS	15,600	N	NMED		1.35E-02
Beryllium	7440-41-7	mg/kg	0.48	J		64,400	N	156	N	NMED	7.45E-11	3.08E-03
Cadmium	7440-43-9	mg/kg	0.32			85,900	N	70.5	N	NMED	3.73E-11	4.54E-03
Calcium	7440-70-2	mg/kg	3,400			NS	NS	13,000,000	N	NMED		2.62E-04
Chromium (Total) (2)	7440-47-3	mg/kg	8.8			96.6	N	45,200	N	NMED	9.11E-07	1.95E-04
Cobalt	7440-48-4	mg/kg	4.3			17,200	N	23.4	N	NMED	2.50E-09	1.84E-01
Copper	7440-50-8	mg/kg	69	J		NS	NS	3,130	N	NMED		2.20E-02
Iron	7439-89-6	mg/kg	7,500			NS	NS	54,800	N	NMED		1.37E-01
Lead	7439-92-1	mg/kg	9			NS	NS	200	N	IEUBK		
Magnesium	7439-95-4	mg/kg	3,800			NS	NS	15,600,000	N	NMED		2.44E-04
Manganese	7439-96-5	mg/kg	340			NS	NS	10,500	N	NMED		3.24E-02
Mercury (Elemental)	7439-97-6	mg/kg	0.18			NS	NS	23.8	N	NMED		7.56E-03
Nickel	7440-02-0	mg/kg	7.2			595,000	N	1,560	N	NMED	1.21E-10	4.62E-03
Potassium	7440-09-7	mg/kg	1,000			NS	NS	15,600,000	N	NMED		6.41E-05
Selenium	7782-49-2	mg/kg	1.1			NS	NS	391	N	NMED		2.81E-03
Silver	7440-22-4	mg/kg	0.054	J		NS	NS	391	N	NMED		1.38E-04
Sodium	7440-23-5	mg/kg	48			NS	NS	7,820,000	N	NMED		6.14E-06
Thallium	7440-28-0	mg/kg	0.074	J		NS	NS	0.782	N	NMED		9.46E-02
Vanadium	7440-62-2	mg/kg	13			NS	NS	394	N	NMED		3.30E-02
Zinc	7440-66-6	mg/kg	24			NS	NS	23,500	N	NMED		1.02E-03
									Cumulative Risk/Hazard		**3E-06**	**0.8**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Residential Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Residential Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-U33-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID U33
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		5,300	N	7,400	N	RSL		

TABLE D1-U33-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID U33
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	11,000			NS	NS	1,290,000	N	NMED		8.53E-03
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	519	N	NMED		
Arsenic	7440-38-2	mg/kg	1.2			36	N	208	N	NMED	3.34E-07	5.77E-03
Barium	7440-39-3	mg/kg	210			NS	NS	255,000	N	NMED		8.24E-04
Beryllium	7440-41-7	mg/kg	0.48	J		313,000	N	2,580	N	NMED	1.53E-11	1.86E-04
Cadmium	7440-43-9	mg/kg	0.32			417,000	N	1,110	N	NMED	7.67E-12	2.88E-04
Calcium	7440-70-2	mg/kg	3,400			NS	NS	32,400,000	N	NMED		1.05E-04
Chromium (Total) (2)	7440-47-3	mg/kg	8.8			505	N	314,000	N	NMED	1.74E-07	2.80E-05
Cobalt	7440-48-4	mg/kg	4.3			83,400	N	388	N	NMED	5.16E-10	1.11E-02
Copper	7440-50-8	mg/kg	69	J		NS	NS	51,900	N	NMED		1.33E-03
Iron	7439-89-6	mg/kg	7,500			NS	NS	908,000	N	NMED		8.26E-03
Lead	7439-92-1	mg/kg	9			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	3,800			NS	NS	5,680,000	N	NMED		6.69E-04
Manganese	7439-96-5	mg/kg	340			NS	NS	160,000	N	NMED		2.13E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.18			NS	NS	112	N	NMED		1.61E-03
Nickel	7440-02-0	mg/kg	7.2			2,890,000	N	25,700	N	NMED	2.49E-11	2.80E-04
Potassium	7440-09-7	mg/kg	1,000			NS	NS	76,200,000	N	NMED		1.31E-05
Selenium	7782-49-2	mg/kg	1.1			NS	NS	6,490	N	NMED		1.69E-04
Silver	7440-22-4	mg/kg	0.054	J		NS	NS	6,490	N	NMED		8.32E-06
Sodium	7440-23-5	mg/kg	48			NS	NS	37,300,000	N	NMED		1.29E-06
Thallium	7440-28-0	mg/kg	0.074	J		NS	NS	13	N	NMED		5.69E-03
Vanadium	7440-62-2	mg/kg	13			NS	NS	6,530	N	NMED		1.99E-03
Zinc	7440-66-6	mg/kg	24			NS	NS	38,900	N	NMED		6.17E-04
									Cumulative Risk/Hazard		**5E-07**	**0.05**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Industrial Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-U33-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID U33
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		626	N	2,420	N	NMEDC			

TABLE D1-U33-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID U33
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	11,000			NS	NS	41,400	N	NMED		2.66E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	142	N	NMED			
Arsenic	7440-38-2	mg/kg	1.2			216	N	41	N	NMED	5.56E-08	2.91E-02	
Barium	7440-39-3	mg/kg	210			NS	NS	4,390	N	NMED		4.78E-02	
Beryllium	7440-41-7	mg/kg	0.48	J		2,710	N	148	N	NMED	1.77E-09	3.24E-03	
Cadmium	7440-43-9	mg/kg	0.32			3,610	N	72	N	NMED	8.86E-10	4.44E-03	
Calcium	7440-70-2	mg/kg	3,400			NS	NS	8,850,000	N	NMED		3.84E-04	
Chromium (Total) (3)	7440-47-3	mg/kg	8.8			468	N	134	N	NMED	1.88E-07	6.57E-02	
Cobalt	7440-48-4	mg/kg	4.3			722	N	37	N	NMED	5.96E-08	1.17E-01	Endocrine
Copper	7440-50-8	mg/kg	69	J		NS	NS	14,200	N	NMED		4.86E-03	
Iron	7439-89-6	mg/kg	7,500			NS	NS	248,000	N	NMED		3.02E-02	
Lead	7439-92-1	mg/kg	9			NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	3,800			NS	NS	1,550,000	N	NMED		2.45E-03	
Manganese	7439-96-5	mg/kg	340			NS	NS	464	N	NMED		7.33E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.18			NS	NS	21	N	NMED		8.70E-03	
Nickel	7440-02-0	mg/kg	7.2			20,500	N	753	N	NMED	3.51E-09	9.56E-03	
Potassium	7440-09-7	mg/kg	1,000			NS	NS	20,800,000	N	NMED		4.81E-05	
Selenium	7782-49-2	mg/kg	1.1			NS	NS	1,750	N	NMED		6.29E-04	
Silver	7440-22-4	mg/kg	0.054	J		NS	NS	1,770	N	NMED		3.05E-05	
Sodium	7440-23-5	mg/kg	48			NS	NS	10,200,000	N	NMED		4.71E-06	
Thallium	7440-28-0	mg/kg	0.074	J		NS	NS	4	N	NMED		2.09E-02	
Vanadium	7440-62-2	mg/kg	13			NS	NS	614	N	NMED		2.12E-02	
Zinc	7440-66-6	mg/kg	24			NS	NS	106,000	N	NMED		2.26E-04	
									Cumulative Risk/Hazard		**3E-07**	**1.4**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. " The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	1.00
Endocrine	0.12
All Others	0.25

TABLE D1-U35-1
GRID U35 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	2,200	N	RSL			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	6.3	N	RSL			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		211	N	36	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		3.56	N	18.5	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	7.7	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		31.6	N	70.4	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	6.16	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	7.64	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		333	N	247	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		83.1	N	301	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	156	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		60.4	N	131	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		313	N	6.16	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	3,850	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		1,300	N	570	N	RSL			

TABLE D1-U35-1
GRID U35 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	13,000			NS	NS	78,000	N	NMED		1.67E-01	Nervous
Antimony	7440-36-0	mg/kg	0.28			NS	NS	31.3	N	NMED		8.95E-03	
Arsenic	7440-38-2	mg/kg	2.2			7.07	N	13	N	NMED	3.11E-06	1.69E-01	Heart/Endocrine
Barium	7440-39-3	mg/kg	180			NS	NS	15,600	N	NMED		1.15E-02	
Beryllium	7440-41-7	mg/kg	0.65	J		64,400	N	156	N	NMED	1.01E-10	4.17E-03	
Cadmium	7440-43-9	mg/kg	0.39			85,900	N	70.5	N	NMED	4.54E-11	5.53E-03	
Calcium	7440-70-2	mg/kg	4,200			NS	NS	13,000,000	N	NMED		3.23E-04	
Chromium (Total) (2)	7440-47-3	mg/kg	11			96.6	N	45,200	N	NMED	1.14E-06	2.43E-04	
Cobalt	7440-48-4	mg/kg	5.6			17,200	N	23.4	N	NMED	3.26E-09	2.39E-01	Endocrine
Copper	7440-50-8	mg/kg	67			NS	NS	3,130	N	NMED		2.14E-02	
Iron	7439-89-6	mg/kg	9,700			NS	NS	54,800	N	NMED		1.77E-01	GI
Lead	7439-92-1	mg/kg	11			NS	NS	200	N	IEUBK			
Magnesium	7439-95-4	mg/kg	3,800			NS	NS	15,600,000	N	NMED		2.44E-04	
Manganese	7439-96-5	mg/kg	440			NS	NS	10,500	N	NMED		4.19E-02	
Mercury (Elemental)	7439-97-6	mg/kg	0.026	J		NS	NS	23.8	N	NMED		1.09E-03	
Nickel	7440-02-0	mg/kg	9.3			595,000	N	1,560	N	NMED	1.56E-10	5.96E-03	
Potassium	7440-09-7	mg/kg	1,400			NS	NS	15,600,000	N	NMED		8.97E-05	
Selenium	7782-49-2	mg/kg	1.3			NS	NS	391	N	NMED		3.32E-03	
Silver	7440-22-4	mg/kg	0.079	J		NS	NS	391	N	NMED		2.02E-04	
Sodium	7440-23-5	mg/kg	48			NS	NS	7,820,000	N	NMED		6.14E-06	
Thallium	7440-28-0	mg/kg	0.1			NS	NS	0.782	N	NMED		1.28E-01	Hair/Coat/Eyes
Vanadium	7440-62-2	mg/kg	19			NS	NS	394	N	NMED		4.82E-02	
Zinc	7440-66-6	mg/kg	27			NS	NS	23,500	N	NMED		1.15E-03	
									Cumulative Risk/Hazard		**4E-06**	**1.0**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Residential Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Residential Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	0.17
Endocrine	0.41
GI	0.18
Heart	0.17
Hair/Coat	0.13
Eyes	0.13
All Others	0.15

TABLE D1-U35-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID U35
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		5,300	N	7,400	N	RSL		

TABLE D1-U35-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID U35
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	13,000			NS	NS	1,290,000	N	NMED		1.01E-02
Antimony	7440-36-0	mg/kg	0.28			NS	NS	519	N	NMED		5.39E-04
Arsenic	7440-38-2	mg/kg	2.2			36	N	208	N	NMED	6.13E-07	1.06E-02
Barium	7440-39-3	mg/kg	180			NS	NS	255,000	N	NMED		7.06E-04
Beryllium	7440-41-7	mg/kg	0.65	J		313,000	N	2,580	N	NMED	2.08E-11	2.52E-04
Cadmium	7440-43-9	mg/kg	0.39			417,000	N	1,110	N	NMED	9.35E-12	3.51E-04
Calcium	7440-70-2	mg/kg	4,200			NS	NS	32,400,000	N	NMED		1.30E-04
Chromium (Total) (2)	7440-47-3	mg/kg	11			505	N	314,000	N	NMED	2.18E-07	3.50E-05
Cobalt	7440-48-4	mg/kg	5.6			83,400	N	388	N	NMED	6.71E-10	1.44E-02
Copper	7440-50-8	mg/kg	67			NS	NS	51,900	N	NMED		1.29E-03
Iron	7439-89-6	mg/kg	9,700			NS	NS	908,000	N	NMED		1.07E-02
Lead	7439-92-1	mg/kg	11			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	3,800			NS	NS	5,680,000	N	NMED		6.69E-04
Manganese	7439-96-5	mg/kg	440			NS	NS	160,000	N	NMED		2.75E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.026	J		NS	NS	112	N	NMED		2.32E-04
Nickel	7440-02-0	mg/kg	9.3			2,890,000	N	25,700	N	NMED	3.22E-11	3.62E-04
Potassium	7440-09-7	mg/kg	1,400			NS	NS	76,200,000	N	NMED		1.84E-05
Selenium	7782-49-2	mg/kg	1.3			NS	NS	6,490	N	NMED		2.00E-04
Silver	7440-22-4	mg/kg	0.079	J		NS	NS	6,490	N	NMED		1.22E-05
Sodium	7440-23-5	mg/kg	48			NS	NS	37,300,000	N	NMED		1.29E-06
Thallium	7440-28-0	mg/kg	0.1			NS	NS	13	N	NMED		7.69E-03
Vanadium	7440-62-2	mg/kg	19			NS	NS	6,530	N	NMED		2.91E-03
Zinc	7440-66-6	mg/kg	27			NS	NS	38,900	N	NMED		6.94E-04
									Cumulative Risk/Hazard		**8E-07**	**0.06**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Industrial Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-U35-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID U35
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		626	N	2,420	N	NMEDC			

TABLE D1-U35-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID U35
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	13,000			NS	NS	41,400	N	NMED		3.14E-01	Nervous
Antimony	7440-36-0	mg/kg	0.28			NS	NS	142	N	NMED		1.97E-03	
Arsenic	7440-38-2	mg/kg	2.2			216	N	41	N	NMED	1.02E-07	5.34E-02	
Barium	7440-39-3	mg/kg	180			NS	NS	4,390	N	NMED		4.10E-02	
Beryllium	7440-41-7	mg/kg	0.65	J		2,710	N	148	N	NMED	2.40E-09	4.39E-03	
Cadmium	7440-43-9	mg/kg	0.39			3,610	N	72	N	NMED	1.08E-09	5.41E-03	
Calcium	7440-70-2	mg/kg	4,200			NS	NS	8,850,000	N	NMED		4.75E-04	
Chromium (Total) (3)	7440-47-3	mg/kg	11			468	N	134	N	NMED	2.35E-07	8.21E-02	
Cobalt	7440-48-4	mg/kg	5.6			722	N	37	N	NMED	7.76E-08	1.53E-01	Endocrine
Copper	7440-50-8	mg/kg	67			NS	NS	14,200	N	NMED		4.72E-03	
Iron	7439-89-6	mg/kg	9,700			NS	NS	248,000	N	NMED		3.91E-02	
Lead	7439-92-1	mg/kg	11			NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	3,800			NS	NS	1,550,000	N	NMED		2.45E-03	
Manganese	7439-96-5	mg/kg	440			NS	NS	464	N	NMED		9.48E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.026	J		NS	NS	21	N	NMED		1.26E-03	
Nickel	7440-02-0	mg/kg	9.3			20,500	N	753	N	NMED	4.54E-09	1.24E-02	
Potassium	7440-09-7	mg/kg	1,400			NS	NS	20,800,000	N	NMED		6.73E-05	
Selenium	7782-49-2	mg/kg	1.3			NS	NS	1,750	N	NMED		7.43E-04	
Silver	7440-22-4	mg/kg	0.079	J		NS	NS	1,770	N	NMED		4.46E-05	
Sodium	7440-23-5	mg/kg	48			NS	NS	10,200,000	N	NMED		4.71E-06	
Thallium	7440-28-0	mg/kg	0.1			NS	NS	4	N	NMED		2.82E-02	
Vanadium	7440-62-2	mg/kg	19			NS	NS	614	N	NMED		3.09E-02	
Zinc	7440-66-6	mg/kg	27			NS	NS	106,000	N	NMED		2.55E-04	
									Cumulative Risk/Hazard		**4E-07**	**1.7**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent	NS = No Standard
CAS = Chemical Abstracts Service	RAG = Risk Assessment Guidance
HI = Hazard Index	SSL = soil screening level
J = Estimated	UJ = Estimated Nondetect
mg/kg = milligrams per kilogram	UTL = upper tolerance limit
N = no	Y = yes
NA = not applicable	

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	1.3
Endocrine	0.15
All Others	0.31

TABLE D1-U37-1
GRID U37 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	2,200	N	RSL			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	6.3	N	RSL			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		211	N	36	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		3.56	N	18.5	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	7.7	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		31.6	N	70.4	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	6.16	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	7.64	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		333	N	247	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		83.1	N	301	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	156	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		60.4	N	131	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		313	N	6.16	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	3,850	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		1,300	N	570	N	RSL			

TABLE D1-U37-1
GRID U37 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	13,000			NS	NS	78,000	N	NMED		1.67E-01	Nervous
Antimony	7440-36-0	mg/kg	0.3			NS	NS	31.3	N	NMED		9.58E-03	
Arsenic	7440-38-2	mg/kg	2.7			7.07	N	13	N	NMED	3.82E-06	2.08E-01	Heart/Endocrine
Barium	7440-39-3	mg/kg	190			NS	NS	15,600	N	NMED		1.22E-02	
Beryllium	7440-41-7	mg/kg	0.71	J		64,400	N	156	N	NMED	1.10E-10	4.55E-03	
Cadmium	7440-43-9	mg/kg	0.3			85,900	N	70.5	N	NMED	3.49E-11	4.26E-03	
Calcium	7440-70-2	mg/kg	4,600			NS	NS	13,000,000	N	NMED		3.54E-04	
Chromium (Total) (2)	7440-47-3	mg/kg	10			96.6	N	45,200	N	NMED	1.04E-06	2.21E-04	
Cobalt	7440-48-4	mg/kg	5.1			17,200	N	23.4	N	NMED	2.97E-09	2.18E-01	Endocrine
Copper	7440-50-8	mg/kg	37			NS	NS	3,130	N	NMED		1.18E-02	
Iron	7439-89-6	mg/kg	10,000			NS	NS	54,800	N	NMED		1.82E-01	GI
Lead	7439-92-1	mg/kg	10			NS	NS	200	N	IEUBK			
Magnesium	7439-95-4	mg/kg	3,400			NS	NS	15,600,000	N	NMED		2.18E-04	
Manganese	7439-96-5	mg/kg	390			NS	NS	10,500	N	NMED		3.71E-02	
Mercury (Elemental)	7439-97-6	mg/kg	0.021	J		NS	NS	23.8	N	NMED		8.82E-04	
Nickel	7440-02-0	mg/kg	8.8			595,000	N	1,560	N	NMED	1.48E-10	5.64E-03	
Potassium	7440-09-7	mg/kg	1,500			NS	NS	15,600,000	N	NMED		9.62E-05	
Selenium	7782-49-2	mg/kg	1.2			NS	NS	391	N	NMED		3.07E-03	
Silver	7440-22-4	mg/kg	0.067	J		NS	NS	391	N	NMED		1.71E-04	
Sodium	7440-23-5	mg/kg	41			NS	NS	7,820,000	N	NMED		5.24E-06	
Thallium	7440-28-0	mg/kg	0.09	J		NS	NS	0.782	N	NMED		1.15E-01	Hair/Coat/Eyes
Vanadium	7440-62-2	mg/kg	21			NS	NS	394	N	NMED		5.33E-02	
Zinc	7440-66-6	mg/kg	29			NS	NS	23,500	N	NMED		1.23E-03	
									Cumulative Risk/Hazard		**5E-06**	**1.0**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Residential Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Residential Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	0.17
Endocrine	0.43
Heart	0.21
GI	0.18
Hair/Coat	0.12
Eyes	0.12
All Others	0.14

TABLE D1-U37-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID U37
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		5,300	N	7,400	N	RSL		

TABLE D1-U37-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID U37
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	13,000			NS	NS	1,290,000	N	NMED		1.01E-02
Antimony	7440-36-0	mg/kg	0.3			NS	NS	519	N	NMED		5.78E-04
Arsenic	7440-38-2	mg/kg	2.7			36	N	208	N	NMED	7.52E-07	1.30E-02
Barium	7440-39-3	mg/kg	190			NS	NS	255,000	N	NMED		7.45E-04
Beryllium	7440-41-7	mg/kg	0.71	J		313,000	N	2,580	N	NMED	2.27E-11	2.75E-04
Cadmium	7440-43-9	mg/kg	0.3			417,000	N	1,110	N	NMED	7.19E-12	2.70E-04
Calcium	7440-70-2	mg/kg	4,600			NS	NS	32,400,000	N	NMED		1.42E-04
Chromium (Total) (2)	7440-47-3	mg/kg	10			505	N	314,000	N	NMED	1.98E-07	3.18E-05
Cobalt	7440-48-4	mg/kg	5.1			83,400	N	388	N	NMED	6.12E-10	1.31E-02
Copper	7440-50-8	mg/kg	37			NS	NS	51,900	N	NMED		7.13E-04
Iron	7439-89-6	mg/kg	10,000			NS	NS	908,000	N	NMED		1.10E-02
Lead	7439-92-1	mg/kg	10			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	3,400			NS	NS	5,680,000	N	NMED		5.99E-04
Manganese	7439-96-5	mg/kg	390			NS	NS	160,000	N	NMED		2.44E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.021	J		NS	NS	112	N	NMED		1.88E-04
Nickel	7440-02-0	mg/kg	8.8			2,890,000	N	25,700	N	NMED	3.04E-11	3.42E-04
Potassium	7440-09-7	mg/kg	1,500			NS	NS	76,200,000	N	NMED		1.97E-05
Selenium	7782-49-2	mg/kg	1.2			NS	NS	6,490	N	NMED		1.85E-04
Silver	7440-22-4	mg/kg	0.067	J		NS	NS	6,490	N	NMED		1.03E-05
Sodium	7440-23-5	mg/kg	41			NS	NS	37,300,000	N	NMED		1.10E-06
Thallium	7440-28-0	mg/kg	0.09	J		NS	NS	13	N	NMED		6.92E-03
Vanadium	7440-62-2	mg/kg	21			NS	NS	6,530	N	NMED		3.22E-03
Zinc	7440-66-6	mg/kg	29			NS	NS	38,900	N	NMED		7.46E-04
									Cumulative Risk/Hazard		**1E-06**	**0.06**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Industrial Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. " The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-U37-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID U37
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		626	N	2,420	N	NMEDC			

TABLE D1-U37-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID U37
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	13,000			NS	NS	41,400	N	NMED		3.14E-01	Nervous
Antimony	7440-36-0	mg/kg	0.3			NS	NS	142	N	NMED		2.11E-03	
Arsenic	7440-38-2	mg/kg	2.7			216	N	41	N	NMED		6.55E-02	
Barium	7440-39-3	mg/kg	190			NS	NS	4,390	N	NMED		4.33E-02	
Beryllium	7440-41-7	mg/kg	0.71	J		2,710	N	148	N	NMED		4.80E-03	
Cadmium	7440-43-9	mg/kg	0.3			3,610	N	72	N	NMED		4.16E-03	
Calcium	7440-70-2	mg/kg	4,600			NS	NS	8,850,000	N	NMED		5.20E-04	
Chromium (Total) (3)	7440-47-3	mg/kg	10			468	N	134	N	NMED		7.46E-02	
Cobalt	7440-48-4	mg/kg	5.1			722	N	37	N	NMED		1.39E-01	Endocrine
Copper	7440-50-8	mg/kg	37			NS	NS	14,200	N	NMED		2.61E-03	
Iron	7439-89-6	mg/kg	10,000			NS	NS	248,000	N	NMED		4.03E-02	
Lead	7439-92-1	mg/kg	10			NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	3,400			NS	NS	1,550,000	N	NMED		2.19E-03	
Manganese	7439-96-5	mg/kg	390			NS	NS	464	N	NMED		8.41E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.021	J		NS	NS	21	N	NMED		1.01E-03	
Nickel	7440-02-0	mg/kg	8.8			20,500	N	753	N	NMED		1.17E-02	
Potassium	7440-09-7	mg/kg	1,500			NS	NS	20,800,000	N	NMED		7.21E-05	
Selenium	7782-49-2	mg/kg	1.2			NS	NS	1,750	N	NMED		6.86E-04	
Silver	7440-22-4	mg/kg	0.067	J		NS	NS	1,770	N	NMED		3.79E-05	
Sodium	7440-23-5	mg/kg	41			NS	NS	10,200,000	N	NMED		4.02E-06	
Thallium	7440-28-0	mg/kg	0.09	J		NS	NS	4	N	NMED		2.54E-02	
Vanadium	7440-62-2	mg/kg	21			NS	NS	614	N	NMED		3.42E-02	
Zinc	7440-66-6	mg/kg	29			NS	NS	106,000	N	NMED		2.74E-04	
									Cumulative Risk/Hazard		**0E+00**	**1.6**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
NA = not applicable
N = no
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	1.2
Endocrine	0.14
All Others	0.31

TABLE D1-V30-1
GRID V30 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.15	UJ		NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.15	UJ		NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.15	UJ		211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.15	UJ		17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.15	UJ		3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.15	UJ		NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.15	UJ		31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.15	UJ		NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.15	UJ		NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.15	UJ		333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.15	UJ		83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.15	UJ		NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.15	UJ		60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.3	UJ		313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.15	UJ		NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.5	UJ		1,300	N	570	N	RSL		

TABLE D1-V30-1
GRID V30 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	17,000			NS	NS	78,000	N	NMED		2.18E-01
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	31.3	N	NMED		
Arsenic	7440-38-2	mg/kg	1.5			7.07	N	13	N	NMED	2.12E-06	1.15E-01
Barium	7440-39-3	mg/kg	230			NS	NS	15,600	N	NMED		1.47E-02
Beryllium	7440-41-7	mg/kg	0.69	J		64,400	N	156	N	NMED	1.07E-10	4.42E-03
Cadmium	7440-43-9	mg/kg	0.55			85,900	N	70.5	N	NMED	6.40E-11	7.80E-03
Calcium	7440-70-2	mg/kg	4,300			NS	NS	13,000,000	N	NMED		3.31E-04
Chromium (Total) (2)	7440-47-3	mg/kg	13			96.6	N	45,200	N	NMED	1.35E-06	2.88E-04
Cobalt	7440-48-4	mg/kg	5			17,200	N	23.4	N	NMED	2.91E-09	2.14E-01
Copper	7440-50-8	mg/kg	140			NS	NS	3,130	N	NMED		4.47E-02
Iron	7439-89-6	mg/kg	8,500			NS	NS	54,800	N	NMED		1.55E-01
Lead	7439-92-1	mg/kg	10			NS	NS	200	N	IEUBK		
Magnesium	7439-95-4	mg/kg	6,400			NS	NS	15,600,000	N	NMED		4.10E-04
Manganese	7439-96-5	mg/kg	440			NS	NS	10,500	N	NMED		4.19E-02
Mercury (Elemental)	7439-97-6	mg/kg	0.029	J		NS	NS	23.8	N	NMED		1.22E-03
Nickel	7440-02-0	mg/kg	9.9			595,000	N	1,560	N	NMED	1.66E-10	6.35E-03
Potassium	7440-09-7	mg/kg	1,200			NS	NS	15,600,000	N	NMED		7.69E-05
Selenium	7782-49-2	mg/kg	0.98			NS	NS	391	N	NMED		2.51E-03
Silver	7440-22-4	mg/kg	0.098	J		NS	NS	391	N	NMED		2.51E-04
Sodium	7440-23-5	mg/kg	51			NS	NS	7,820,000	N	NMED		6.52E-06
Thallium	7440-28-0	mg/kg	0.064	J		NS	NS	0.782	N	NMED		8.18E-02
Vanadium	7440-62-2	mg/kg	16			NS	NS	394	N	NMED		4.06E-02
Zinc	7440-66-6	mg/kg	31			NS	NS	23,500	N	NMED		1.32E-03
									Cumulative Risk/Hazard		**3E-06**	**0.95**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Resdential Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Residential Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-V30-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID V30
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[2]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.15	UJ		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.15	UJ		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.15	UJ		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.15	UJ		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.15	UJ		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.15	UJ		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.15	UJ		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.15	UJ		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.15	UJ		NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.15	UJ		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.15	UJ		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.15	UJ		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.15	UJ		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.3	UJ		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.15	UJ		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.5	UJ		5,300	N	7,400	N	RSL		

TABLE D1-V30-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID V30
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[2]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	17,000			NS	NS	1,290,000	N	NMED		1.32E-02
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	519	N	NMED		
Arsenic	7440-38-2	mg/kg	1.5			36	N	208	N	NMED	4.18E-07	7.21E-03
Barium	7440-39-3	mg/kg	230			NS	NS	255,000	N	NMED		9.02E-04
Beryllium	7440-41-7	mg/kg	0.69	J		313,000	N	2,580	N	NMED	2.20E-11	2.67E-04
Cadmium	7440-43-9	mg/kg	0.55			417,000	N	1,110	N	NMED	1.32E-11	4.95E-04
Calcium	7440-70-2	mg/kg	4,300			NS	NS	32,400,000	N	NMED		1.33E-04
Chromium (Total) (3)	7440-47-3	mg/kg	13			505	N	314,000	N	NMED	2.57E-07	4.14E-05
Cobalt	7440-48-4	mg/kg	5			83,400	N	388	N	NMED	6.00E-10	1.29E-02
Copper	7440-50-8	mg/kg	140			NS	NS	51,900	N	NMED		2.70E-03
Iron	7439-89-6	mg/kg	8,500			NS	NS	908,000	N	NMED		9.36E-03
Lead	7439-92-1	mg/kg	10			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	6,400			NS	NS	5,680,000	N	NMED		1.13E-03
Manganese	7439-96-5	mg/kg	440			NS	NS	160,000	N	NMED		2.75E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.029	J		NS	NS	112	N	NMED		2.59E-04
Nickel	7440-02-0	mg/kg	9.9			2,890,000	N	25,700	N	NMED	3.43E-11	3.85E-04
Potassium	7440-09-7	mg/kg	1,200			NS	NS	76,200,000	N	NMED		1.57E-05
Selenium	7782-49-2	mg/kg	0.98			NS	NS	6,490	N	NMED		1.51E-04
Silver	7440-22-4	mg/kg	0.098	J		NS	NS	6,490	N	NMED		1.51E-05
Sodium	7440-23-5	mg/kg	51			NS	NS	37,300,000	N	NMED		1.37E-06
Thallium	7440-28-0	mg/kg	0.064	J		NS	NS	13	N	NMED		4.92E-03
Vanadium	7440-62-2	mg/kg	16			NS	NS	6,530	N	NMED		2.45E-03
Zinc	7440-66-6	mg/kg	31			NS	NS	38,900	N	NMED		7.97E-04
									Cumulative Risk/Hazard		**7E-07**	**0.06**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Industrial Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-V30-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID V30
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.15	UJ		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.15	UJ		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.15	UJ		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.15	UJ		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.15	UJ		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.15	UJ		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.15	UJ		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.15	UJ		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.15	UJ		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.15	UJ		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.15	UJ		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.15	UJ		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.15	UJ		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.3	UJ		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.15	UJ		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.5	UJ		626	N	2,420	N	NMEDC			

TABLE D1-V30-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID V30
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	17,000			NS	NS	41,400	N	NMED		4.11E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	142	N	NMED			
Arsenic	7440-38-2	mg/kg	1.5			216	N	41	N	NMED		3.64E-02	
Barium	7440-39-3	mg/kg	230			NS	NS	4,390	N	NMED		5.24E-02	
Beryllium	7440-41-7	mg/kg	0.69	J		2,710	N	148	N	NMED		4.66E-03	
Cadmium	7440-43-9	mg/kg	0.55			3,610	N	72	N	NMED		7.63E-03	
Calcium	7440-70-2	mg/kg	4,300			NS	NS	8,850,000	N	NMED		4.86E-04	
Chromium (Total) (3)	7440-47-3	mg/kg	13			468	N	134	N	NMED		9.70E-02	
Cobalt	7440-48-4	mg/kg	5			722	N	37	N	NMED		1.36E-01	Endocrine
Copper	7440-50-8	mg/kg	140			NS	NS	14,200	N	NMED		9.86E-03	
Iron	7439-89-6	mg/kg	8,500			NS	NS	248,000	N	NMED		3.43E-02	
Lead	7439-92-1	mg/kg	10			NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	6,400			NS	NS	1,550,000	N	NMED		4.13E-03	
Manganese	7439-96-5	mg/kg	440			NS	NS	464	N	NMED		9.48E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.029	J		NS	NS	21	N	NMED		1.40E-03	
Nickel	7440-02-0	mg/kg	9.9			20,500	N	753	N	NMED		1.31E-02	
Potassium	7440-09-7	mg/kg	1,200			NS	NS	20,800,000	N	NMED		5.77E-05	
Selenium	7782-49-2	mg/kg	0.98			NS	NS	1,750	N	NMED		5.60E-04	
Silver	7440-22-4	mg/kg	0.098	J		NS	NS	1,770	N	NMED		5.54E-05	
Sodium	7440-23-5	mg/kg	51			NS	NS	10,200,000	N	NMED		5.00E-06	
Thallium	7440-28-0	mg/kg	0.064	J		NS	NS	4	N	NMED		1.81E-02	
Vanadium	7440-62-2	mg/kg	16			NS	NS	614	N	NMED		2.61E-02	
Zinc	7440-66-6	mg/kg	31			NS	NS	106,000	N	NMED		2.92E-04	
									Cumulative Risk/Hazard		**0E+00**	**1.8**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	1.4
Endocrine	0.14
All Others	0.31

TABLE D1-V33-1
GRID V33 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	2,200	N	RSL			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	6.3	N	RSL			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		211	N	36	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		3.56	N	18.5	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	7.7	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		31.6	N	70.4	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	6.16	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	7.64	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		333	N	247	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		83.1	N	301	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	156	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U		60.4	N	131	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U		313	N	6.16	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	3,850	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		1,300	N	570	N	RSL			

TABLE D1-V33-1
GRID V33 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	14,000			NS	NS	78,000	N	NMED		1.79E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	31.3	N	NMED			
Arsenic	7440-38-2	mg/kg	1.4			7.07	N	13	N	NMED	1.98E-06	1.08E-01	Heart/Endocrine
Barium	7440-39-3	mg/kg	200			NS	NS	15,600	N	NMED		1.28E-02	
Beryllium	7440-41-7	mg/kg	0.48	J		64,400	N	156	N	NMED	7.45E-11	3.08E-03	
Cadmium	7440-43-9	mg/kg	0.36			85,900	N	70.5	N	NMED	4.19E-11	5.11E-03	
Calcium	7440-70-2	mg/kg	2,700			NS	NS	13,000,000	N	NMED		2.08E-04	
Chromium (Total) (2)	7440-47-3	mg/kg	11			96.6	N	45,200	N	NMED	1.14E-06	2.43E-04	
Cobalt	7440-48-4	mg/kg	4.8			17,200	N	23.4	N	NMED	2.79E-09	2.05E-01	Endocrine
Copper	7440-50-8	mg/kg	80	J		NS	NS	3,130	N	NMED		2.56E-02	
Iron	7439-89-6	mg/kg	9,000			NS	NS	54,800	N	NMED		1.64E-01	GI
Lead	7439-92-1	mg/kg	11			NS	NS	200	N	IEUBK			
Magnesium	7439-95-4	mg/kg	5,000			NS	NS	15,600,000	N	NMED		3.21E-04	
Manganese	7439-96-5	mg/kg	390			NS	NS	10,500	N	NMED		3.71E-02	
Mercury (Elemental)	7439-97-6	mg/kg	0.023	J		NS	NS	23.8	N	NMED		9.66E-04	
Nickel	7440-02-0	mg/kg	8.8			595,000	N	1,560	N	NMED	1.48E-10	5.64E-03	
Potassium	7440-09-7	mg/kg	1,100			NS	NS	15,600,000	N	NMED		7.05E-05	
Selenium	7782-49-2	mg/kg	1.1			NS	NS	391	N	NMED		2.81E-03	
Silver	7440-22-4	mg/kg	0.059	J		NS	NS	391	N	NMED		1.51E-04	
Sodium	7440-23-5	mg/kg	55			NS	NS	7,820,000	N	NMED		7.03E-06	
Thallium	7440-28-0	mg/kg	0.064	J		NS	NS	0.782	N	NMED		8.18E-02	
Vanadium	7440-62-2	mg/kg	15			NS	NS	394	N	NMED		3.81E-02	
Zinc	7440-66-6	mg/kg	30			NS	NS	23,500	N	NMED		1.28E-03	
									Cumulative Risk/Hazard		**3E-06**	**0.9**	
									Exceeds Target Level		**N**	**N**	

Notes:

[1] NMED = New Mexico Environment Department Residential Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Residential Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	0.18
Endocrine	0.31
Heart	0.11
GI	0.16
All Others	0.22

TABLE D1-V33-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID V33
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		5,300	N	7,400	N	RSL		

TABLE D1-V33-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID V33
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	14,000			NS	NS	1,290,000	N	NMED		1.09E-02
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	519	N	NMED		
Arsenic	7440-38-2	mg/kg	1.4			36	N	208	N	NMED	3.90E-07	6.73E-03
Barium	7440-39-3	mg/kg	200			NS	NS	255,000	N	NMED		7.84E-04
Beryllium	7440-41-7	mg/kg	0.48	J		313,000	N	2,580	N	NMED	1.53E-11	1.86E-04
Cadmium	7440-43-9	mg/kg	0.36			417,000	N	1,110	N	NMED	8.63E-12	3.24E-04
Calcium	7440-70-2	mg/kg	2,700			NS	NS	32,400,000	N	NMED		8.33E-05
Chromium (Total) (2)	7440-47-3	mg/kg	11			505	N	314,000	N	NMED	2.18E-07	3.50E-05
Cobalt	7440-48-4	mg/kg	4.8			83,400	N	388	N	NMED	5.76E-10	1.24E-02
Copper	7440-50-8	mg/kg	80	J		NS	NS	51,900	N	NMED		1.54E-03
Iron	7439-89-6	mg/kg	9,000			NS	NS	908,000	N	NMED		9.91E-03
Lead	7439-92-1	mg/kg	11			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	5,000			NS	NS	5,680,000	N	NMED		8.80E-04
Manganese	7439-96-5	mg/kg	390			NS	NS	160,000	N	NMED		2.44E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.023	J		NS	NS	112	N	NMED		2.05E-04
Nickel	7440-02-0	mg/kg	8.8			2,890,000	N	25,700	N	NMED	3.04E-11	3.42E-04
Potassium	7440-09-7	mg/kg	1,100			NS	NS	76,200,000	N	NMED		1.44E-05
Selenium	7782-49-2	mg/kg	1.1			NS	NS	6,490	N	NMED		1.69E-04
Silver	7440-22-4	mg/kg	0.059	J		NS	NS	6,490	N	NMED		9.09E-06
Sodium	7440-23-5	mg/kg	55			NS	NS	37,300,000	N	NMED		1.47E-06
Thallium	7440-28-0	mg/kg	0.064	J		NS	NS	13	N	NMED		4.92E-03
Vanadium	7440-62-2	mg/kg	15			NS	NS	6,530	N	NMED		2.30E-03
Zinc	7440-66-6	mg/kg	30			NS	NS	38,900	N	NMED		7.71E-04
									Cumulative Risk/Hazard		**6E-07**	**0.05**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Industrial Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-V33-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID V33
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		626	N	2,420	N	NMEDC			

TABLE D1-V33-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID V33
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	14,000			NS	NS	41,400	N	NMED		3.38E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	142	N	NMED			
Arsenic	7440-38-2	mg/kg	1.4			216	N	41	N	NMED	6.48E-08	3.40E-02	
Barium	7440-39-3	mg/kg	200			NS	NS	4,390	N	NMED		4.56E-02	
Beryllium	7440-41-7	mg/kg	0.48	J		2,710	N	148	N	NMED	1.77E-09	3.24E-03	
Cadmium	7440-43-9	mg/kg	0.36			3,610	N	72	N	NMED	9.97E-10	4.99E-03	
Calcium	7440-70-2	mg/kg	2,700			NS	NS	8,850,000	N	NMED		3.05E-04	
Chromium (Total) (3)	7440-47-3	mg/kg	11			468	N	134	N	NMED	2.35E-07	8.21E-02	
Cobalt	7440-48-4	mg/kg	4.8			722	N	37	N	NMED	6.65E-08	1.31E-01	Endocrine
Copper	7440-50-8	mg/kg	80	J		NS	NS	14,200	N	NMED		5.63E-03	
Iron	7439-89-6	mg/kg	9,000			NS	NS	248,000	N	NMED		3.63E-02	
Lead	7439-92-1	mg/kg	11			NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	5,000			NS	NS	1,550,000	N	NMED		3.23E-03	
Manganese	7439-96-5	mg/kg	390			NS	NS	464	N	NMED		8.41E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.023	J		NS	NS	21	N	NMED		1.11E-03	
Nickel	7440-02-0	mg/kg	8.8			20,500	N	753	N	NMED	4.29E-09	1.17E-02	
Potassium	7440-09-7	mg/kg	1,100			NS	NS	20,800,000	N	NMED		5.29E-05	
Selenium	7782-49-2	mg/kg	1.1			NS	NS	1,750	N	NMED		6.29E-04	
Silver	7440-22-4	mg/kg	0.059	J		NS	NS	1,770	N	NMED		3.33E-05	
Sodium	7440-23-5	mg/kg	55			NS	NS	10,200,000	N	NMED		5.39E-06	
Thallium	7440-28-0	mg/kg	0.064	J		NS	NS	4	N	NMED		1.81E-02	
Vanadium	7440-62-2	mg/kg	15			NS	NS	614	N	NMED		2.44E-02	
Zinc	7440-66-6	mg/kg	30			NS	NS	106,000	N	NMED		2.83E-04	
									Cumulative Risk/Hazard		**4E-07**	**1.6**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	1.2
Endocrine	0.13
All Others	0.27

TABLE D1-V36-1
GRID V36 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		1,300	N	570	N	RSL		

TABLE D1-V36-1
GRID V36 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	12,000			NS	NS	78,000	N	NMED		1.54E-01
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	31.3	N	NMED		
Arsenic	7440-38-2	mg/kg	2.2			7.07	N	13	N	NMED	3.11E-06	1.69E-01
Barium	7440-39-3	mg/kg	200			NS	NS	15,600	N	NMED		1.28E-02
Beryllium	7440-41-7	mg/kg	0.7	J		64,400	N	156	N	NMED	1.09E-10	4.49E-03
Cadmium	7440-43-9	mg/kg	0.28			85,900	N	70.5	N	NMED	3.26E-11	3.97E-03
Calcium	7440-70-2	mg/kg	4,200			NS	NS	13,000,000	N	NMED		3.23E-04
Chromium (Total) (2)	7440-47-3	mg/kg	9.7			96.6	N	45,200	N	NMED	1.00E-06	2.15E-04
Cobalt	7440-48-4	mg/kg	5.3			17,200	N	23.4	N	NMED	3.08E-09	2.26E-01
Copper	7440-50-8	mg/kg	41			NS	NS	3,130	N	NMED		1.31E-02
Iron	7439-89-6	mg/kg	9,700			NS	NS	54,800	N	NMED		1.77E-01
Lead	7439-92-1	mg/kg	11			NS	NS	200	N	IEUBK		
Magnesium	7439-95-4	mg/kg	3,300			NS	NS	15,600,000	N	NMED		2.12E-04
Manganese	7439-96-5	mg/kg	410			NS	NS	10,500	N	NMED		3.90E-02
Mercury (Elemental)	7439-97-6	mg/kg	0.019	J		NS	NS	23.8	N	NMED		7.98E-04
Nickel	7440-02-0	mg/kg	8.6			595,000	N	1,560	N	NMED	1.45E-10	5.51E-03
Potassium	7440-09-7	mg/kg	1,400			NS	NS	15,600,000	N	NMED		8.97E-05
Selenium	7782-49-2	mg/kg	1.2			NS	NS	391	N	NMED		3.07E-03
Silver	7440-22-4	mg/kg	0.06	J		NS	NS	391	N	NMED		1.53E-04
Sodium	7440-23-5	mg/kg	45			NS	NS	7,820,000	N	NMED		5.75E-06
Thallium	7440-28-0	mg/kg	0.087	J		NS	NS	0.782	N	NMED		1.11E-01
Vanadium	7440-62-2	mg/kg	19			NS	NS	394	N	NMED		4.82E-02
Zinc	7440-66-6	mg/kg	31			NS	NS	23,500	N	NMED		1.32E-03
									Cumulative Risk/Hazard		**4E-06**	**0.97**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Residential Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Residential Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-V36-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID V36
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		5,300	N	7,400	N	RSL		

TABLE D1-V36-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID V36
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	12,000			NS	NS	1,290,000	N	NMED		9.30E-03
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	519	N	NMED		
Arsenic	7440-38-2	mg/kg	2.2			36	N	208	N	NMED	6.13E-07	1.06E-02
Barium	7440-39-3	mg/kg	200			NS	NS	255,000	N	NMED		7.84E-04
Beryllium	7440-41-7	mg/kg	0.7	J		313,000	N	2,580	N	NMED	2.24E-11	2.71E-04
Cadmium	7440-43-9	mg/kg	0.28			417,000	N	1,110	N	NMED	6.71E-12	2.52E-04
Calcium	7440-70-2	mg/kg	4,200			NS	NS	32,400,000	N	NMED		1.30E-04
Chromium (Total) (2)	7440-47-3	mg/kg	9.7			505	N	314,000	N	NMED	1.92E-07	3.09E-05
Cobalt	7440-48-4	mg/kg	5.3			83,400	N	388	N	NMED	6.35E-10	1.37E-02
Copper	7440-50-8	mg/kg	41			NS	NS	51,900	N	NMED		7.90E-04
Iron	7439-89-6	mg/kg	9,700			NS	NS	908,000	N	NMED		1.07E-02
Lead	7439-92-1	mg/kg	11			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	3,300			NS	NS	5,680,000	N	NMED		5.81E-04
Manganese	7439-96-5	mg/kg	410			NS	NS	160,000	N	NMED		2.56E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.019	J		NS	NS	112	N	NMED		1.70E-04
Nickel	7440-02-0	mg/kg	8.6			2,890,000	N	25,700	N	NMED	2.98E-11	3.35E-04
Potassium	7440-09-7	mg/kg	1,400			NS	NS	76,200,000	N	NMED		1.84E-05
Selenium	7782-49-2	mg/kg	1.2			NS	NS	6,490	N	NMED		1.85E-04
Silver	7440-22-4	mg/kg	0.06	J		NS	NS	6,490	N	NMED		9.24E-06
Sodium	7440-23-5	mg/kg	45			NS	NS	37,300,000	N	NMED		1.21E-06
Thallium	7440-28-0	mg/kg	0.087	J		NS	NS	13	N	NMED		6.69E-03
Vanadium	7440-62-2	mg/kg	19			NS	NS	6,530	N	NMED		2.91E-03
Zinc	7440-66-6	mg/kg	31			NS	NS	38,900	N	NMED		7.97E-04
									Cumulative Risk/Hazard		**8E-07**	**0.06**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Industrial Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-V36-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID V36
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		626	N	2,420	N	NMEDC			

TABLE D1-V36-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID V36
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	12,000			NS	NS	41,400	N	NMED		2.90E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	142	N	NMED			
Arsenic	7440-38-2	mg/kg	2.2			216	N	41	N	NMED	1.02E-07	5.34E-02	
Barium	7440-39-3	mg/kg	200			NS	NS	4,390	N	NMED		4.56E-02	
Beryllium	7440-41-7	mg/kg	0.7	J		2,710	N	148	N	NMED	2.58E-09	4.73E-03	
Cadmium	7440-43-9	mg/kg	0.28			3,610	N	72	N	NMED	7.76E-10	3.88E-03	
Calcium	7440-70-2	mg/kg	4,200			NS	NS	8,850,000	N	NMED		4.75E-04	
Chromium (Total) (3)	7440-47-3	mg/kg	9.7			468	N	134	N	NMED	2.07E-07	7.24E-02	
Cobalt	7440-48-4	mg/kg	5.3			722	N	37	N	NMED	7.34E-08	1.44E-01	Endocrine
Copper	7440-50-8	mg/kg	41			NS	NS	14,200	N	NMED		2.89E-03	
Iron	7439-89-6	mg/kg	9,700			NS	NS	248,000	N	NMED		3.91E-02	
Lead	7439-92-1	mg/kg	11			NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	3,300			NS	NS	1,550,000	N	NMED		2.13E-03	
Manganese	7439-96-5	mg/kg	410			NS	NS	464	N	NMED		8.84E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.019	J		NS	NS	21	N	NMED		9.18E-04	
Nickel	7440-02-0	mg/kg	8.6			20,500	N	753	N	NMED	4.20E-09	1.14E-02	
Potassium	7440-09-7	mg/kg	1,400			NS	NS	20,800,000	N	NMED		6.73E-05	
Selenium	7782-49-2	mg/kg	1.2			NS	NS	1,750	N	NMED		6.86E-04	
Silver	7440-22-4	mg/kg	0.06	J		NS	NS	1,770	N	NMED		3.39E-05	
Sodium	7440-23-5	mg/kg	45			NS	NS	10,200,000	N	NMED		4.41E-06	
Thallium	7440-28-0	mg/kg	0.087	J		NS	NS	4	N	NMED		2.46E-02	
Vanadium	7440-62-2	mg/kg	19			NS	NS	614	N	NMED		3.09E-02	
Zinc	7440-66-6	mg/kg	31			NS	NS	106,000	N	NMED		2.92E-04	
									Cumulative Risk/Hazard		**4E-07**	**1.6**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent	NS = No Standard
CAS = Chemical Abstracts Service	RAG = Risk Assessment Guidance
HI = Hazard Index	SSL = soil screening level
J = Estimated	U = Nondetect
mg/kg = milligrams per kilogram	UJ = Estimated Nondetect
N = no	UTL = upper tolerance limit
NA = not applicable	Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	1.2
Endocrine	0.14
All Others	0.29

TABLE D1-W26-1
GRID W26 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	2,200	N	RSL			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	6.3	N	RSL			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		211	N	36	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		3.56	N	18.5	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	7.7	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		31.6	N	70.4	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	6.16	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	7.64	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		333	N	247	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		83.1	N	301	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	156	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		60.4	N	131	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		313	N	6.16	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	3,850	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		1,300	N	570	N	RSL			

TABLE D1-W26-1
GRID W26 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	25,000			NS	NS	78,000	N	NMED		3.21E-01	Nervous
Antimony	7440-36-0	mg/kg	0.16	J		NS	NS	31.3	N	NMED		5.11E-03	
Arsenic	7440-38-2	mg/kg	1.5			7.07	N	13	N	NMED	2.12E-06	1.15E-01	Heart/Endocrine
Barium	7440-39-3	mg/kg	420			NS	NS	15,600	N	NMED		2.69E-02	
Beryllium	7440-41-7	mg/kg	0.76	J		64,400	N	156	N	NMED	1.18E-10	4.87E-03	
Cadmium	7440-43-9	mg/kg	0.59			85,900	N	70.5	N	NMED	6.87E-11	8.37E-03	
Calcium	7440-70-2	mg/kg	7,500			NS	NS	13,000,000	N	NMED		5.77E-04	
Chromium (Total) (2)	7440-47-3	mg/kg	19			96.6	N	45,200	N	NMED	1.97E-06	4.20E-04	
Cobalt	7440-48-4	mg/kg	6.8			17,200	N	23.4	N	NMED	3.95E-09	2.91E-01	Endocrine
Copper	7440-50-8	mg/kg	120			NS	NS	3,130	N	NMED		3.83E-02	
Iron	7439-89-6	mg/kg	16,000			NS	NS	54,800	N	NMED		2.92E-01	GI
Lead	7439-92-1	mg/kg	17			NS	NS	200	N	IEUBK			
Magnesium	7439-95-4	mg/kg	8,600			NS	NS	15,600,000	N	NMED		5.51E-04	
Manganese	7439-96-5	mg/kg	520			NS	NS	10,500	N	NMED		4.95E-02	
Mercury (Elemental)	7439-97-6	mg/kg	0.036	J		NS	NS	23.8	N	NMED		1.51E-03	
Nickel	7440-02-0	mg/kg	14			595,000	N	1,560	N	NMED	2.35E-10	8.97E-03	
Potassium	7440-09-7	mg/kg	1,900			NS	NS	15,600,000	N	NMED		1.22E-04	
Selenium	7782-49-2	mg/kg	1.3			NS	NS	391	N	NMED		3.32E-03	
Silver	7440-22-4	mg/kg	0.16			NS	NS	391	N	NMED		4.09E-04	
Sodium	7440-23-5	mg/kg	63			NS	NS	7,820,000	N	NMED		8.06E-06	
Thallium	7440-28-0	mg/kg	0.088	J		NS	NS	0.782	N	NMED		1.13E-01	Hair/Coat/Eyes
Vanadium	7440-62-2	mg/kg	27			NS	NS	394	N	NMED		6.85E-02	
Zinc	7440-66-6	mg/kg	38			NS	NS	23,500	N	NMED		1.62E-03	
									Cumulative Risk/Hazard		**4E-06**	**1.4**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Residential Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Residential Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	0.32
Endocrine	0.41
Heart	0.12
GI	0.29
Hair/Coat	0.11
Eyes	0.11
All Others	0.22

TABLE D1-W26-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID W26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		5,300	N	7,400	N	RSL		

TABLE D1-W26-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID W26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	25,000			NS	NS	1,290,000	N	NMED		1.94E-02
Antimony	7440-36-0	mg/kg	0.16	J		NS	NS	519	N	NMED		3.08E-04
Arsenic	7440-38-2	mg/kg	1.5			36	N	208	N	NMED	4.18E-07	7.21E-03
Barium	7440-39-3	mg/kg	420			NS	NS	255,000	N	NMED		1.65E-03
Beryllium	7440-41-7	mg/kg	0.76	J		313,000	N	2,580	N	NMED	2.43E-11	2.95E-04
Cadmium	7440-43-9	mg/kg	0.59			417,000	N	1,110	N	NMED	1.41E-11	5.32E-04
Calcium	7440-70-2	mg/kg	7,500			NS	NS	32,400,000	N	NMED		2.31E-04
Chromium (Total) (2)	7440-47-3	mg/kg	19			505	N	314,000	N	NMED	3.76E-07	6.05E-05
Cobalt	7440-48-4	mg/kg	6.8			83,400	N	388	N	NMED	8.15E-10	1.75E-02
Copper	7440-50-8	mg/kg	120			NS	NS	51,900	N	NMED		2.31E-03
Iron	7439-89-6	mg/kg	16,000			NS	NS	908,000	N	NMED		1.76E-02
Lead	7439-92-1	mg/kg	17			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	8,600			NS	NS	5,680,000	N	NMED		1.51E-03
Manganese	7439-96-5	mg/kg	520			NS	NS	160,000	N	NMED		3.25E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.036	J		NS	NS	112	N	NMED		3.21E-04
Nickel	7440-02-0	mg/kg	14			2,890,000	N	25,700	N	NMED	4.84E-11	5.45E-04
Potassium	7440-09-7	mg/kg	1,900			NS	NS	76,200,000	N	NMED		2.49E-05
Selenium	7782-49-2	mg/kg	1.3			NS	NS	6,490	N	NMED		2.00E-04
Silver	7440-22-4	mg/kg	0.16			NS	NS	6,490	N	NMED		2.47E-05
Sodium	7440-23-5	mg/kg	63			NS	NS	37,300,000	N	NMED		1.69E-06
Thallium	7440-28-0	mg/kg	0.088	J		NS	NS	13	N	NMED		6.77E-03
Vanadium	7440-62-2	mg/kg	27			NS	NS	6,530	N	NMED		4.13E-03
Zinc	7440-66-6	mg/kg	38			NS	NS	38,900	N	NMED		9.77E-04
									Cumulative Risk/Hazard		**8E-07**	**0.08**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Industrial Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-W26-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID W26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		626	N	2,420	N	NMEDC			

TABLE D1-W26-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID W26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	25,000			NS	NS	41,400	N	NMED		6.04E-01	Nervous
Antimony	7440-36-0	mg/kg	0.16	J		NS	NS	142	N	NMED		1.13E-03	
Arsenic	7440-38-2	mg/kg	1.5			216	N	41	N	NMED	6.94E-08	3.64E-02	
Barium	7440-39-3	mg/kg	420			NS	NS	4,390	N	NMED		9.57E-02	
Beryllium	7440-41-7	mg/kg	0.76	J		2,710	N	148	N	NMED	2.80E-09	5.14E-03	
Cadmium	7440-43-9	mg/kg	0.59			3,610	N	72	N	NMED	1.63E-09	8.18E-03	
Calcium	7440-70-2	mg/kg	7,500			NS	NS	8,850,000	N	NMED		8.47E-04	
Chromium (Total) (3)	7440-47-3	mg/kg	19			468	N	134	N	NMED	4.06E-07	1.42E-01	GI, Blood
Cobalt	7440-48-4	mg/kg	6.8			722	N	37	N	NMED	9.42E-08	1.85E-01	Endocrine
Copper	7440-50-8	mg/kg	120			NS	NS	14,200	N	NMED		8.45E-03	
Iron	7439-89-6	mg/kg	16,000			NS	NS	248,000	N	NMED		6.45E-02	
Lead	7439-92-1	mg/kg	17			NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	8,600			NS	NS	1,550,000	N	NMED		5.55E-03	
Manganese	7439-96-5	mg/kg	520			NS	NS	464	Y	NMED		1.12E+00	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.036	J		NS	NS	21	N	NMED		1.74E-03	
Nickel	7440-02-0	mg/kg	14			20,500	N	753	N	NMED	6.83E-09	1.86E-02	
Potassium	7440-09-7	mg/kg	1,900			NS	NS	20,800,000	N	NMED		9.13E-05	
Selenium	7782-49-2	mg/kg	1.3			NS	NS	1,750	N	NMED		7.43E-04	
Silver	7440-22-4	mg/kg	0.16			NS	NS	1,770	N	NMED		9.04E-05	
Sodium	7440-23-5	mg/kg	63			NS	NS	10,200,000	N	NMED		6.18E-06	
Thallium	7440-28-0	mg/kg	0.088	J		NS	NS	4	N	NMED		2.49E-02	
Vanadium	7440-62-2	mg/kg	27			NS	NS	614	N	NMED		4.40E-02	
Zinc	7440-66-6	mg/kg	38			NS	NS	106,000	N	NMED		3.58E-04	
									Cumulative Risk/Hazard		**6E-07**	**2.4**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	1.7
Endocrine	0.19
GI	0.14
Blood	0.14
All Others	0.32

TABLE D1-W28-1
GRID W28 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	2,200	N	RSL			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	6.3	N	RSL			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		211	N	36	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		3.56	N	18.5	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	7.7	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		31.6	N	70.4	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	6.16	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	7.64	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		333	N	247	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		83.1	N	301	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	156	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		60.4	N	131	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		313	N	6.16	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	3,850	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		1,300	N	570	N	RSL			

TABLE D1-W28-1
GRID W28 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	27,000			NS	NS	78,000	N	NMED		3.46E-01	Nervous
Antimony	7440-36-0	mg/kg	0.2			NS	NS	31.3	N	NMED		6.39E-03	
Arsenic	7440-38-2	mg/kg	1.5			7.07	N	13	N	NMED	2.12E-06	1.15E-01	Heart/Endocrine
Barium	7440-39-3	mg/kg	790			NS	NS	15,600	N	NMED		5.06E-02	
Beryllium	7440-41-7	mg/kg	0.91	J		64,400	N	156	N	NMED	1.41E-10	5.83E-03	
Cadmium	7440-43-9	mg/kg	0.52			85,900	N	70.5	N	NMED	6.05E-11	7.38E-03	
Calcium	7440-70-2	mg/kg	18,000			NS	NS	13,000,000	N	NMED		1.38E-03	
Chromium (Total) (2)	7440-47-3	mg/kg	20			96.6	N	45,200	N	NMED	2.07E-06	4.42E-04	
Cobalt	7440-48-4	mg/kg	7			17,200	N	23.4	N	NMED	4.07E-09	2.99E-01	Endocrine
Copper	7440-50-8	mg/kg	120			NS	NS	3,130	N	NMED		3.83E-02	
Iron	7439-89-6	mg/kg	19,000			NS	NS	54,800	N	NMED		3.47E-01	GI
Lead	7439-92-1	mg/kg	18			NS	NS	200	N	IEUBK			
Magnesium	7439-95-4	mg/kg	8,900			NS	NS	15,600,000	N	NMED		5.71E-04	
Manganese	7439-96-5	mg/kg	500			NS	NS	10,500	N	NMED		4.76E-02	
Mercury (Elemental)	7439-97-6	mg/kg	0.084	J		NS	NS	23.8	N	NMED		3.53E-03	
Nickel	7440-02-0	mg/kg	15			595,000	N	1,560	N	NMED	2.52E-10	9.62E-03	
Potassium	7440-09-7	mg/kg	2,600			NS	NS	15,600,000	N	NMED		1.67E-04	
Selenium	7782-49-2	mg/kg	1.9			NS	NS	391	N	NMED		4.86E-03	
Silver	7440-22-4	mg/kg	0.12			NS	NS	391	N	NMED		3.07E-04	
Sodium	7440-23-5	mg/kg	69			NS	NS	7,820,000	N	NMED		8.82E-06	
Thallium	7440-28-0	mg/kg	0.11			NS	NS	0.782	N	NMED		1.41E-01	Hair/Coat/Eyes
Vanadium	7440-62-2	mg/kg	26			NS	NS	394	N	NMED		6.60E-02	
Zinc	7440-66-6	mg/kg	37			NS	NS	23,500	N	NMED		1.57E-03	
									Cumulative Risk/Hazard		**4E-06**	**1.5**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Residential Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Residential Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	0.35
Endocrine	0.41
Heart	0.12
GI	0.35
Hair/Coat	0.14
Eyes	0.14
All Others	0.24

TABALE D1-W28-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID W28
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		5,300	N	7,400	N	RSL		

TABALE D1-W28-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID W28
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	27,000			NS	NS	1,290,000	N	NMED		2.09E-02
Antimony	7440-36-0	mg/kg	0.2			NS	NS	519	N	NMED		3.85E-04
Arsenic	7440-38-2	mg/kg	1.5			36	N	208	N	NMED	4.18E-07	7.21E-03
Barium	7440-39-3	mg/kg	790			NS	NS	255,000	N	NMED		3.10E-03
Beryllium	7440-41-7	mg/kg	0.91	J		313,000	N	2,580	N	NMED	2.91E-11	3.53E-04
Cadmium	7440-43-9	mg/kg	0.52			417,000	N	1,110	N	NMED	1.25E-11	4.68E-04
Calcium	7440-70-2	mg/kg	18,000			NS	NS	32,400,000	N	NMED		5.56E-04
Chromium (Total) (2)	7440-47-3	mg/kg	20			505	N	341,000	N	NMED	3.96E-07	5.87E-05
Cobalt	7440-48-4	mg/kg	7			83,400	N	388	N	NMED	8.39E-10	1.80E-02
Copper	7440-50-8	mg/kg	120			NS	NS	51,900	N	NMED		2.31E-03
Iron	7439-89-6	mg/kg	19,000			NS	NS	908,000	N	NMED		2.09E-02
Lead	7439-92-1	mg/kg	18			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	8,900			NS	NS	5,680,000	N	NMED		1.57E-03
Manganese	7439-96-5	mg/kg	500			NS	NS	160,000	N	NMED		3.13E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.084	J		NS	NS	112	N	NMED		7.50E-04
Nickel	7440-02-0	mg/kg	15			2,890,000	N	25,700	N	NMED	5.19E-11	5.84E-04
Potassium	7440-09-7	mg/kg	2,600			NS	NS	76,200,000	N	NMED		3.41E-05
Selenium	7782-49-2	mg/kg	1.9			NS	NS	6,490	N	NMED		2.93E-04
Silver	7440-22-4	mg/kg	0.12			NS	NS	6,490	N	NMED		1.85E-05
Sodium	7440-23-5	mg/kg	69			NS	NS	37,300,000	N	NMED		1.85E-06
Thallium	7440-28-0	mg/kg	0.11			NS	NS	13	N	NMED		8.46E-03
Vanadium	7440-62-2	mg/kg	26			NS	NS	6,530	N	NMED		3.98E-03
Zinc	7440-66-6	mg/kg	37			NS	NS	38,900	N	NMED		9.51E-04
									Cumulative Risk/Hazard		**8E-07**	**0.09**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Industrial Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-W28-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID W28
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		626	N	2,420	N	NMEDC			

TABLE D1-W28-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID W28
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	27,000			NS	NS	41,400	N	NMED		6.52E-01	Nervous
Antimony	7440-36-0	mg/kg	0.2			NS	NS	142	N	NMED		1.41E-03	
Arsenic	7440-38-2	mg/kg	1.5			216	N	41	N	NMED	6.94E-08	3.64E-02	
Barium	7440-39-3	mg/kg	790			NS	NS	4,390	N	NMED		1.80E-01	Kidneys
Beryllium	7440-41-7	mg/kg	0.91	J		2,710	N	148	N	NMED	3.36E-09	6.15E-03	
Cadmium	7440-43-9	mg/kg	0.52			3,610	N	72	N	NMED	1.44E-09	7.21E-03	
Calcium	7440-70-2	mg/kg	18,000			NS	NS	8,850,000	N	NMED		2.03E-03	
Chromium (Total) (3)	7440-47-3	mg/kg	20			468	N	134	N	NMED	4.27E-07	1.49E-01	GI, Blood
Cobalt	7440-48-4	mg/kg	7			722	N	37	N	NMED	9.70E-08	1.91E-01	Endocrine
Copper	7440-50-8	mg/kg	120			NS	NS	14,200	N	NMED		8.45E-03	
Iron	7439-89-6	mg/kg	19,000			NS	NS	248,000	N	NMED		7.66E-02	
Lead	7439-92-1	mg/kg	18			NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	8,900			NS	NS	1,550,000	N	NMED		5.74E-03	
Manganese	7439-96-5	mg/kg	500			NS	NS	464	Y	NMED		1.08E+00	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.084	J		NS	NS	21	N	NMED		4.06E-03	
Nickel	7440-02-0	mg/kg	15			20,500	N	753	N	NMED	7.32E-09	1.99E-02	
Potassium	7440-09-7	mg/kg	2,600			NS	NS	20,800,000	N	NMED		1.25E-04	
Selenium	7782-49-2	mg/kg	1.9			NS	NS	1,750	N	NMED		1.09E-03	
Silver	7440-22-4	mg/kg	0.12			NS	NS	1,770	N	NMED		6.78E-05	
Sodium	7440-23-5	mg/kg	69			NS	NS	10,200,000	N	NMED		6.76E-06	
Thallium	7440-28-0	mg/kg	0.11			NS	NS	4	N	NMED		3.11E-02	
Vanadium	7440-62-2	mg/kg	26			NS	NS	614	N	NMED		4.23E-02	
Zinc	7440-66-6	mg/kg	37			NS	NS	106,000	N	NMED		3.49E-04	
									Cumulative Risk/Hazard		**6E-07**	**2.5**	
									Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	1.7
Endocrine	0.19
GI	0.15
Blood	0.15
Kidneys	0.18
All Others	0.24

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

Shaded values exceed ecological screening levels.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-W31-1
GRID W31 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	2,200	N	RSL			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	6.3	N	RSL			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		211	N	36	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		3.56	N	18.5	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	7.7	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		31.6	N	70.4	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	6.16	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	7.64	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		333	N	247	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		83.1	N	301	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	156	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		60.4	N	131	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		313	N	6.16	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	3,850	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		1,300	N	570	N	RSL			

TABLE D1-W31-1
GRID W31 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	18,000			NS	NS	78,000	N	NMED		2.31E-01	Nervous
Antimony	7440-36-0	mg/kg	0.083	J		NS	NS	31.3	N	NMED		2.65E-03	
Arsenic	7440-38-2	mg/kg	1.3			7.07	N	13	N	NMED	1.84E-06	1.00E-01	Heart/Endocrine
Barium	7440-39-3	mg/kg	160			NS	NS	15,600	N	NMED		1.03E-02	
Beryllium	7440-41-7	mg/kg	0.56	J		64,400	N	156	N	NMED	8.70E-11	3.59E-03	
Cadmium	7440-43-9	mg/kg	0.41			85,900	N	70.5	N	NMED	4.77E-11	5.82E-03	
Calcium	7440-70-2	mg/kg	3,900			NS	NS	13,000,000	N	NMED		3.00E-04	
Chromium (Total) (2)	7440-47-3	mg/kg	13			96.6	N	45,200	N	NMED	1.35E-06	2.88E-04	
Cobalt	7440-48-4	mg/kg	5.6			17,200	N	23.4	N	NMED	3.26E-09	2.39E-01	Endocrine
Copper	7440-50-8	mg/kg	95			NS	NS	3,130	N	NMED		3.04E-02	
Iron	7439-89-6	mg/kg	11,000			NS	NS	54,800	N	NMED		2.01E-01	GI
Lead	7439-92-1	mg/kg	10			NS	NS	200	N	IEUBK			
Magnesium	7439-95-4	mg/kg	7,600			NS	NS	15,600,000	N	NMED		4.87E-04	
Manganese	7439-96-5	mg/kg	310			NS	NS	10,500	N	NMED		2.95E-02	
Mercury (Elemental)	7439-97-6	mg/kg	0.019	J		NS	NS	23.8	N	NMED		7.98E-04	
Nickel	7440-02-0	mg/kg	9.6			595,000	N	1,560	N	NMED	1.61E-10	6.15E-03	
Potassium	7440-09-7	mg/kg	930			NS	NS	15,600,000	N	NMED		5.96E-05	
Selenium	7782-49-2	mg/kg	1			NS	NS	391	N	NMED		2.56E-03	
Silver	7440-22-4	mg/kg	0.077	J		NS	NS	391	N	NMED		1.97E-04	
Sodium	7440-23-5	mg/kg	74			NS	NS	7,820,000	N	NMED		9.46E-06	
Thallium	7440-28-0	mg/kg	0.18			NS	NS	0.782	N	NMED		2.30E-01	Hair/Coat/Eyes
Vanadium	7440-62-2	mg/kg	21			NS	NS	394	N	NMED		5.33E-02	
Zinc	7440-66-6	mg/kg	30			NS	NS	23,500	N	NMED		1.28E-03	
									Cumulative Risk/Hazard		**3E-06**	**1.1**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Residential Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Residential Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

System	Hazard Quotient
Nervous	0.23
Endocrine	0.34
Heart	0.10
GI	0.20
Hair/Coat	0.23
Eyes	0.23
All Others	0.15

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-W31-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID W31
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		5,300	N	7,400	N	RSL		

TABLE D1-W31-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID W31
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	18,000			NS	NS	1,290,000	N	NMED		1.40E-02
Antimony	7440-36-0	mg/kg	0.083	J		NS	NS	519	N	NMED		1.60E-04
Arsenic	7440-38-2	mg/kg	1.3			36	N	208	N	NMED	3.62E-07	6.25E-03
Barium	7440-39-3	mg/kg	160			NS	NS	255,000	N	NMED		6.27E-04
Beryllium	7440-41-7	mg/kg	0.56	J		313,000	N	2,580	N	NMED	1.79E-11	2.17E-04
Cadmium	7440-43-9	mg/kg	0.41			417,000	N	1,110	N	NMED	9.83E-12	3.69E-04
Calcium	7440-70-2	mg/kg	3,900			NS	NS	32,400,000	N	NMED		1.20E-04
Chromium (Total) (2)	7440-47-3	mg/kg	13			505	N	314,000	N	NMED	2.57E-07	4.14E-05
Cobalt	7440-48-4	mg/kg	5.6			83,400	N	388	N	NMED	6.71E-10	1.44E-02
Copper	7440-50-8	mg/kg	95			NS	NS	51,900	N	NMED		1.83E-03
Iron	7439-89-6	mg/kg	11,000			NS	NS	908,000	N	NMED		1.21E-02
Lead	7439-92-1	mg/kg	10			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	7,600			NS	NS	5,680,000	N	NMED		1.34E-03
Manganese	7439-96-5	mg/kg	310			NS	NS	160,000	N	NMED		1.94E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.019	J		NS	NS	112	N	NMED		1.70E-04
Nickel	7440-02-0	mg/kg	9.6			2,890,000	N	25,700	N	NMED	3.32E-11	3.74E-04
Potassium	7440-09-7	mg/kg	930			NS	NS	76,200,000	N	NMED		1.22E-05
Selenium	7782-49-2	mg/kg	1			NS	NS	6,490	N	NMED		1.54E-04
Silver	7440-22-4	mg/kg	0.077	J		NS	NS	6,490	N	NMED		1.19E-05
Sodium	7440-23-5	mg/kg	74			NS	NS	37,300,000	N	NMED		1.98E-06
Thallium	7440-28-0	mg/kg	0.18			NS	NS	13	N	NMED		1.38E-02
Vanadium	7440-62-2	mg/kg	21			NS	NS	6,530	N	NMED		3.22E-03
Zinc	7440-66-6	mg/kg	30			NS	NS	38,900	N	NMED		7.71E-04
									Cumulative Risk/Hazard		**6E-07**	**0.07**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Industrial Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-W31-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID W31
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		626	N	2,420	N	NMEDC			

TABLE D1-W31-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID W31
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	18,000			NS	NS	41,400	N	NMED		4.35E-01	Nervous
Antimony	7440-36-0	mg/kg	0.083	J		NS	NS	142	N	NMED		5.85E-04	
Arsenic	7440-38-2	mg/kg	1.3			216	N	41	N	NMED	6.02E-08	3.16E-02	
Barium	7440-39-3	mg/kg	160			NS	NS	4,390	N	NMED		3.64E-02	
Beryllium	7440-41-7	mg/kg	0.56	J		2,710	N	148	N	NMED	2.07E-09	3.78E-03	
Cadmium	7440-43-9	mg/kg	0.41			3,610	N	72	N	NMED	1.14E-09	5.69E-03	
Calcium	7440-70-2	mg/kg	3,900			NS	NS	8,850,000	N	NMED		4.41E-04	
Chromium (Total) (3)	7440-47-3	mg/kg	13			468	N	134	N	NMED	2.78E-07	9.70E-02	
Cobalt	7440-48-4	mg/kg	5.6			722	N	37	N	NMED	7.76E-08	1.53E-01	Endocrine
Copper	7440-50-8	mg/kg	95			NS	NS	14,200	N	NMED		6.69E-03	
Iron	7439-89-6	mg/kg	11,000			NS	NS	248,000	N	NMED		4.44E-02	
Lead	7439-92-1	mg/kg	10			NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	7,600			NS	NS	1,550,000	N	NMED		4.90E-03	
Manganese	7439-96-5	mg/kg	310			NS	NS	464	N	NMED		6.68E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.019	J		NS	NS	21	N	NMED		9.18E-04	
Nickel	7440-02-0	mg/kg	9.6			20,500	N	753	N	NMED	4.68E-09	1.27E-02	
Potassium	7440-09-7	mg/kg	930			NS	NS	20,800,000	N	NMED		4.47E-05	
Selenium	7782-49-2	mg/kg	1			NS	NS	1,750	N	NMED		5.71E-04	
Silver	7440-22-4	mg/kg	0.077	J		NS	NS	1,770	N	NMED		4.35E-05	
Sodium	7440-23-5	mg/kg	74			NS	NS	10,200,000	N	NMED		7.25E-06	
Thallium	7440-28-0	mg/kg	0.18			NS	NS	4	N	NMED		5.08E-02	
Vanadium	7440-62-2	mg/kg	21			NS	NS	614	N	NMED		3.42E-02	
Zinc	7440-66-6	mg/kg	30			NS	NS	106,000	N	NMED		2.83E-04	
									Cumulative Risk/Hazard		**4E-07**	**1.6**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent	NS = No Standard
CAS = Chemical Abstracts Service	RAG = Risk Assessment Guidance
HI = Hazard Index	SSL = soil screening level
J = Estimated	U = Nondetect
mg/kg = milligrams per kilogram	UJ = Estimated Nondetect
NA = not applicable	UTL = upper tolerance limit
N = no	Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	1.1
Endocrine	0.15
All Others	0.33

TABLE D1-W34-1
GRID W34 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	2,200	N	RSL			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	6.3	N	RSL			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		211	N	36	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		3.56	N	18.5	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	7.7	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		31.6	N	70.4	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	6.16	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	7.64	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		333	N	247	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		83.1	N	301	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	156	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		60.4	N	131	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		313	N	6.16	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	3,850	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		1,300	N	570	N	RSL			

TABLE D1-W34-1
GRID W34 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	19,000			NS	NS	78,000	N	NMED		2.44E-01	Nervous
Antimony	7440-36-0	mg/kg	0.077	J		NS	NS	31.3	N	NMED		2.46E-03	
Arsenic	7440-38-2	mg/kg	1.4	J		7.07	N	13	N	NMED	1.98E-06	1.08E-01	Heart/Endocrine
Barium	7440-39-3	mg/kg	270			NS	NS	15,600	N	NMED		1.73E-02	
Beryllium	7440-41-7	mg/kg	0.67	J		64,400	N	156	N	NMED	1.04E-10	4.29E-03	
Cadmium	7440-43-9	mg/kg	0.37			85,900	N	70.5	N	NMED	4.31E-11	5.25E-03	
Calcium	7440-70-2	mg/kg	3,300	J		NS	NS	13,000,000	N	NMED		2.54E-04	
Chromium (Total) (2)	7440-47-3	mg/kg	14	J		96.6	N	45,200	N	NMED	1.45E-06	3.10E-04	
Cobalt	7440-48-4	mg/kg	6.1	J		17,200	N	23.4	N	NMED	3.55E-09	2.61E-01	Endocrine
Copper	7440-50-8	mg/kg	64	J		NS	NS	3,130	N	NMED		2.04E-02	
Iron	7439-89-6	mg/kg	12,000			NS	NS	54,800	N	NMED		2.19E-01	GI
Lead	7439-92-1	mg/kg	11			NS	NS	200	N	IEUBK			
Magnesium	7439-95-4	mg/kg	6,500	J		NS	NS	15,600,000	N	NMED		4.17E-04	
Manganese	7439-96-5	mg/kg	410			NS	NS	10,500	N	NMED		3.90E-02	
Mercury (Elemental)	7439-97-6	mg/kg	0.017	J		NS	NS	23.8	N	NMED		7.14E-04	
Nickel	7440-02-0	mg/kg	10	J		595,000	N	1,560	N	NMED	1.68E-10	6.41E-03	
Potassium	7440-09-7	mg/kg	1,600	J		NS	NS	15,600,000	N	NMED		1.03E-04	
Selenium	7782-49-2	mg/kg	0.89			NS	NS	391	N	NMED		2.28E-03	
Silver	7440-22-4	mg/kg	0.072	J		NS	NS	391	N	NMED		1.84E-04	
Sodium	7440-23-5	mg/kg	62			NS	NS	7,820,000	N	NMED		7.93E-06	
Thallium	7440-28-0	mg/kg	0.075	J		NS	NS	0.782	N	NMED		9.59E-02	
Vanadium	7440-62-2	mg/kg	24			NS	NS	394	N	NMED		6.09E-02	
Zinc	7440-66-6	mg/kg	30			NS	NS	23,500	N	NMED		1.28E-03	
									Cumulative Risk/Hazard		**3E-06**	**1.1**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Residential Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Residential Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	0.24
Endocrine	0.37
Heart	0.11
GI	0.22
All Others	0.26

TABLE D1-W34-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID W34
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		5,300	N	7,400	N	RSL		

TABLE D1-W34-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID W34
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	19,000			NS	NS	1,290,000	N	NMED		1.47E-02
Antimony	7440-36-0	mg/kg	0.077	J		NS	NS	519	N	NMED		1.48E-04
Arsenic	7440-38-2	mg/kg	1.4	J		36	N	208	N	NMED	3.90E-07	6.73E-03
Barium	7440-39-3	mg/kg	270			NS	NS	255,000	N	NMED		1.06E-03
Beryllium	7440-41-7	mg/kg	0.67	J		313,000	N	2,580	N	NMED	2.14E-11	2.60E-04
Cadmium	7440-43-9	mg/kg	0.37			417,000	N	1,110	N	NMED	8.87E-12	3.33E-04
Calcium	7440-70-2	mg/kg	3,300	J		NS	NS	32,400,000	N	NMED		1.02E-04
Chromium (Total) (2)	7440-47-3	mg/kg	14	J		505	N	314,000	N	NMED	2.77E-07	4.46E-05
Cobalt	7440-48-4	mg/kg	6.1	J		83,400	N	388	N	NMED	7.31E-10	1.57E-02
Copper	7440-50-8	mg/kg	64	J		NS	NS	51,900	N	NMED		1.23E-03
Iron	7439-89-6	mg/kg	12,000			NS	NS	908,000	N	NMED		1.32E-02
Lead	7439-92-1	mg/kg	11			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	6,500	J		NS	NS	5,680,000	N	NMED		1.14E-03
Manganese	7439-96-5	mg/kg	410			NS	NS	160,000	N	NMED		2.56E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.017	J		NS	NS	112	N	NMED		1.52E-04
Nickel	7440-02-0	mg/kg	10	J		2,890,000	N	25,700	N	NMED	3.46E-11	3.89E-04
Potassium	7440-09-7	mg/kg	1,600	J		NS	NS	76,200,000	N	NMED		2.10E-05
Selenium	7782-49-2	mg/kg	0.89			NS	NS	6,490	N	NMED		1.37E-04
Silver	7440-22-4	mg/kg	0.072	J		NS	NS	6,490	N	NMED		1.11E-05
Sodium	7440-23-5	mg/kg	62			NS	NS	37,300,000	N	NMED		1.66E-06
Thallium	7440-28-0	mg/kg	0.075	J		NS	NS	13	N	NMED		5.77E-03
Vanadium	7440-62-2	mg/kg	24			NS	NS	6,530	N	NMED		3.68E-03
Zinc	7440-66-6	mg/kg	30			NS	NS	38,900	N	NMED		7.71E-04
									Cumulative Risk/Hazard		**7E-07**	**0.07**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Industrial Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-W34-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID W34
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		626	N	2,420	N	NMEDC			

TABLE D1-W34-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID W34
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	19,000			NS	NS	41,400	N	NMED		4.59E-01	Nervous
Antimony	7440-36-0	mg/kg	0.077	J		NS	NS	142	N	NMED		5.42E-04	
Arsenic	7440-38-2	mg/kg	1.4	J		216	N	41	N	NMED	6.48E-08	3.40E-02	
Barium	7440-39-3	mg/kg	270			NS	NS	4,390	N	NMED		6.15E-02	
Beryllium	7440-41-7	mg/kg	0.67	J		2,710	N	148	N	NMED	2.47E-09	4.53E-03	
Cadmium	7440-43-9	mg/kg	0.37			3,610	N	72	N	NMED	1.02E-09	5.13E-03	
Calcium	7440-70-2	mg/kg	3,300	J		NS	NS	8,850,000	N	NMED		3.73E-04	
Chromium (Total) (3)	7440-47-3	mg/kg	14	J		468	N	134	N	NMED	2.99E-07	1.04E-01	GI, Blood
Cobalt	7440-48-4	mg/kg	6.1	J		722	N	37	N	NMED	8.45E-08	1.66E-01	Endocrine
Copper	7440-50-8	mg/kg	64	J		NS	NS	14,200	N	NMED		4.51E-03	
Iron	7439-89-6	mg/kg	12,000			NS	NS	248,000	N	NMED		4.84E-02	
Lead	7439-92-1	mg/kg	11			NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	6,500	J		NS	NS	1,550,000	N	NMED		4.19E-03	
Manganese	7439-96-5	mg/kg	410			NS	NS	464	N	NMED		8.84E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.017	J		NS	NS	21	N	NMED		8.21E-04	
Nickel	7440-02-0	mg/kg	10	J		20,500	N	753	N	NMED	4.88E-09	1.33E-02	
Potassium	7440-09-7	mg/kg	1,600	J		NS	NS	20,800,000	N	NMED		7.69E-05	
Selenium	7782-49-2	mg/kg	0.89			NS	NS	1,750	N	NMED		5.09E-04	
Silver	7440-22-4	mg/kg	0.072	J		NS	NS	1,770	N	NMED		4.07E-05	
Sodium	7440-23-5	mg/kg	62			NS	NS	10,200,000	N	NMED		6.08E-06	
Thallium	7440-28-0	mg/kg	0.075	J		NS	NS	4	N	NMED		2.12E-02	
Vanadium	7440-62-2	mg/kg	24			NS	NS	614	N	NMED		3.91E-02	
Zinc	7440-66-6	mg/kg	30			NS	NS	106,000	N	NMED		2.83E-04	
									Cumulative Risk/Hazard		**5E-07**	**1.9**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
NA = not applicable
N = no
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	1.3
Endocrine	0.17
GI	0.10
Blood	0.10
All Others	0.24

TABLE D1-W39-1
GRID W39 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	2,200	N	RSL			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	6.3	N	RSL			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		211	N	36	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		3.56	N	18.5	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	7.7	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		31.6	N	70.4	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	6.16	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	7.64	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		333	N	247	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		83.1	N	301	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	156	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		60.4	N	131	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		313	N	6.16	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	3,850	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		1,300	N	570	N	RSL			

TABLE D1-W39-1
GRID W39 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	20,000			NS	NS	78,000	N	NMED		2.56E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	31.3	N	NMED			
Arsenic	7440-38-2	mg/kg	1.2			7.07	N	13	N	NMED	1.70E-06	9.23E-02	
Barium	7440-39-3	mg/kg	410			NS	NS	15,600	N	NMED		2.63E-02	
Beryllium	7440-41-7	mg/kg	0.93	J		64,400	N	156	N	NMED	1.44E-10	5.96E-03	
Cadmium	7440-43-9	mg/kg	0.1			85,900	N	70.5	N	NMED	1.16E-11	1.42E-03	
Calcium	7440-70-2	mg/kg	21,000			NS	NS	13,000,000	N	NMED		1.62E-03	
Chromium (Total) (2)	7440-47-3	mg/kg	11			96.6	N	45,200	N	NMED	1.14E-06	2.43E-04	
Cobalt	7440-48-4	mg/kg	6			17,200	N	23.4	N	NMED	3.49E-09	2.56E-01	Endocrine
Copper	7440-50-8	mg/kg	14			NS	NS	3,130	N	NMED		4.47E-03	
Iron	7439-89-6	mg/kg	15,000			NS	NS	54,800	N	NMED		2.74E-01	GI
Lead	7439-92-1	mg/kg	8.4			NS	NS	200	N	IEUBK			
Magnesium	7439-95-4	mg/kg	7,700			NS	NS	15,600,000	N	NMED		4.94E-04	
Manganese	7439-96-5	mg/kg	380			NS	NS	10,500	N	NMED		3.62E-02	
Mercury (Elemental)	7439-97-6	mg/kg	0.012	J		NS	NS	23.8	N	NMED		5.04E-04	
Nickel	7440-02-0	mg/kg	13			595,000	N	1,560	N	NMED	2.18E-10	8.33E-03	
Potassium	7440-09-7	mg/kg	1,200			NS	NS	15,600,000	N	NMED		7.69E-05	
Selenium	7782-49-2	mg/kg	1.3			NS	NS	391	N	NMED		3.32E-03	
Silver	7440-22-4	mg/kg	0.039	J		NS	NS	391	N	NMED		9.97E-05	
Sodium	7440-23-5	mg/kg	49			NS	NS	7,820,000	N	NMED		6.27E-06	
Thallium	7440-28-0	mg/kg	0.069	J		NS	NS	0.782	N	NMED		8.82E-02	
Vanadium	7440-62-2	mg/kg	14			NS	NS	394	N	NMED		3.55E-02	
Zinc	7440-66-6	mg/kg	26			NS	NS	23,500	N	NMED		1.11E-03	
									Cumulative Risk/Hazard		**3E-06**	**1.1**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Residential Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Residential Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	0.26
Endocrine	0.26
GI	0.27
All Others	0.31

TABLE D1-W39-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID W39
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		5,300	N	7,400	N	RSL		

TABLE D1-W39-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID W39
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	20,000			NS	NS	1,290,000	N	NMED		1.55E-02
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	519	N	NMED		
Arsenic	7440-38-2	mg/kg	1.2			36	N	208	N	NMED	3.34E-07	5.77E-03
Barium	7440-39-3	mg/kg	410			NS	NS	255,000	N	NMED		1.61E-03
Beryllium	7440-41-7	mg/kg	0.93	J		313,000	N	2,580	N	NMED	2.97E-11	3.60E-04
Cadmium	7440-43-9	mg/kg	0.1			417,000	N	1,110	N	NMED	2.40E-12	9.01E-05
Calcium	7440-70-2	mg/kg	21,000			NS	NS	32,400,000	N	NMED		6.48E-04
Chromium (Total) (2)	7440-47-3	mg/kg	11			505	N	314,000	N	NMED	2.18E-07	3.50E-05
Cobalt	7440-48-4	mg/kg	6			83,400	N	388	N	NMED	7.19E-10	1.55E-02
Copper	7440-50-8	mg/kg	14			NS	NS	51,900	N	NMED		2.70E-04
Iron	7439-89-6	mg/kg	15,000			NS	NS	908,000	N	NMED		1.65E-02
Lead	7439-92-1	mg/kg	8.4			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	7,700			NS	NS	5,680,000	N	NMED		1.36E-03
Manganese	7439-96-5	mg/kg	380			NS	NS	160,000	N	NMED		2.38E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.012	J		NS	NS	112	N	NMED		1.07E-04
Nickel	7440-02-0	mg/kg	13			2,890,000	N	25,700	N	NMED	4.50E-11	5.06E-04
Potassium	7440-09-7	mg/kg	1,200			NS	NS	76,200,000	N	NMED		1.57E-05
Selenium	7782-49-2	mg/kg	1.3			NS	NS	6,490	N	NMED		2.00E-04
Silver	7440-22-4	mg/kg	0.039	J		NS	NS	6,490	N	NMED		6.01E-06
Sodium	7440-23-5	mg/kg	49			NS	NS	37,300,000	N	NMED		1.31E-06
Thallium	7440-28-0	mg/kg	0.069	J		NS	NS	13	N	NMED		5.31E-03
Vanadium	7440-62-2	mg/kg	14			NS	NS	6,530	N	NMED		2.14E-03
Zinc	7440-66-6	mg/kg	26			NS	NS	38,900	N	NMED		6.68E-04
									Cumulative Risk/Hazard		**6E-07**	**0.07**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Industrial Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-W39-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID W39
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ		626	N	2,420	N	NMEDC			

TABLE D1-W39-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID W39
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	20,000			NS	NS	41,400	N	NMED		4.83E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	142	N	NMED			
Arsenic	7440-38-2	mg/kg	1.2			216	N	41	N	NMED	5.56E-08	2.91E-02	
Barium	7440-39-3	mg/kg	410			NS	NS	4,390	N	NMED		9.34E-02	
Beryllium	7440-41-7	mg/kg	0.93	J		2,710	N	148	N	NMED	3.43E-09	6.28E-03	
Cadmium	7440-43-9	mg/kg	0.1			3,610	N	72	N	NMED	2.77E-10	1.39E-03	
Calcium	7440-70-2	mg/kg	21,000			NS	NS	8,850,000	N	NMED		2.37E-03	
Chromium (Total) (3)	7440-47-3	mg/kg	11			468	N	134	N	NMED	2.35E-07	8.21E-02	
Cobalt	7440-48-4	mg/kg	6			722	N	37	N	NMED	8.31E-08	1.63E-01	Endocrine
Copper	7440-50-8	mg/kg	14			NS	NS	14,200	N	NMED		9.86E-04	
Iron	7439-89-6	mg/kg	15,000			NS	NS	248,000	N	NMED		6.05E-02	
Lead	7439-92-1	mg/kg	8.4			NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	7,700			NS	NS	1,550,000	N	NMED		4.97E-03	
Manganese	7439-96-5	mg/kg	380			NS	NS	464	N	NMED		8.19E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.012	J		NS	NS	21	N	NMED		5.80E-04	
Nickel	7440-02-0	mg/kg	13			20,500	N	753	N	NMED	6.34E-09	1.73E-02	
Potassium	7440-09-7	mg/kg	1,200			NS	NS	20,800,000	N	NMED		5.77E-05	
Selenium	7782-49-2	mg/kg	1.3			NS	NS	1,750	N	NMED		7.43E-04	
Silver	7440-22-4	mg/kg	0.039	J		NS	NS	1,770	N	NMED		2.20E-05	
Sodium	7440-23-5	mg/kg	49			NS	NS	10,200,000	N	NMED		4.80E-06	
Thallium	7440-28-0	mg/kg	0.069	J		NS	NS	4	N	NMED		1.95E-02	
Vanadium	7440-62-2	mg/kg	14			NS	NS	614	N	NMED		2.28E-02	
Zinc	7440-66-6	mg/kg	26			NS	NS	106,000	N	NMED		2.45E-04	
									Cumulative Risk/Hazard		**4E-07**	**1.8**	
									Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	1.3
Endocrine	0.16
All Others	0.34

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-X25-1
GRID X25 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U		60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U		313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		1,300	N	570	N	RSL		

TABLE D1-X25-1
GRID X25 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	18,000			NS	NS	78,000	N	NMED		2.31E-01
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	31.3	N	NMED		
Arsenic	7440-38-2	mg/kg	0.93			7.07	N	13	N	NMED	1.32E-06	7.15E-02
Barium	7440-39-3	mg/kg	430			NS	NS	15,600	N	NMED		2.76E-02
Beryllium	7440-41-7	mg/kg	1			64,400	N	156	N	NMED	1.55E-10	6.41E-03
Cadmium	7440-43-9	mg/kg	0.52			85,900	N	70.5	N	NMED	6.05E-11	7.38E-03
Calcium	7440-70-2	mg/kg	28,000			NS	NS	13,000,000	N	NMED		2.15E-03
Chromium (Total) (2)	7440-47-3	mg/kg	13			96.6	N	45,200	N	NMED	1.35E-06	2.88E-04
Cobalt	7440-48-4	mg/kg	5			17,200	N	23.4	N	NMED	2.91E-09	2.14E-01
Copper	7440-50-8	mg/kg	100			NS	NS	3,130	N	NMED		3.19E-02
Iron	7439-89-6	mg/kg	11,000			NS	NS	54,800	N	NMED		2.01E-01
Lead	7439-92-1	mg/kg	12			NS	NS	200	N	IEUBK		
Magnesium	7439-95-4	mg/kg	6,500			NS	NS	15,600,000	N	NMED		4.17E-04
Manganese	7439-96-5	mg/kg	490			NS	NS	10,500	N	NMED		4.67E-02
Mercury (Elemental)	7439-97-6	mg/kg	0.085	J		NS	NS	23.8	N	NMED		3.57E-03
Nickel	7440-02-0	mg/kg	12			595,000	N	1,560	N	NMED	2.02E-10	7.69E-03
Potassium	7440-09-7	mg/kg	1,600			NS	NS	15,600,000	N	NMED		1.03E-04
Selenium	7782-49-2	mg/kg	1.6			NS	NS	391	N	NMED		4.09E-03
Silver	7440-22-4	mg/kg	0.026	J		NS	NS	391	N	NMED		6.65E-05
Sodium	7440-23-5	mg/kg	52			NS	NS	7,820,000	N	NMED		6.65E-06
Thallium	7440-28-0	mg/kg	0.046	J		NS	NS	0.782	N	NMED		5.88E-02
Vanadium	7440-62-2	mg/kg	15			NS	NS	394	N	NMED		3.81E-02
Zinc	7440-66-6	mg/kg	28			NS	NS	23,500	N	NMED		1.19E-03
									Cumulative Risk/Hazard		**3E-06**	**0.95**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Resdential Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Residential Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
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SSL = soil screening level
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UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-X25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID X25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		5,300	N	7,400	N	RSL		

TABLE D1-X25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID X25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	18,000			NS	NS	1,290,000	N	NMED		1.40E-02
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	519	N	NMED		
Arsenic	7440-38-2	mg/kg	0.93			36	N	208	N	NMED	2.59E-07	4.47E-03
Barium	7440-39-3	mg/kg	430			NS	NS	255,000	N	NMED		1.69E-03
Beryllium	7440-41-7	mg/kg	1			313,000	N	2,580	N	NMED	3.19E-11	3.88E-04
Cadmium	7440-43-9	mg/kg	0.52			417,000	N	1,110	N	NMED	1.25E-11	4.68E-04
Calcium	7440-70-2	mg/kg	28,000			NS	NS	32,400,000	N	NMED		8.64E-04
Chromium (Total) (2)	7440-47-3	mg/kg	13			505	N	314,000	N	NMED	2.57E-07	4.14E-05
Cobalt	7440-48-4	mg/kg	5			83,400	N	388	N	NMED	6.00E-10	1.29E-02
Copper	7440-50-8	mg/kg	100			NS	NS	51,900	N	NMED		1.93E-03
Iron	7439-89-6	mg/kg	11,000			NS	NS	908,000	N	NMED		1.21E-02
Lead	7439-92-1	mg/kg	12			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	6,500			NS	NS	5,680,000	N	NMED		1.14E-03
Manganese	7439-96-5	mg/kg	490			NS	NS	160,000	N	NMED		3.06E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.085	J		NS	NS	112	N	NMED		7.59E-04
Nickel	7440-02-0	mg/kg	12			2,890,000	N	25,700	N	NMED	4.15E-11	4.67E-04
Potassium	7440-09-7	mg/kg	1,600			NS	NS	76,200,000	N	NMED		2.10E-05
Selenium	7782-49-2	mg/kg	1.6			NS	NS	6,490	N	NMED		2.47E-04
Silver	7440-22-4	mg/kg	0.026	J		NS	NS	6,490	N	NMED		4.01E-06
Sodium	7440-23-5	mg/kg	52			NS	NS	37,300,000	N	NMED		1.39E-06
Thallium	7440-28-0	mg/kg	0.046	J		NS	NS	13	N	NMED		3.54E-03
Vanadium	7440-62-2	mg/kg	15			NS	NS	6,530	N	NMED		2.30E-03
Zinc	7440-66-6	mg/kg	28			NS	NS	38,900	N	NMED		7.20E-04
									Cumulative Risk/Hazard		**5E-07**	**0.06**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Industrial Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-X25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID X25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		626	N	2,420	N	NMEDC			

TABLE D1-X25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID X25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	18,000			NS	NS	41,400	N	NMED		4.35E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	142	N	NMED			
Arsenic	7440-38-2	mg/kg	0.93			216	N	41	N	NMED	4.31E-08	2.26E-02	
Barium	7440-39-3	mg/kg	430			NS	NS	4,390	N	NMED		9.79E-02	
Beryllium	7440-41-7	mg/kg	1			2,710	N	148	N	NMED	3.69E-09	6.76E-03	
Cadmium	7440-43-9	mg/kg	0.52			3,610	N	72	N	NMED	1.44E-09	7.21E-03	
Calcium	7440-70-2	mg/kg	28,000			NS	NS	8,850,000	N	NMED		3.16E-03	
Chromium (Total) (3)	7440-47-3	mg/kg	13			468	N	134	N	NMED	2.78E-07	9.70E-02	
Cobalt	7440-48-4	mg/kg	5			722	N	37	N	NMED	6.93E-08	1.36E-01	Endocrine
Copper	7440-50-8	mg/kg	100			NS	NS	14,200	N	NMED		7.04E-03	
Iron	7439-89-6	mg/kg	11,000			NS	NS	248,000	N	NMED		4.44E-02	
Lead	7439-92-1	mg/kg	12			NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	6,500			NS	NS	1,550,000	N	NMED		4.19E-03	
Manganese	7439-96-5	mg/kg	490			NS	NS	464	Y	NMED		1.06E+00	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.085	J		NS	NS	21	N	NMED		4.11E-03	
Nickel	7440-02-0	mg/kg	12			20,500	N	753	N	NMED	5.85E-09	1.59E-02	
Potassium	7440-09-7	mg/kg	1,600			NS	NS	20,800,000	N	NMED		7.69E-05	
Selenium	7782-49-2	mg/kg	1.6			NS	NS	1,750	N	NMED		9.14E-04	
Silver	7440-22-4	mg/kg	0.026	J		NS	NS	1,770	N	NMED		1.47E-05	
Sodium	7440-23-5	mg/kg	52			NS	NS	10,200,000	N	NMED		5.10E-06	
Thallium	7440-28-0	mg/kg	0.046	J		NS	NS	4	N	NMED		1.30E-02	
Vanadium	7440-62-2	mg/kg	15			NS	NS	614	N	NMED		2.44E-02	
Zinc	7440-66-6	mg/kg	28			NS	NS	106,000	N	NMED		2.64E-04	
									Cumulative Risk/Hazard		**4E-07**	**2.0**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
NA = not applicable
N = no
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	1.5
Endocrine	0.14
All Others	0.35

TABLE D1-X33-1
GRID X33 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.15	UJ		NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.15	UJ		NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.15	UJ		211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.15	UJ		17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.15	UJ		3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.15	UJ		NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.15	UJ		31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.15	UJ		NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.15	UJ		NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.15	UJ		333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.15	UJ		83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.15	UJ		NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.15	UJ		60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.3	UJ		313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.15	UJ		NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.5	UJ		1,300	N	570	N	RSL		

TABLE D1-X33-1
GRID X33 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	14,000			NS	NS	78,000	N	NMED		1.79E-01
Antimony	7440-36-0	mg/kg	0.23			NS	NS	31.3	N	NMED		7.35E-03
Arsenic	7440-38-2	mg/kg	1.2			7.07	N	13	N	NMED	1.70E-06	9.23E-02
Barium	7440-39-3	mg/kg	240			NS	NS	15,600	N	NMED		1.54E-02
Beryllium	7440-41-7	mg/kg	0.59	J		64,400	N	156	N	NMED	9.16E-11	3.78E-03
Cadmium	7440-43-9	mg/kg	0.4			85,900	N	70.5	N	NMED	4.66E-11	5.67E-03
Calcium	7440-70-2	mg/kg	2,900			NS	NS	13,000,000	N	NMED		2.23E-04
Chromium (Total) (2)	7440-47-3	mg/kg	11			96.6	N	45,200	N	NMED	1.14E-06	2.43E-04
Cobalt	7440-48-4	mg/kg	5.2			17,200	N	23.4	N	NMED	3.02E-09	2.22E-01
Copper	7440-50-8	mg/kg	84			NS	NS	3,130	N	NMED		2.68E-02
Iron	7439-89-6	mg/kg	8,300			NS	NS	54,800	N	NMED		1.51E-01
Lead	7439-92-1	mg/kg	9.6			NS	NS	200	N	IEUBK		
Magnesium	7439-95-4	mg/kg	5,200			NS	NS	15,600,000	N	NMED		3.33E-04
Manganese	7439-96-5	mg/kg	400			NS	NS	10,500	N	NMED		3.81E-02
Mercury (Elemental)	7439-97-6	mg/kg	0.019	J		NS	NS	23.8	N	NMED		7.98E-04
Nickel	7440-02-0	mg/kg	8.8			595,000	N	1,560	N	NMED	1.48E-10	5.64E-03
Potassium	7440-09-7	mg/kg	1,200			NS	NS	15,600,000	N	NMED		7.69E-05
Selenium	7782-49-2	mg/kg	0.75			NS	NS	391	N	NMED		1.92E-03
Silver	7440-22-4	mg/kg	0.079	J		NS	NS	391	N	NMED		2.02E-04
Sodium	7440-23-5	mg/kg	46			NS	NS	7,820,000	N	NMED		5.88E-06
Thallium	7440-28-0	mg/kg	0.087	J		NS	NS	0.782	N	NMED		1.11E-01
Vanadium	7440-62-2	mg/kg	14			NS	NS	394	N	NMED		3.55E-02
Zinc	7440-66-6	mg/kg	28			NS	NS	23,500	N	NMED		1.19E-03
									Cumulative Risk/Hazard		**3E-06**	**0.9**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Residential Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Residential Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-X33-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID X33
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.15	UJ		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.15	UJ		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.15	UJ		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.15	UJ		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.15	UJ		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.15	UJ		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.15	UJ		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.15	UJ		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.15	UJ		NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.15	UJ		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.15	UJ		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.15	UJ		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.15	UJ		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.3	UJ		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.15	UJ		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.5	UJ		5,300	N	7,400	N	RSL		

TABLE D1-X33-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID X33
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	14,000			NS	NS	1,290,000	N	NMED		1.09E-02
Antimony	7440-36-0	mg/kg	0.23			NS	NS	519	N	NMED		4.43E-04
Arsenic	7440-38-2	mg/kg	1.2			36	N	208	N	NMED	3.34E-07	5.77E-03
Barium	7440-39-3	mg/kg	240			NS	NS	255,000	N	NMED		9.41E-04
Beryllium	7440-41-7	mg/kg	0.59	J		313,000	N	2,580	N	NMED	1.88E-11	2.29E-04
Cadmium	7440-43-9	mg/kg	0.4			417,000	N	1,110	N	NMED	9.59E-12	3.60E-04
Calcium	7440-70-2	mg/kg	2,900			NS	NS	32,400,000	N	NMED		8.95E-05
Chromium (Total) (2)	7440-47-3	mg/kg	11			505	N	314,000	N	NMED	2.18E-07	3.50E-05
Cobalt	7440-48-4	mg/kg	5.2			83,400	N	388	N	NMED	6.24E-10	1.34E-02
Copper	7440-50-8	mg/kg	84			NS	NS	51,900	N	NMED		1.62E-03
Iron	7439-89-6	mg/kg	8,300			NS	NS	908,000	N	NMED		9.14E-03
Lead	7439-92-1	mg/kg	9.6			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	5,200			NS	NS	5,680,000	N	NMED		9.15E-04
Manganese	7439-96-5	mg/kg	400			NS	NS	160,000	N	NMED		2.50E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.019	J		NS	NS	112	N	NMED		1.70E-04
Nickel	7440-02-0	mg/kg	8.8			2,890,000	N	25,700	N	NMED	3.04E-11	3.42E-04
Potassium	7440-09-7	mg/kg	1,200			NS	NS	76,200,000	N	NMED		1.57E-05
Selenium	7782-49-2	mg/kg	0.75			NS	NS	6,490	N	NMED		1.16E-04
Silver	7440-22-4	mg/kg	0.079	J		NS	NS	6,490	N	NMED		1.22E-05
Sodium	7440-23-5	mg/kg	46			NS	NS	37,300,000	N	NMED		1.23E-06
Thallium	7440-28-0	mg/kg	0.087	J		NS	NS	13	N	NMED		6.69E-03
Vanadium	7440-62-2	mg/kg	14			NS	NS	6,530	N	NMED		2.14E-03
Zinc	7440-66-6	mg/kg	28			NS	NS	38,900	N	NMED		7.20E-04
									Cumulative Risk/Hazard		**6E-07**	**0.06**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Industrial Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-X33-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID X33
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.15	UJ		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.15	UJ		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.15	UJ		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.15	UJ		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.15	UJ		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.15	UJ		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.15	UJ		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.15	UJ		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.15	UJ		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.15	UJ		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.15	UJ		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.15	UJ		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.15	UJ		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.3	UJ		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.15	UJ		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.5	UJ		626	N	2,420	N	NMEDC			

TABLE D1-X33-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID X33
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	14,000			NS	NS	41,400	N	NMED		3.38E-01	Nervous
Antimony	7440-36-0	mg/kg	0.23			NS	NS	142	N	NMED		1.62E-03	
Arsenic	7440-38-2	mg/kg	1.2			216	N	41	N	NMED		2.91E-02	
Barium	7440-39-3	mg/kg	240			NS	NS	4,390	N	NMED		5.47E-02	
Beryllium	7440-41-7	mg/kg	0.59	J		2,710	N	148	N	NMED		3.99E-03	
Cadmium	7440-43-9	mg/kg	0.4			3,610	N	72	N	NMED		5.55E-03	
Calcium	7440-70-2	mg/kg	2,900			NS	NS	8,850,000	N	NMED		3.28E-04	
Chromium (Total) (3)	7440-47-3	mg/kg	11			468	N	134	N	NMED		8.21E-02	
Cobalt	7440-48-4	mg/kg	5.2			722	N	37	N	NMED		1.42E-01	Endocrine
Copper	7440-50-8	mg/kg	84			NS	NS	14,200	N	NMED		5.92E-03	
Iron	7439-89-6	mg/kg	8,300			NS	NS	248,000	N	NMED		3.35E-02	
Lead	7439-92-1	mg/kg	9.6			NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	5,200			NS	NS	1,550,000	N	NMED		3.35E-03	
Manganese	7439-96-5	mg/kg	400			NS	NS	464	N	NMED		8.62E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.019	J		NS	NS	21	N	NMED		9.18E-04	
Nickel	7440-02-0	mg/kg	8.8			20,500	N	753	N	NMED		1.17E-02	
Potassium	7440-09-7	mg/kg	1,200			NS	NS	20,800,000	N	NMED		5.77E-05	
Selenium	7782-49-2	mg/kg	0.75			NS	NS	1,750	N	NMED		4.29E-04	
Silver	7440-22-4	mg/kg	0.079	J		NS	NS	1,770	N	NMED		4.46E-05	
Sodium	7440-23-5	mg/kg	46			NS	NS	10,200,000	N	NMED		4.51E-06	
Thallium	7440-28-0	mg/kg	0.087	J		NS	NS	4	N	NMED		2.46E-02	
Vanadium	7440-62-2	mg/kg	14			NS	NS	614	N	NMED		2.28E-02	
Zinc	7440-66-6	mg/kg	28			NS	NS	106,000	N	NMED		2.64E-04	
									Cumulative Risk/Hazard		**0E+00**	**1.6**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	1.2
Endocrine	0.14
All Others	0.28

TABLE D1-X36-1
GRID X36 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.15	UJ		NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.15	UJ		NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.15	UJ		211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.15	UJ		17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.15	UJ		3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.15	UJ		NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.15	UJ		31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.15	UJ		NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.15	UJ		NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.15	UJ		333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.15	UJ		83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.15	UJ		NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.15	UJ		60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.3	UJ		313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.15	UJ		NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.5	UJ		1,300	N	570	N	RSL		

TABLE D1-X36-1
GRID X36 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	12,000			NS	NS	78,000	N	NMED		1.54E-01
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	31.3	N	NMED		
Arsenic	7440-38-2	mg/kg	1.4			7.07	N	13	N	NMED	1.98E-06	1.08E-01
Barium	7440-39-3	mg/kg	180			NS	NS	15,600	N	NMED		1.15E-02
Beryllium	7440-41-7	mg/kg	0.54	J		64,400	N	156	N	NMED	8.39E-11	3.46E-03
Cadmium	7440-43-9	mg/kg	0.3			85,900	N	70.5	N	NMED	3.49E-11	4.26E-03
Calcium	7440-70-2	mg/kg	3,000			NS	NS	13,000,000	N	NMED		2.31E-04
Chromium (Total) (2)	7440-47-3	mg/kg	9			96.6	N	45,200	N	NMED	9.32E-07	1.99E-04
Cobalt	7440-48-4	mg/kg	4.8			17,200	N	23.4	N	NMED	2.79E-09	2.05E-01
Copper	7440-50-8	mg/kg	47			NS	NS	3,130	N	NMED		1.50E-02
Iron	7439-89-6	mg/kg	7,600			NS	NS	54,800	N	NMED		1.39E-01
Lead	7439-92-1	mg/kg	9.8			NS	NS	200	N	IEUBK		
Magnesium	7439-95-4	mg/kg	4,000			NS	NS	15,600,000	N	NMED		2.56E-04
Manganese	7439-96-5	mg/kg	390			NS	NS	10,500	N	NMED		3.71E-02
Mercury (Elemental)	7439-97-6	mg/kg	0.019	J		NS	NS	23.8	N	NMED		7.98E-04
Nickel	7440-02-0	mg/kg	7.9			595,000	N	1,560	N	NMED	1.33E-10	5.06E-03
Potassium	7440-09-7	mg/kg	1,000			NS	NS	15,600,000	N	NMED		6.41E-05
Selenium	7782-49-2	mg/kg	0.96			NS	NS	391	N	NMED		2.46E-03
Silver	7440-22-4	mg/kg	0.079	J		NS	NS	391	N	NMED		2.02E-04
Sodium	7440-23-5	mg/kg	47			NS	NS	7,820,000	N	NMED		6.01E-06
Thallium	7440-28-0	mg/kg	0.096	J		NS	NS	0.782	N	NMED		1.23E-01
Vanadium	7440-62-2	mg/kg	13			NS	NS	394	N	NMED		3.30E-02
Zinc	7440-66-6	mg/kg	24			NS	NS	23,500	N	NMED		1.02E-03
									Cumulative Risk/Hazard		**3E-06**	**0.8**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Residential Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Residential Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-X36-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID X36
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.15	UJ		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.15	UJ		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.15	UJ		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.15	UJ		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.15	UJ		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.15	UJ		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.15	UJ		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.15	UJ		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.15	UJ		NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.15	UJ		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.15	UJ		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.15	UJ		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.15	UJ		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.3	UJ		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.15	UJ		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.5	UJ		5,300	N	7,400	N	RSL		

TABLE D1-X36-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID X36
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	12,000			NS	NS	1,290,000	N	NMED		9.30E-03
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	519	N	NMED		
Arsenic	7440-38-2	mg/kg	1.4			36	N	208	N	NMED	3.90E-07	6.73E-03
Barium	7440-39-3	mg/kg	180			NS	NS	255,000	N	NMED		7.06E-04
Beryllium	7440-41-7	mg/kg	0.54	J		313,000	N	2,580	N	NMED	1.73E-11	2.09E-04
Cadmium	7440-43-9	mg/kg	0.3			417,000	N	1,110	N	NMED	7.19E-12	2.70E-04
Calcium	7440-70-2	mg/kg	3,000			NS	NS	32,400,000	N	NMED		9.26E-05
Chromium (Total) (2)	7440-47-3	mg/kg	9			505	N	314,000	N	NMED	1.78E-07	2.87E-05
Cobalt	7440-48-4	mg/kg	4.8			83,400	N	388	N	NMED	5.76E-10	1.24E-02
Copper	7440-50-8	mg/kg	47			NS	NS	51,900	N	NMED		9.06E-04
Iron	7439-89-6	mg/kg	7,600			NS	NS	908,000	N	NMED		8.37E-03
Lead	7439-92-1	mg/kg	9.8			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	4,000			NS	NS	5,680,000	N	NMED		7.04E-04
Manganese	7439-96-5	mg/kg	390			NS	NS	160,000	N	NMED		2.44E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.019	J		NS	NS	112	N	NMED		1.70E-04
Nickel	7440-02-0	mg/kg	7.9			2,890,000	N	25,700	N	NMED	2.73E-11	3.07E-04
Potassium	7440-09-7	mg/kg	1,000			NS	NS	76,200,000	N	NMED		1.31E-05
Selenium	7782-49-2	mg/kg	0.96			NS	NS	6,490	N	NMED		1.48E-04
Silver	7440-22-4	mg/kg	0.079	J		NS	NS	6,490	N	NMED		1.22E-05
Sodium	7440-23-5	mg/kg	47			NS	NS	37,300,000	N	NMED		1.26E-06
Thallium	7440-28-0	mg/kg	0.096	J		NS	NS	13	N	NMED		7.38E-03
Vanadium	7440-62-2	mg/kg	13			NS	NS	6,530	N	NMED		1.99E-03
Zinc	7440-66-6	mg/kg	24			NS	NS	38,900	N	NMED		6.17E-04
									Cumulative Risk/Hazard		**6E-07**	**0.05**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Industrial Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UJ = Estimated Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-X36-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID X36
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.15	UJ		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.15	UJ		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.15	UJ		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.15	UJ		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.15	UJ		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.15	UJ		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.15	UJ		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.15	UJ		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.15	UJ		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.15	UJ		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.15	UJ		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.15	UJ		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.15	UJ		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.3	UJ		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.15	UJ		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.5	UJ		626	N	2,420	N	NMEDC			

TABLE D1-X36-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID X36
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	12,000			NS	NS	41,400	N	NMED		2.90E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	142	N	NMED			
Arsenic	7440-38-2	mg/kg	1.4			216	N	41	N	NMED	6.48E-08	3.40E-02	
Barium	7440-39-3	mg/kg	180			NS	NS	4,390	N	NMED		4.10E-02	
Beryllium	7440-41-7	mg/kg	0.54	J		2,710	N	148	N	NMED	1.99E-09	3.65E-03	
Cadmium	7440-43-9	mg/kg	0.3			3,610	N	72	N	NMED	8.31E-10	4.16E-03	
Calcium	7440-70-2	mg/kg	3,000			NS	NS	8,850,000	N	NMED		3.39E-04	
Chromium (Total) (3)	7440-47-3	mg/kg	9			468	N	134	N	NMED	1.92E-07	6.72E-02	
Cobalt	7440-48-4	mg/kg	4.8			722	N	37	N	NMED	6.65E-08	1.31E-01	Endocrine
Copper	7440-50-8	mg/kg	47			NS	NS	14,200	N	NMED		3.31E-03	
Iron	7439-89-6	mg/kg	7,600			NS	NS	248,000	N	NMED		3.06E-02	
Lead	7439-92-1	mg/kg	9.8			NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	4,000			NS	NS	1,550,000	N	NMED		2.58E-03	
Manganese	7439-96-5	mg/kg	390			NS	NS	464	N	NMED		8.41E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.019	J		NS	NS	21	N	NMED		9.18E-04	
Nickel	7440-02-0	mg/kg	7.9			20,500	N	753	N	NMED	3.85E-09	1.05E-02	
Potassium	7440-09-7	mg/kg	1,000			NS	NS	20,800,000	N	NMED		4.81E-05	
Selenium	7782-49-2	mg/kg	0.96			NS	NS	1,750	N	NMED		5.49E-04	
Silver	7440-22-4	mg/kg	0.079	J		NS	NS	1,770	N	NMED		4.46E-05	
Sodium	7440-23-5	mg/kg	47			NS	NS	10,200,000	N	NMED		4.61E-06	
Thallium	7440-28-0	mg/kg	0.096	J		NS	NS	4	N	NMED		2.71E-02	
Vanadium	7440-62-2	mg/kg	13			NS	NS	614	N	NMED		2.12E-02	
Zinc	7440-66-6	mg/kg	24			NS	NS	106,000	N	NMED		2.26E-04	
									Cumulative Risk/Hazard		**3E-07**	**1.5**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent	NS = No Standard
CAS = Chemical Abstracts Service	RAG = Risk Assessment Guidance
HI = Hazard Index	SSL = soil screening level
J = Estimated	U = Nondetect
mg/kg = milligrams per kilogram	UJ = Estimated Nondetect
N = no	UTL = upper tolerance limit
NA = not applicable	Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	1.1
Endocrine	0.13
All Others	0.25

TABLE D1-Z29-1
GRID Z29 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	2,200	N	RSL			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	6.3	N	RSL			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		211	N	36	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		3.56	N	18.5	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	7.7	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		31.6	N	70.4	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	6.16	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	7.64	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		333	N	247	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		83.1	N	301	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	156	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U		60.4	N	131	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U		313	N	6.16	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	3,850	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		1,300	N	570	N	RSL			

TABLE D1-Z29-1
GRID Z29 HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	23,000			NS	NS	78,000	N	NMED		2.95E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	31.3	N	NMED			
Arsenic	7440-38-2	mg/kg	1.1			7.07	N	13	N	NMED	1.56E-06	8.46E-02	
Barium	7440-39-3	mg/kg	610			NS	NS	15,600	N	NMED		3.91E-02	
Beryllium	7440-41-7	mg/kg	1			64,400	N	156	N	NMED	1.55E-10	6.41E-03	
Cadmium	7440-43-9	mg/kg	0.28			85,900	N	70.5	N	NMED	3.26E-11	3.97E-03	
Calcium	7440-70-2	mg/kg	5,800			NS	NS	13,000,000	N	NMED		4.46E-04	
Chromium (Total) (2)	7440-47-3	mg/kg	16			96.6	N	45,200	N	NMED	1.66E-06	3.54E-04	
Cobalt	7440-48-4	mg/kg	5.9			17,200	N	23.4	N	NMED	3.43E-09	2.52E-01	Endocrine
Copper	7440-50-8	mg/kg	72			NS	NS	3,130	N	NMED		2.30E-02	
Iron	7439-89-6	mg/kg	15,000			NS	NS	54,800	N	NMED		2.74E-01	GI
Lead	7439-92-1	mg/kg	11			NS	NS	200	N	IEUBK			
Magnesium	7439-95-4	mg/kg	8,600			NS	NS	15,600,000	N	NMED		5.51E-04	
Manganese	7439-96-5	mg/kg	240			NS	NS	10,500	N	NMED		2.29E-02	
Mercury (Elemental)	7439-97-6	mg/kg	0.017	J		NS	NS	23.8	N	NMED		7.14E-04	
Nickel	7440-02-0	mg/kg	12			595,000	N	1,560	N	NMED	2.02E-10	7.69E-03	
Potassium	7440-09-7	mg/kg	1,300			NS	NS	15,600,000	N	NMED		8.33E-05	
Selenium	7782-49-2	mg/kg	1.5			NS	NS	391	N	NMED		3.84E-03	
Silver	7440-22-4	mg/kg	0.076	J		NS	NS	391	N	NMED		1.94E-04	
Sodium	7440-23-5	mg/kg	69			NS	NS	7,820,000	N	NMED		8.82E-06	
Thallium	7440-28-0	mg/kg	0.054	J		NS	NS	0.782	N	NMED		6.91E-02	
Vanadium	7440-62-2	mg/kg	23	J		NS	NS	394	N	NMED		5.84E-02	
Zinc	7440-66-6	mg/kg	30			NS	NS	23,500	N	NMED		1.28E-03	
									Cumulative Risk/Hazard		**3E-06**	**1.1**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Residential Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Residential Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
IEUBK = Integrated Exposure Uptake Biokinetic Model
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	0.32
Endocrine	0.25
GI	0.27
All Others	0.32

TABLE D1-Z29-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID Z29
FORT WINGTE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)												
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U		293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U		1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		5,300	N	7,400	N	RSL		

TABLE D1-Z29-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR GRID Z29
FORT WINGTE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1]	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)												
Aluminum	7429-90-5	mg/kg	23,000			NS	NS	1,290,000	N	NMED		1.78E-02
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	519	N	NMED		
Arsenic	7440-38-2	mg/kg	1.1			36	N	208	N	NMED	3.06E-07	5.29E-03
Barium	7440-39-3	mg/kg	610			NS	NS	255,000	N	NMED		2.39E-03
Beryllium	7440-41-7	mg/kg	1			313,000	N	2,580	N	NMED	3.19E-11	3.88E-04
Cadmium	7440-43-9	mg/kg	0.28			417,000	N	1,110	N	NMED	6.71E-12	2.52E-04
Calcium	7440-70-2	mg/kg	5,800			NS	NS	32,400,000	N	NMED		1.79E-04
Chromium (Total) (2)	7440-47-3	mg/kg	16			505	N	314,000	N	NMED	3.17E-07	5.10E-05
Cobalt	7440-48-4	mg/kg	5.9			83,400	N	388	N	NMED	7.07E-10	1.52E-02
Copper	7440-50-8	mg/kg	72			NS	NS	51,900	N	NMED		1.39E-03
Iron	7439-89-6	mg/kg	15,000			NS	NS	908,000	N	NMED		1.65E-02
Lead	7439-92-1	mg/kg	11			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	8,600			NS	NS	5,680,000	N	NMED		1.51E-03
Manganese	7439-96-5	mg/kg	240			NS	NS	160,000	N	NMED		1.50E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.017	J		NS	NS	112	N	NMED		1.52E-04
Nickel	7440-02-0	mg/kg	12			2,890,000	N	25,700	N	NMED	4.15E-11	4.67E-04
Potassium	7440-09-7	mg/kg	1,300			NS	NS	76,200,000	N	NMED		1.71E-05
Selenium	7782-49-2	mg/kg	1.5			NS	NS	6,490	N	NMED		2.31E-04
Silver	7440-22-4	mg/kg	0.076	J		NS	NS	6,490	N	NMED		1.17E-05
Sodium	7440-23-5	mg/kg	69			NS	NS	37,300,000	N	NMED		1.85E-06
Thallium	7440-28-0	mg/kg	0.054	J		NS	NS	13	N	NMED		4.15E-03
Vanadium	7440-62-2	mg/kg	23	J		NS	NS	6,530	N	NMED		3.52E-03
Zinc	7440-66-6	mg/kg	30			NS	NS	38,900	N	NMED		7.71E-04
									Cumulative Risk/Hazard		**6E-07**	**0.07**
									Exceeds Target Level		**N**	**N**

Notes:

[1] NMED = New Mexico Environment Department Industrial Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Industrial Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1.

[2] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
N = no
NA = not applicable
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

TABLE D1-Z29-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID Z29
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NS	NS	8,070	N	NMEDC			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NS	NS	27	N	NMEDC			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U		7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U		NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ		NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U		1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U		11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		626	N	2,420	N	NMEDC			

TABLE D1-Z29-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR GRID Z29
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result			Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source[1,2]	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	23,000			NS	NS	41,400	N	NMED		5.56E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	U		NS	NS	142	N	NMED			
Arsenic	7440-38-2	mg/kg	1.1			216	N	41	N	NMED	5.09E-08	2.67E-02	
Barium	7440-39-3	mg/kg	610			NS	NS	4,390	N	NMED		1.39E-01	Kidneys
Beryllium	7440-41-7	mg/kg	1			2,710	N	148	N	NMED	3.69E-09	6.76E-03	
Cadmium	7440-43-9	mg/kg	0.28			3,610	N	72	N	NMED	7.76E-10	3.88E-03	
Calcium	7440-70-2	mg/kg	5,800			NS	NS	8,850,000	N	NMED		6.55E-04	
Chromium (Total) (3)	7440-47-3	mg/kg	16			468	N	134	N	NMED	3.42E-07	1.19E-01	GI, Blood
Cobalt	7440-48-4	mg/kg	5.9			722	N	37	N	NMED	8.17E-08	1.61E-01	Endocrine
Copper	7440-50-8	mg/kg	72			NS	NS	14,200	N	NMED		5.07E-03	
Iron	7439-89-6	mg/kg	15,000			NS	NS	248,000	N	NMED		6.05E-02	
Lead	7439-92-1	mg/kg	11			NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	8,600			NS	NS	1,550,000	N	NMED		5.55E-03	
Manganese	7439-96-5	mg/kg	240			NS	NS	464	N	NMED		5.17E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.017	J		NS	NS	21	N	NMED		8.21E-04	
Nickel	7440-02-0	mg/kg	12			20,500	N	753	N	NMED	5.85E-09	1.59E-02	
Potassium	7440-09-7	mg/kg	1,300			NS	NS	20,800,000	N	NMED		6.25E-05	
Selenium	7782-49-2	mg/kg	1.5			NS	NS	1,750	N	NMED		8.57E-04	
Silver	7440-22-4	mg/kg	0.076	J		NS	NS	1,770	N	NMED		4.29E-05	
Sodium	7440-23-5	mg/kg	69			NS	NS	10,200,000	N	NMED		6.76E-06	
Thallium	7440-28-0	mg/kg	0.054	J		NS	NS	4	N	NMED		1.53E-02	
Vanadium	7440-62-2	mg/kg	23	J		NS	NS	614	N	NMED		3.75E-02	
Zinc	7440-66-6	mg/kg	30			NS	NS	106,000	N	NMED		2.83E-04	
									Cumulative Risk/Hazard		**5E-07**	**1.7**	
									Exceeds Target Level		**N**	**Y**	

Notes:

[1] NMED = New Mexico Environment Department Construction Worker Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = United States Environmental Protection Agency (USEPA) Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

[2] NMEDC = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

[3] Chromium screening value is for Total Chromium.

% = percent
CAS = Chemical Abstracts Service
HI = Hazard Index
J = Estimated
mg/kg = milligrams per kilogram
NA = not applicable
N = no
NS = No Standard
RAG = Risk Assessment Guidance
SSL = soil screening level
U = Nondetect
UTL = upper tolerance limit
Y = yes

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments." The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	1.1
Endocrine	0.16
Kidneys	0.14
GI	0.12
Blood	0.12
All Others	0.18

Buffer Area

TABLE D1-AA24-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AA24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0018	U			28.1	N	2,350	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0018	U			NS	NS	14,400	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0018	U			7.98	N	1,560	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0018	U			18.8	N	2.61	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0018	U			78.6	N	15,600	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0018	U			NS	NS	440	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0018	U			29.3	N	141	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0018	U			NS	NS	63	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0045	U			0.051	N	7.09	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0018	U			240	N	82.9	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0018	U			NS	NS	300	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0045	U			0.0858	N	5.88	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0018	U			0.672	N	135	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0018	U			NS	NS	2,150	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0018	U			8.32	N	55.6	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0018	U			17.8	N	29	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0018	U			NS	NS	270	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0018	U			1,290	N	5,480	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0018	U			NS	NS	1,600	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0018	U			1,290	N	5,480	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0018	U			17.8	N	29	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0027	U			NS	NS	37,400	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0018	U			NS	NS	1,560	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0018	U			NS	NS	200	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0018	U			NS	NS	1,600	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0018	U			NS	NS	5,810	N	RSL		
Acetone	67-64-1	mg/kg	0.15				NS	NS	66,300	N	NMED		2.26E-06
Benzene	71-43-2	mg/kg	0.0018	U			17.8	N	114	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0018	U			NS	NS	290	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0018	U			NS	NS	150	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0018	U			6.19	N	1,560	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0018	U			674	N	1,230	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0018	U			NS	NS	17.7	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0018	U			NS	NS	1,550	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0018	U			10.7	N	144	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0018	U			NS	NS	378	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0018	U			NS	NS	19,000	N	NMED		
Chloroform	67-66-3	mg/kg	0.0018	U			5.9	N	306	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0045	U			41.1	N	268	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0018	U			NS	NS	156	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0018	U			29.3	N	141	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0018	U			13.9	N	1,230	N	NMED		
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0018	U			NS	NS	57.9	N	NMED		

TABLE D1-AA24-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AA24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg),continued													
Dichlorodifluoromethane	75-71-8	mg/kg	0.0018	U			NS	NS	182	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0018	U			75.1	N	3,930	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0018	U			68.3	N	61.6	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0018	U			NS	NS	2,360	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0045	U			NS	NS	764	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0018	U			975	N	37,800	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.009	U			766	N	409	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0018	U			NS	NS	3,900	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0018	U			NS	NS	3,800	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0018	U			22.6	N	162	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0022	U			NS	NS	805	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0018	U			NS	NS	2,360	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0018	U			NS	NS	7,800	N	RSL		
Styrene	100-42-5	mg/kg	0.0018	U			NS	NS	7,260	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0018	U			NS	NS	7,800	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0018	U			337	N	111	N	NMED		
Toluene	108-88-3	mg/kg	0.0018	U			NS	NS	5,230	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0018	U			NS	NS	210	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0018	U			29.3	N	141	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0018	U			15.5	N	6.77	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0018	U			NS	NS	1,230	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0018	U			0.742	N	113	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	UJ			240	N	82.9	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	UJ			NS	NS	2,150	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	UJ			1,290	N	5,480	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	UJ			1,290	N	5,480	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	UJ			NS	NS	6,160	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	UJ			484	N	61.6	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	UJ			NS	NS	185	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	UJ			NS	NS	1,230	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	UJ			NS	NS	123	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	UJ			17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	UJ			3.56	N	18.5	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	UJ			NS	NS	6,260	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.17	UJ			NS	NS	391	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.17	UJ			NS	NS	232	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	UJ			NS	NS	3,200	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.17	UJ			NS	NS	630	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	UJ			11.8	N	NS	NS	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.17	UJ			270	N	250	N	RSL[S]		
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	UJ			NS	NS	4.93	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		

TABLE D1-AA24-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AA24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	UJ			NS	NS	6,300	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.17	UJ			27	N	32	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.17	UJ			270	N	250	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.17	UJ			NS	NS	3,480	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.17	UJ			NS	NS	1,740	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.17	UJ			NS	NS	17,400	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.17	UJ			1.53	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.13	UJ			1.12	N	17.4	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	UJ			1.53	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	UJ			NS	NS	1,740	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	UJ			15.3	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.17	UJ			NS	NS	250,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.17	UJ			NS	NS	6,300	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	UJ			NS	NS	190	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	UJ			3.11	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	UJ			99.3	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	UJ			380	N	1,230	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.17	UJ			2,900	N	13,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.17	UJ			153	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.17	UJ			NS	NS	6,160	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.17	UJ			NS	NS	630	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	UJ			0.153	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.17	UJ			NS	NS	78	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.17	UJ			NS	NS	49,300	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.17	UJ			NS	NS	61,600	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.17	UJ			NS	NS	2,320	N	NMED		
Fluorene	86-73-7	mg/kg	0.17	UJ			NS	NS	2,320	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.17	UJ			3.33	N	49.3	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	UJ			68.3	N	61.6	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.17	UJ			133	N	43.1	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	UJ			1.53	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.17	UJ			5,610	N	12,300	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	UJ			0.78	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.02	UJ			0.0234	N	0.493	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	UJ			1,090	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.17	UJ			22.6	N	162	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.17	UJ			60.4	N	131	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.17	UJ			9.85	N	234	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.17	UJ			NS	NS	1,740	N	NMED		
Phenol	108-95-2	mg/kg	0.17	UJ			NS	NS	18,500	N	NMED		
Pyrene	129-00-0	mg/kg	0.17	UJ			NS	NS	1,740	N	NMED		

TABLE D1-AA24-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AA24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			1,300	N	570	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.02	U			69.6	N	3.98	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.02	U			1.81	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.01	U			1.86	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.01	U			2.43	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.01	U			2.43	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.01	U			2.43	N	1.14	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.01	U			2.43	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000023	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg		U	0.00001	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000015	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.0000021	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000019	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.00000011	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg	0.000000011	J	0.00000011	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000046	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000054	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		UJ	0.00000014	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.000000087	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000013	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.0000001	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.00000011	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000013	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000031	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.0000001	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.000000011				0.000049	N	0.0000506	N	NMED	2.24E-09	2.17E-04

TABLE D1-AA24-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AA24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	16,000				NS	NS	78,000	N	NMED		2.05E-01
Antimony	7440-36-0	mg/kg	0.19	J			NS	NS	31.3	N	NMED		6.07E-03
Arsenic	7440-38-2	mg/kg	1.4				7.07	N	13	N	NMED	1.98E-06	1.08E-01
Barium	7440-39-3	mg/kg	170				NS	NS	15,600	N	NMED		1.09E-02
Beryllium	7440-41-7	mg/kg	0.52	J			64,400	N	156	N	NMED	8.07E-11	3.33E-03
Cadmium	7440-43-9	mg/kg	0.71				85,900	N	70.5	N	NMED	8.27E-11	1.01E-02
Calcium	7440-70-2	mg/kg	3,500				NS	NS	13,000,000	N	NMED		2.69E-04
Chromium (Total) (3)	7440-47-3	mg/kg	14				96.6	N	45,200	N	NMED	1.45E-06	3.10E-04
Cobalt	7440-48-4	mg/kg	5.1				17,200	N	23.4	N	NMED	2.97E-09	2.18E-01
Copper	7440-50-8	mg/kg	170	J			NS	NS	3,130	N	NMED		5.43E-02
Iron	7439-89-6	mg/kg	9,600				NS	NS	54,800	N	NMED		1.75E-01
Lead	7439-92-1	mg/kg	17				NS	NS	200	N	RSL		
Magnesium	7439-95-4	mg/kg	6,900				NS	NS	15,600,000	N	NMED		4.42E-04
Manganese	7439-96-5	mg/kg	380				NS	NS	10,500	N	NMED		3.62E-02
Mercury (Elemental)	7439-97-6	mg/kg	0.035	J			NS	NS	23.8	N	NMED		1.47E-03
Nickel	7440-02-0	mg/kg	11				595,000	N	1,560	N	NMED	1.85E-10	7.05E-03
Potassium	7440-09-7	mg/kg	930				NS	NS	15,600,000	N	NMED		5.96E-05
Selenium	7782-49-2	mg/kg	1.1				NS	NS	391	N	NMED		2.81E-03
Silver	7440-22-4	mg/kg	0.17				NS	NS	391	N	NMED		4.35E-04
Sodium	7440-23-5	mg/kg	73				NS	NS	7,820,000	N	NMED		9.34E-06
Thallium	7440-28-0	mg/kg	0.046	J			NS	NS	0.782	N	NMED		5.88E-02
Vanadium	7440-62-2	mg/kg	18				NS	NS	394	N	NMED		4.57E-02
Zinc	7440-66-6	mg/kg	37				NS	NS	23,500	N	NMED		1.57E-03

TABLE D1-AA24-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AA24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.32	U			NS	NS	11.2	N	NMED		
Nitrate	14797-55-8	mg/kg	6.8	J			NS	NS	125,000	N	NMED		5.44E-05
Perchlorate	14797-73-0	mg/kg	0.0018	UJ			NS	NS	54.8	N	NMED		
										Cumulative Risk/Hazard		**3E-06**	**0.95**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of Quantitation
mg/kg = milligrams per kilogram
NS = No Standard
TEF = Toxicity Equivalency Factor
TEQ = Toxicity Equivalency Quotient
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper tolerance limit

TABLE D1-AA24-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AA24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0018	U			137	N	39,400	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0018	U			NS	NS	72,500	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0018	U			39	N	26,000	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0018	U			92	N	12	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0018	U			383	N	260,000	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0018	U			NS	NS	2,260	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0018	U			146	N	695	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0018	U			NS	NS	930	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0045	U			1	N	34	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0018	U			1,250	N	423	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0018	U			NS	NS	1,800	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0045	U			1	N	41	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0018	U			3	N	738	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0018	U			NS	NS	13,000	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0018	U			41	N	286	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0018	U			87	N	137	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0018	U			NS	NS	1,500	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0018	U			6,730	N	90,800	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0018	U			NS	NS	23,000	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0018	U			6,730	N	90,800	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0018	U			87	N	137	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0027	U			NS	NS	411,000	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0018	U			NS	NS	26,000	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0018	U			NS	NS	1,300	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0018	U			NS	NS	23,000	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0018	U			NS	NS	81,600	N	RSL		
Acetone	67-64-1	mg/kg	0.15				NS	NS	960,000	N	NMED		1.56E-07
Benzene	71-43-2	mg/kg	0.0018	U			87	N	729	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0018	U			NS	NS	1,800	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0018	U			NS	NS	630	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0018	U			30	N	26,000	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0018	U			1,760	N	18,300	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0018	U			NS	NS	95	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0018	U			NS	NS	8,540	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0018	U			53	N	1,020	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0018	U			NS	NS	2,160	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0018	U			NS	NS	89,500	N	NMED		
Chloroform	67-66-3	mg/kg	0.0018	U			29	N	2,000	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0045	U			201	N	1,260	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0018	U			NS	NS	2,600	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0018	U			146	N	695	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0018	U			67	N	18,300	N	NMED		
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0018	U			NS	NS	288	N	NMED		

TABLE D1-AA24-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AA24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Ethylbenzene	100-41-4	mg/kg	0.0018	U			29,000	N	368	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0018	U			52	N	916	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0018	U			NS	NS	14,200	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0045	U			NS	NS	3,730	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0018	U			4,820	N	178,000	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.009	U			14,400	N	5,130	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0018	U			NS	NS	58,000	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0018	U			NS	NS	24,000	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0018	U			108	N	843	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0022	U			NS	NS	3,940	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0018	U			NS	NS	14,200	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0018	U			NS	NS	120,000	N	RSL		
Styrene	100-42-5	mg/kg	0.0018	U			NS	NS	51,300	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0018	U			NS	NS	120,000	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0018	U			1,650	N	629	N	NMED		
Toluene	108-88-3	mg/kg	0.0018	U			NS	NS	61,300	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0018	U			NS	NS	1,100	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0018	U			146	N	695	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0018	U			112	N	37	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0018	U			NS	NS	6,030	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0018	U			28	N	46	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	UJ			1,250	N	423	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	UJ			NS	NS	13,000	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	UJ			6,730	N	90,800	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	UJ			6,730	N	90,800	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	UJ			NS	NS	91,600	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	UJ			2,330	N	916	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	UJ			NS	NS	2,750	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	UJ			NS	NS	18,300	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	UJ			NS	NS	1,830	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	UJ			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	UJ			17	N	276	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	UJ			NS	NS	104,000	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.17	UJ			NS	NS	6,490	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.17	UJ			NS	NS	3,370	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	UJ			NS	NS	41,000	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.17	UJ			NS	NS	8,000	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	UJ			NS	NS	410	N	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.17	UJ			1,100	N	3,300	N	RSL[S]		
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	UJ			NS	NS	73	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	UJ			NS	NS	82,000	N	RSL		

TABLE D1-AA24-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AA24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4-Chloroaniline	106-47-8	mg/kg	0.17	UJ			110	N	410	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.17	UJ			1,100	N	3,300	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.17	UJ			NS	NS	50,500	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.17	UJ			NS	NS	25,300	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.17	UJ			NS	NS	253,000	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.17	UJ			32	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.13	UJ			24	N	251	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	UJ			32	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	UJ			NS	NS	25,300	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	UJ			323	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.17	UJ			NS	NS	3,300,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.17	UJ			NS	NS	82,000	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	UJ			NS	NS	2,500	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	UJ			16	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	UJ			519	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	UJ			1,830	N	18,300	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.17	UJ			12,000	N	160,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.17	UJ			3,230	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.13	UJ			NS	NS	91,600	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.17	UJ			NS	NS	8,200	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.17	UJ			3	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.17	UJ			NS	NS	1,200	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.17	UJ			NS	NS	733,000	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.17	UJ			NS	NS	916,000	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.17	UJ			NS	NS	33,700	N	NMED		
Fluorene	86-73-7	mg/kg	0.17	UJ			NS	NS	33,700	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.17	UJ			16	N	733	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	UJ			52	N	916	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.17	UJ			641	N	641	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	UJ			32	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.17	UJ			27,000	N	183,000	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	UJ			3	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.02	UJ			1	N	7	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	UJ			5,240	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.17	UJ			108	N	843	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.17	UJ			293	N	1,540	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.17	UJ			45	N	3,180	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.17	UJ			NS	NS	27,500	N	NMED		
Phenol	108-95-2	mg/kg	0.17	UJ			NS	NS	275,000	N	NMED		
Pyrene	129-00-0	mg/kg	0.17	UJ			NS	NS	25,300	N	NMED		

TABLE D1-AA24-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AA24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			5,300	N	7,400	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.02	U			304	N	57	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.02	U			9	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.01	U			9	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.01	U			11	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.01	U			11	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.01	U			11	N	16	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.01	U			11	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000023	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg		U	0.00001	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000015	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.0000021	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000019	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.00000011	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg	0.000000011	J	0.00000011	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000046	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000054	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		UJ	0.00000014	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.000000087	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000013	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.0000001	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.00000011	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000013	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000031	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.0000001	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.000000011				0.000238	N	0.000808	N	NMED	4.62E-10	1.36E-05

TABLE D1-AA24-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AA24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	16,000				NS	NS	1,290,000	N	NMED		1.24E-02
Antimony	7440-36-0	mg/kg	0.19	J			NS	NS	519	N	NMED		3.66E-04
Arsenic	7440-38-2	mg/kg	1.4				36	N	208	N	NMED	3.90E-07	6.73E-03
Barium	7440-39-3	mg/kg	170				NS	NS	255,000	N	NMED		6.67E-04
Beryllium	7440-41-7	mg/kg	0.52	J			313,000	N	2,580	N	NMED	1.66E-11	2.02E-04
Cadmium	7440-43-9	mg/kg	0.71				417,000	N	1,110	N	NMED	1.70E-11	6.40E-04
Calcium	7440-70-2	mg/kg	3,500				NS	NS	32,400,000	N	NMED		
Chromium (Total) (3)	7440-47-3	mg/kg	14				505	N	314,000	N	NMED	2.77E-07	4.46E-05
Cobalt	7440-48-4	mg/kg	5.1				83,400	N	388	N	NMED	6.12E-10	1.31E-02
Copper	7440-50-8	mg/kg	170	J			NS	NS	51,900	N	NMED		3.28E-03
Iron	7439-89-6	mg/kg	9,600				NS	NS	908,000	N	NMED		1.06E-02
Lead	7439-92-1	mg/kg	17				NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	6,900				NS	NS	5,680,000	N	NMED		
Manganese	7439-96-5	mg/kg	380				NS	NS	160,000	N	NMED		2.38E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.035	J			NS	NS	112	N	NMED		3.13E-04
Nickel	7440-02-0	mg/kg	11				2,890,000	N	25,700	N	NMED	3.81E-11	4.28E-04
Potassium	7440-09-7	mg/kg	930				NS	NS	76,200,000	N	NMED		
Selenium	7782-49-2	mg/kg	1.1				NS	NS	6,490	N	NMED		1.69E-04
Silver	7440-22-4	mg/kg	0.17				NS	NS	6,490	N	NMED		2.62E-05
Sodium	7440-23-5	mg/kg	73				NS	NS	37,300,000	N	NMED		1.96E-06
Thallium	7440-28-0	mg/kg	0.046	J			NS	NS	13	N	NMED		3.54E-03
Vanadium	7440-62-2	mg/kg	18				NS	NS	6,530	N	NMED		2.76E-03
Zinc	7440-66-6	mg/kg	37				NS	NS	38,900	N	NMED		9.51E-04

TABLE D1-AA24-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AA24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.32	U			NS	NS	63	N	NMED		
Nitrate	14797-55-8	mg/kg	6.8	J			NS	NS	2,080,000	N	NMED		3.27E-06
Perchlorate	14797-73-0	mg/kg	0.0018	UJ			NS	NS	908	N	NMED		
										Cumulative Risk/Hazard		**7E-07**	**0.06**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of Quantitation
mg/kg = milligrams per kilogram
NS = No Standard
TEF = Toxicity Equivalency Factor
TEQ = Toxicity Equivalency Quotient
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper tolerance limit

TABLE D1-AA24-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AA24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0018	U			659	N	10,600	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0018	U			NS	NS	13,600	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0018	U			197	N	7,080	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0018	U			4,300	N	2	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0018	U			1,820	N	70,800	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0018	U			NS	NS	424	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0018	U			781	N	130	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0018	U			NS	NS	283	N	NMED[C]			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0045	U			8	N	6	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0018	U			8,540	N	79	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0018	U			NS	NS	492	N	NMED[C]			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0045	U			6	N	8	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0018	U			16	N	140	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0018	U			NS	NS	2,500	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0018	U			195	N	54	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0018	U			415	N	25	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0018	U			NS	NS	422	N	NMED[C]			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0018	U			45,900	N	24,800	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0018	U			NS	NS	7,080	N	NMED[C]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0018	U			45,900	N	24,800	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0018	U			415	N	25	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.0027	U			NS	NS	90,700	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0018	U			NS	NS	7,080	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.0018	U			NS	NS	599	N	NMED[C]			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0018	U			NS	NS	7,080	N	NMED[C]			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0018	U			NS	NS	20,400	N	NMED[C]			
Acetone	67-64-1	mg/kg	0.15				NS	NS	242,000	N	NMED		6.20E-07	
Benzene	71-43-2	mg/kg	0.0018	U			423	N	142	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.0018	U			NS	NS	538	N	NMED[C]			
Bromochloromethane	74-97-5	mg/kg	0.0018	U			NS	NS	296	N	NMED[C]			
Bromodichloromethane	75-27-4	mg/kg	0.0018	U			143	N	7,080	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0018	U			23,700	N	5,380	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0018	U			NS	NS	18	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.0018	U			NS	NS	1,620	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0018	U			252	N	202	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0018	U			NS	NS	412	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0018	U			NS	NS	16,600	N	NMED			
Chloroform	67-66-3	mg/kg	0.0018	U			134	N	391	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0045	U			956	N	235	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0018	U			NS	NS	708	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0018	U			781	N	130	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0018	U			340	N	5,380	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0018	U			NS	NS	54	N	NMED			
Dichlorodifluoromethane	75-71-8	mg/kg	0.0018	U			NS	NS	161	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.0018	U			1,770	N	5,800	N	NMED			

TABLE D1-AA24-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AA24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Hexachlorobutadiene	87-68-3	mg/kg	0.0018	U			2,400	N	269	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0018	U			NS	NS	2,740	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0045	U			NS	NS	696	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0018	U			24,200	N	33,100	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.009	U			89,600	N	1,210	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0018	U			NS	NS	17,700	N	NMED[C]			
n-Propylbenzene	103-65-1	mg/kg	0.0018	U			NS	NS	6,730	N	NMED[C]			
Naphthalene	91-20-3	mg/kg	0.0018	U			633	N	159	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0022	U			NS	NS	736	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.0018	U			NS	NS	2,740	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.0018	U			NS	NS	35,400	N	NMED[C]			
Styrene	100-42-5	mg/kg	0.0018	U			NS	NS	10,200	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0018	U			NS	NS	35,400	N	NMED[C]			
Tetrachloroethene	127-18-4	mg/kg	0.0018	U			7,910	N	120	N	NMED			
Toluene	108-88-3	mg/kg	0.0018	U			NS	NS	14,000	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0018	U			NS	NS	206	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0018	U			781	N	130	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0018	U			5,370	N	7	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0018	U			NS	NS	1,130	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0018	U			161	N	162	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	UJ			8,540	N	79	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	UJ			NS	NS	2,500	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	UJ			45,900	N	24,800	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	UJ			45,900	N	24,800	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	UJ			NS	NS	26,900	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	UJ			17,000	N	269	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	UJ			NS	NS	807	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	UJ			NS	NS	5,380	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	UJ			NS	NS	538	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	UJ			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	UJ			165	N	81	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	UJ			NS	NS	28,300	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.17	UJ			NS	NS	1,770	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.17	UJ			NS	NS	1,000	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	UJ			NS	NS	13,500	N	NMED[C]			
2-Nitroaniline	88-74-4	mg/kg	0.17	UJ			NS	NS	2,690	N	NMED[C]			
2-Nitrophenol	88-75-5	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	UJ			410	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.17	UJ			135	N	1,080	N	NMED[SC]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	UJ			NS	NS	22	N	NMED			
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	UJ			NS	NS	26,900	N	NMED[C]			
4-Chloroaniline	106-47-8	mg/kg	0.17	UJ			14	N	135	N	NMED[C]			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			

TABLE D1-AA24-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AA24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Nitroaniline	100-01-6	mg/kg	0.17	UJ			135	N	1,080	N	NMED[C]			
4-Nitrophenol	100-02-7	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.17	UJ			NS	NS	15,100	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.17	UJ			NS	NS	7,530	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.17	UJ			NS	NS	75,300	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.17	UJ			240	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.13	UJ			173	N	15	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	UJ			240	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	UJ			NS	NS	7,530	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	UJ			2,310	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.17	UJ			NS	NS	1,080,000	N	NMED[C]			
Benzyl Alcohol	100-51-6	mg/kg	0.17	UJ			NS	NS	26,900	N	NMED[C]			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	UJ			NS	NS	807	N	NMED[C]			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	UJ			2	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	UJ			3,540	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	UJ			13,400	N	5,380	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.17	UJ			1,420	N	53,800	N	NMED[C]			
Carbazole	86-74-8	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.17	UJ			23,100	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.17	UJ			NS	NS	26,900	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.17	UJ			NS	NS	2,690	N	NMED[C]			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	UJ			24	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.17	UJ			NS	NS	269	N	NMED[C]			
Diethylphthalate	84-66-2	mg/kg	0.17	UJ			NS	NS	215,000	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.17	UJ			NS	NS	269,000	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.17	UJ			NS	NS	10,000	N	NMED			
Fluorene	86-73-7	mg/kg	0.17	UJ			NS	NS	10,000	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.17	UJ			117	N	215	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	UJ			2,400	N	269	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.17	UJ			4,670	N	188	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	UJ			240	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.17	UJ			198,000	N	53,700	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	UJ			0.38	N	NA	N	NMED[C]			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.02	UJ			4	N	2	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	UJ			37,900	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.17	UJ			633	N	159	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.17	UJ			1,350	N	353	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.17	UJ			346	N	989	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.17	UJ			NS	NS	8,070	N	NMED			
Phenol	108-95-2	mg/kg	0.17	UJ			NS	NS	77,400	N	NMED			
Pyrene	129-00-0	mg/kg	0.17	UJ			NS	NS	7,530	N	NMED			

TABLE D1-AA24-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AA24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	8,070	N	NMED[C]			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	27	N	NMED[C]			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			626	N	2,420	N	NMED[C]			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.02	U			2,440	N	17	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.02	U			55	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.01	U			58	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.01	U			85	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.01	U			85	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.01	U			85	N	5	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.01	U			85	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (3)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000023	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg		U	0.00001	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000015	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.0000021	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000019	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.00000011	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg	0.000000011	J	0.00000011	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000046	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000054	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		UJ	0.00000014	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.000000087	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000013	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.0000001	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.00000011	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000013	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000031	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.0000001	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.000000011				0.00172	N	0.000226	N	NMED	6.40E-11	4.87E-05	

TABLE D1-AA24-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AA24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	16,000				NS	NS	41,400	N	NMED		3.86E-01	Nervous
Antimony	7440-36-0	mg/kg	0.19	J			NS	NS	142	N	NMED		1.34E-03	
Arsenic	7440-38-2	mg/kg	1.4				216	N	41	N	NMED	6.48E-08	3.40E-02	
Barium	7440-39-3	mg/kg	170				NS	NS	4,390	N	NMED		3.87E-02	
Beryllium	7440-41-7	mg/kg	0.52	J			2,710	N	148	N	NMED	1.92E-09	3.51E-03	
Cadmium	7440-43-9	mg/kg	0.71				3,610	N	72	N	NMED	1.97E-09	9.85E-03	
Calcium	7440-70-2	mg/kg	3,500				NS	NS	8,850,000	N	NMED		3.95E-04	
Chromium (Total) (4)	7440-47-3	mg/kg	14				468	N	134	N	NMED	2.99E-07	1.04E-01	GI, Blood
Cobalt	7440-48-4	mg/kg	5.1				722	N	37	N	NMED	7.06E-08	1.39E-01	Endocrine
Copper	7440-50-8	mg/kg	170	J			NS	NS	14,200	N	NMED		1.20E-02	
Iron	7439-89-6	mg/kg	9,600				NS	NS	248,000	N	NMED		3.87E-02	
Lead	7439-92-1	mg/kg	17				NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	6,900				NS	NS	1,550,000	N	NMED		4.45E-03	
Manganese	7439-96-5	mg/kg	380				NS	NS	464	N	NMED		8.19E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.035	J			NS	NS	21	N	NMED		1.69E-03	
Nickel	7440-02-0	mg/kg	11				20,500	N	753	N	NMED	5.37E-09	1.46E-02	
Potassium	7440-09-7	mg/kg	930				NS	NS	20,800,000	N	NMED		4.47E-05	
Selenium	7782-49-2	mg/kg	1.1				NS	NS	1,750	N	NMED		6.29E-04	
Silver	7440-22-4	mg/kg	0.17				NS	NS	1,770	N	NMED		9.60E-05	
Sodium	7440-23-5	mg/kg	73				NS	NS	10,200,000	N	NMED		7.16E-06	
Thallium	7440-28-0	mg/kg	0.046	J			NS	NS	4	N	NMED		1.30E-02	
Vanadium	7440-62-2	mg/kg	18				NS	NS	614	N	NMED		2.93E-02	
Zinc	7440-66-6	mg/kg	37				NS	NS	106,000	N	NMED		3.49E-04	

TABLE D1-AA24-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AA24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.32	U			NS	NS	12	N	NMED			
Nitrate	14797-55-8	mg/kg	6.8	J			NS	NS	566,000	N	NMED		1.20E-05	
Perchlorate	14797-73-0	mg/kg	0.0018	UJ			NS	NS	248	N	NMED			
										Cumulative Risk/Hazard		**4E-07**	**1.7**	
										Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	1.2
Endocrine	0.14
GI	0.10
Blood	0.10
All Others	0.20

Notes:

[s] = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update).

2) NMED[C] = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

3) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

4) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of Quantitation
mg/kg = milligrams per kilogram
NS = No Standard
TEF = Toxicity Equivalency Factor
TEQ = Toxicity Equivalency Quotient
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper tolerance limit

TABLE D1-AB24-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AB24
FOR WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0025	U			28.1	N	2,350	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0025	U			NS	NS	14,400	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0025	U			7.98	N	1,560	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0025	U			18.8	N	2.61	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0025	U			78.6	N	15,600	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0025	U			NS	NS	440	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0025	U			29.3	N	141	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0025	U			NS	NS	63	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0062	U			0.051	N	7.09	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0025	U			240	N	82.9	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0025	U			NS	NS	300	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0062	U			0.0858	N	5.88	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0025	U			0.672	N	135	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0025	U			NS	NS	2,150	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0025	U			8.32	N	55.6	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0025	U			17.8	N	29	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0025	U			NS	NS	270	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0025	U			1,290	N	5,480	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0025	U			NS	NS	1,600	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0025	U			1,290	N	5,480	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0025	U			17.8	N	29	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.02	J			NS	NS	37,400	N	NMED		5.35E-07
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0025	U			NS	NS	1,560	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0025	U			NS	NS	200	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0025	U			NS	NS	1,600	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0025	U			NS	NS	5,810	N	RSL		
Acetone	67-64-1	mg/kg	0.38	J			NS	NS	66,300	N	NMED		5.73E-06
Benzene	71-43-2	mg/kg	0.0025	U			17.8	N	114	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0025	U			NS	NS	290	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0025	U			NS	NS	150	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0025	U			6.19	N	1,560	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0025	U			674	N	1,230	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0089	J			NS	NS	17.7	N	NMED		5.03E-04
Carbon Disulfide	75-15-0	mg/kg	0.0025	U			NS	NS	1,550	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0025	U			10.7	N	144	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0025	U			NS	NS	378	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0025	U			NS	NS	19,000	N	NMED		
Chloroform	67-66-3	mg/kg	0.0025	U			5.9	N	306	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0062	U			41.1	N	268	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0025	U			NS	NS	156	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0025	U			29.3	N	141	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0025	U			13.9	N	1,230	N	NMED		
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0025	U			NS	NS	57.9	N	NMED		
Dichlorodifluoromethane	75-71-8	mg/kg	0.0025	U			NS	NS	182	N	NMED		

TABLE D1-AB24-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AB24
FOR WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Ethylbenzene	100-41-4	mg/kg	0.0025	U			75.1	N	3,930	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0025	U			68.3	N	61.6	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0025	U			NS	NS	2,360	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0062	U			NS	NS	764	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0025	U			975	N	37,800	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.012	U			766	N	409	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0025	U			NS	NS	3,900	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0025	U			NS	NS	3,800	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0025	U			22.6	N	162	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0031	U			NS	NS	805	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0025	U			NS	NS	2,360	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0025	U			NS	NS	7,800	N	RSL		
Styrene	100-42-5	mg/kg	0.0025	U			NS	NS	7,260	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0025	U			NS	NS	7,800	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0025	U			337	N	111	N	NMED		
Toluene	108-88-3	mg/kg	0.0025	U			NS	NS	5,230	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0025	U			NS	NS	210	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0025	U			29.3	N	141	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0025	U			15.5	N	6.77	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0025	U			NS	NS	1,230	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0025	U			0.742	N	113	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	U			240	N	82.9	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	U			NS	NS	2,150	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	U			1,290	N	5,480	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	U			1,290	N	5,480	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	U			NS	NS	6,160	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	U			484	N	61.6	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	U			NS	NS	185	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	U			NS	NS	1,230	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	U			NS	NS	123	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	U			17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	U			3.56	N	18.5	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	U			NS	NS	6,260	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.17	U			NS	NS	391	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.17	U			NS	NS	232	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	U			NS	NS	3,200	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.17	U			NS	NS	630	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.17	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	U			11.8	N	NS	NS	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.17	U			270	N	250	N	RSL[S]		
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	U			NS	NS	4.93	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	U			NS	NS	NS	NS	NS		
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	U			NS	NS	6,300	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.17	U			27	N	32	N	RSL		

TABLE D1-AB24-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AB24
FOR WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.17	U			270	N	250	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.17	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.17	U			NS	NS	3,480	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.17	U			NS	NS	1,740	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.17	U			NS	NS	17,400	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.17	U			1.53	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			1.12	N	17.4	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	U			1.53	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	U			NS	NS	1,740	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	U			15.3	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.17	U			NS	NS	250,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.17	U			NS	NS	6,300	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	U			NS	NS	190	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	U			3.11	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	U			99.3	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	U			380	N	1,230	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.17	U			2,900	N	13,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.17	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.17	U			153	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.17	U			NS	NS	6,160	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.17	U			NS	NS	630	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			0.153	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.17	U			NS	NS	78	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.17	U			NS	NS	49,300	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.17	U			NS	NS	61,600	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.17	U			NS	NS	2,320	N	NMED		
Fluorene	86-73-7	mg/kg	0.17	U			NS	NS	2,320	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.17	U			3.33	N	49.3	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	U			68.3	N	61.6	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.17	U			133	N	43.1	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	U			1.53	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.17	U			5,610	N	12,300	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	U			0.78	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	UJ			0.0234	N	0.493	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	U			1,090	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.17	U			22.6	N	162	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.17	U			60.4	N	131	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.17	U			9.85	N	234	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.17	U			NS	NS	1,740	N	NMED		
Phenol	108-95-2	mg/kg	0.17	U			NS	NS	18,500	N	NMED		
Pyrene	129-00-0	mg/kg	0.17	U			NS	NS	1,740	N	NMED		

TABLE D1-AB24-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AB24
FOR WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			1,300	N	570	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.021	U			69.6	N	3.98	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.021	U			1.81	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.01	U			1.86	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.01	U			2.43	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.01	U			2.43	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.01	U			2.43	N	1.14	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.01	U			2.43	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000063	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.000000011		0.000036	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.0000011	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.000000065	J	0.0000065	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000017	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.00000015	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000016	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.00000014	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.00000034	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.00000021	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000014	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000018	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.00000015	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.00000055	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000019	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000029	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.00000023	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.000000076				0.00049	N	0.000506	N	NMED	1.55E-09	1.50E-04

TABLE D1-AB24-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AB24
FOR WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	11,000				NS	NS	78,000	N	NMED		1.41E-01
Antimony	7440-36-0	mg/kg	0.1	J			NS	NS	31.3	N	NMED		3.19E-03
Arsenic	7440-38-2	mg/kg	1.1				7.07	N	13	N	NMED	1.56E-06	8.46E-02
Barium	7440-39-3	mg/kg	180				NS	NS	15,600	N	NMED		1.15E-02
Beryllium	7440-41-7	mg/kg	0.47	J			64,400	N	156	N	NMED	7.30E-11	3.01E-03
Cadmium	7440-43-9	mg/kg	0.57				85,900	N	70.5	N	NMED	6.64E-11	8.09E-03
Calcium	7440-70-2	mg/kg	2,800				NS	NS	13,000,000	N	NMED		2.15E-04
Chromium (Total) (3)	7440-47-3	mg/kg	10				96.6	N	45,200	N	NMED	1.04E-06	2.21E-04
Cobalt	7440-48-4	mg/kg	4				17,200	N	23.4	N	NMED	2.33E-09	1.71E-01
Copper	7440-50-8	mg/kg	96				NS	NS	3,130	N	NMED		3.07E-02
Iron	7439-89-6	mg/kg	8,200				NS	NS	54,800	N	NMED		1.50E-01
Lead	7439-92-1	mg/kg	11				NS	NS	200	N	RSL		
Magnesium	7439-95-4	mg/kg	3,600				NS	NS	15,600,000	N	NMED		2.31E-04
Manganese	7439-96-5	mg/kg	380				NS	NS	10,500	N	NMED		3.62E-02
Mercury (Elemental)	7439-97-6	mg/kg	0.024	J			NS	NS	23.8	N	NMED		1.01E-03
Nickel	7440-02-0	mg/kg	8.2				595,000	N	1,560	N	NMED	1.38E-10	5.26E-03
Potassium	7440-09-7	mg/kg	820				NS	NS	15,600,000	N	NMED		5.26E-05
Selenium	7782-49-2	mg/kg	0.82				NS	NS	391	N	NMED		2.10E-03
Silver	7440-22-4	mg/kg	0.12				NS	NS	391	N	NMED		3.07E-04
Sodium	7440-23-5	mg/kg	45				NS	NS	7,820,000	N	NMED		5.75E-06
Thallium	7440-28-0	mg/kg	0.07	J			NS	NS	0.782	N	NMED		8.95E-02
Vanadium	7440-62-2	mg/kg	14				NS	NS	394	N	NMED		3.55E-02
Zinc	7440-66-6	mg/kg	27				NS	NS	23,500	N	NMED		1.15E-03

TABLE D1-AB24-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AB24
FOR WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.32	U			NS	NS	11.2	N	NMED		
Nitrate	14797-55-8	mg/kg	2.5	J			NS	NS	125,000	N	NMED		2.00E-05
Perchlorate	14797-73-0	mg/kg	0.0021	U			NS	NS	54.8	N	NMED		
										Cumulative Risk/Hazard		**3E-06**	**0.78**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of Quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect

TABLE D1-AB24-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AB24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0025	U			137	N	39,400	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0025	U			NS	NS	72,500	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0025	U			39	N	26,000	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0025	U			92	N	12	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0025	U			383	N	260,000	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0025	U			NS	NS	2,260	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0025	U			146	N	695	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0025	U			NS	NS	930	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0062	U			1	N	34	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0025	U			1,250	N	423	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0025	U			NS	NS	1,800	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0062	U			1	N	41	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0025	U			3	N	738	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0025	U			NS	NS	13,000	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0025	U			41	N	286	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0025	U			87	N	137	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0025	U			NS	NS	1,500	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0025	U			6,730	N	90,800	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0025	U			NS	NS	23,000	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0025	U			6,730	N	90,800	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0025	U			87	N	137	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.02	J			NS	NS	411,000	N	NMED		4.87E-08
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0025	U			NS	NS	26,000	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0025	U			NS	NS	1,300	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0025	U			NS	NS	23,000	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0025	U			NS	NS	81,600	N	RSL		
Acetone	67-64-1	mg/kg	0.38	J			NS	NS	960,000	N	NMED		3.96E-07
Benzene	71-43-2	mg/kg	0.0025	U			87	N	729	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0025	U			NS	NS	1,800	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0025	U			NS	NS	630	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0025	U			30	N	26,000	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0025	U			1,760	N	18,300	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0089	J			NS	NS	95	N	NMED		9.42E-05
Carbon Disulfide	75-15-0	mg/kg	0.0025	U			NS	NS	8,540	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0025	U			53	N	1,020	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0025	U			NS	NS	2,160	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0025	U			NS	NS	89,500	N	NMED		
Chloroform	67-66-3	mg/kg	0.0025	U			29	N	2,000	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0062	U			201	N	1,260	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0025	U			NS	NS	2,600	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0025	U			146	N	695	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0025	U			67	N	18,300	N	NMED		
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0025	U			NS	NS	288	N	NMED		

TABLE D1-AB24-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AB24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dichlorodifluoromethane	75-71-8	mg/kg	0.0025	U			NS	NS	865	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0025	U			29,000	N	368	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0025	U			52	N	916	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0025	U			NS	NS	14,200	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0062	U			NS	NS	3,730	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0025	U			4,820	N	178,000	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.012	U			14,400	N	5,130	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0025	U			NS	NS	58,000	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0025	U			NS	NS	24,000	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0025	U			108	N	843	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0031	U			NS	NS	3,940	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0025	U			NS	NS	14,200	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0025	U			NS	NS	120,000	N	RSL		
Styrene	100-42-5	mg/kg	0.0025	U			NS	NS	51,300	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0025	U			NS	NS	120,000	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0025	U			1,650	N	629	N	NMED		
Toluene	108-88-3	mg/kg	0.0025	U			NS	NS	61,300	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0025	U			NS	NS	1,100	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0025	U			146	N	695	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0025	U			112	N	37	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0025	U			NS	NS	6,030	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0025	U			28	N	46	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	U			1,250	N	423	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	U			NS	NS	13,000	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	U			6,730	N	90,800	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	U			6,730	N	90,800	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	U			NS	NS	91,600	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	U			2,330	N	916	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	U			NS	NS	2,750	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	U			NS	NS	18,300	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	U			NS	NS	1,830	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	U			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	U			17	N	276	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	U			NS	NS	104,000	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.17	U			NS	NS	6,490	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.17	U			NS	NS	3,370	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	U			NS	NS	41,000	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.17	U			NS	NS	8,000	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.17	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	U			NS	NS	410	N	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.17	U			1,100	N	3,300	N	RSL[S]		
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	U			NS	NS	73	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	U			NS	NS	NS	NS	NS		

TABLE D1-AB24-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AB24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	U			NS	NS	82,000	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.17	U			110	N	410	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.17	U			1,100	N	3,300	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.17	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.17	U			NS	NS	50,500	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.17	U			NS	NS	25,300	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.17	U			NS	NS	253,000	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.17	U			32	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			24	N	251	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	U			32	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	U			NS	NS	25,300	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	U			323	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.17	U			NS	NS	3,300,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.17	U			NS	NS	82,000	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	U			NS	NS	2,500	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	U			16	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	U			519	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	U			1,830	N	18,300	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.17	U			12,000	N	160,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.17	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.17	U			3,230	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.17	U			NS	NS	91,600	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.17	U			NS	NS	8,200	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			3	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.17	U			NS	NS	1,200	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.17	U			NS	NS	733,000	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.17	U			NS	NS	916,000	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.17	U			NS	NS	33,700	N	NMED		
Fluorene	86-73-7	mg/kg	0.17	U			NS	NS	33,700	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.17	U			16	N	733	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	U			52	N	916	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.17	U			641	N	641	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	U			32	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.17	U			27,000	N	183,000	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	U			3	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	UJ			1	N	7	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	U			5,240	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.17	U			108	N	843	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.17	U			293	N	1,540	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.17	U			45	N	3,180	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.17	U			NS	NS	27,500	N	NMED		
Phenol	108-95-2	mg/kg	0.17	U			NS	NS	275,000	N	NMED		
Pyrene	129-00-0	mg/kg	0.17	U			NS	NS	25,300	N	NMED		

TABLE D1-AB24-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AB24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			5,300	N	7,400	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.021	U			304	N	57	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.021	U			9	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.01	U			9	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.01	U			11	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.01	U			11	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.01	U			11	N	16	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.01	U			11	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000063	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.000000011		0.000036	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.0000011	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.000000065	J	0.0000065	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000017	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.00000015	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000016	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.00000014	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.00000034	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.00000021	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000014	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000018	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.00000015	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.00000055	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000019	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000029	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.00000023	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.000000076				0	N	0	N	NMED	3.18E-09	9.38E-05

TABLE D1-AB24-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AB24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	11,000				NS	NS	1,290,000	N	NMED		8.53E-03
Antimony	7440-36-0	mg/kg	0.1	J			NS	NS	519	N	NMED		1.93E-04
Arsenic	7440-38-2	mg/kg	1.1				36	N	208	N	NMED	3.06E-07	5.29E-03
Barium	7440-39-3	mg/kg	180				NS	NS	255,000	N	NMED		7.06E-04
Beryllium	7440-41-7	mg/kg	0.47	J			313,000	N	2,580	N	NMED	1.50E-11	1.82E-04
Cadmium	7440-43-9	mg/kg	0.57				417,000	N	1,110	N	NMED	1.37E-11	5.14E-04
Calcium	7440-70-2	mg/kg	2,800				NS	NS	32,400,000	N	NMED		8.64E-05
Chromium (Total) (3)	7440-47-3	mg/kg	10				505	N	314,000	N	NMED	1.98E-07	3.18E-05
Cobalt	7440-48-4	mg/kg	4				83,400	N	388	N	NMED	4.80E-10	1.03E-02
Copper	7440-50-8	mg/kg	96				NS	NS	51,900	N	NMED		1.85E-03
Iron	7439-89-6	mg/kg	8,200				NS	NS	908,000	N	NMED		9.03E-03
Lead	7439-92-1	mg/kg	11				NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	3,600				NS	NS	5,680,000	N	NMED		6.34E-04
Manganese	7439-96-5	mg/kg	380				NS	NS	160,000	N	NMED		2.38E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.024	J			NS	NS	112	N	NMED		2.14E-04
Nickel	7440-02-0	mg/kg	8.2				2,890,000	N	25,700	N	NMED	2.84E-11	3.19E-04
Potassium	7440-09-7	mg/kg	820				NS	NS	76,200,000	N	NMED		1.08E-05
Selenium	7782-49-2	mg/kg	0.82				NS	NS	6,490	N	NMED		1.26E-04
Silver	7440-22-4	mg/kg	0.12				NS	NS	6,490	N	NMED		1.85E-05
Sodium	7440-23-5	mg/kg	45				NS	NS	37,300,000	N	NMED		1.21E-06
Thallium	7440-28-0	mg/kg	0.07	J			NS	NS	13	N	NMED		5.38E-03
Vanadium	7440-62-2	mg/kg	14				NS	NS	6,530	N	NMED		2.14E-03
Zinc	7440-66-6	mg/kg	27				NS	NS	38,900	N	NMED		6.94E-04

TABLE D1-AB24-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AB24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.32	U			NS	NS	63	N	NMED		
Nitrate	14797-55-8	mg/kg	2.5	J			NS	NS	2,080,000	N	NMED		1.20E-06
Perchlorate	14797-73-0	mg/kg	0.0021	U			NS	NS	908	N	NMED		
										Cumulative Risk/Hazard		**5E-07**	**0.05**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of Quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper tolerance limit

TABLE D1-AB24-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AB24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0025	U			659	N	10,600	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0025	U			NS	NS	13,600	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0025	U			197	N	7,080	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0025	U			4,300	N	2	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0025	U			1,820	N	70,800	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0025	U			NS	NS	424	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0025	U			781	N	130	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0025	U			NS	NS	283	N	NMED[C]			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0062	U			8	N	6	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0025	U			8,540	N	79	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0025	U			NS	NS	492	N	NMED[C]			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0062	U			6	N	8	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0025	U			16	N	140	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0025	U			NS	NS	2,500	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0025	U			195	N	54	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0025	U			415	N	25	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0025	U			NS	NS	422	N	NMED[C]			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0025	U			45,900	N	24,800	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0025	U			NS	NS	7,080	N	NMED[C]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0025	U			45,900	N	24,800	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0025	U			415	N	25	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.02	J			NS	NS	90,700	N	NMED		2.21E-07	
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0025	U			NS	NS	7,080	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.0025	U			NS	NS	599	N	NMED[C]			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0025	U			NS	NS	7,080	N	NMED[C]			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0025	U			NS	NS	20,400	N	NMED[C]			
Acetone	67-64-1	mg/kg	0.38	J			NS	NS	242,000	N	NMED		1.57E-06	
Benzene	71-43-2	mg/kg	0.0025	U			423	N	142	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.0025	U			NS	NS	538	N	NMED[C]			
Bromochloromethane	74-97-5	mg/kg	0.0025	U			NS	NS	296	N	NMED[C]			
Bromodichloromethane	75-27-4	mg/kg	0.0025	U			143	N	7,080	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0025	U			23,700	N	5,380	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0089	J			NS	NS	18	N	NMED		4.97E-04	
Carbon Disulfide	75-15-0	mg/kg	0.0025	U			NS	NS	1,620	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0025	U			252	N	202	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0025	U			NS	NS	412	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0025	U			NS	NS	16,600	N	NMED			
Chloroform	67-66-3	mg/kg	0.0025	U			134	N	391	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0062	U			956	N	235	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0025	U			NS	NS	708	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0025	U			781	N	130	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0025	U			340	N	5,380	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0025	U			NS	NS	54	N	NMED			
Dichlorodifluoromethane	75-71-8	mg/kg	0.0025	U			NS	NS	161	N	NMED			

TABLE D1-AB24-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AB24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Ethylbenzene	100-41-4	mg/kg	0.0025	U			1,770	N	5,800	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0025	U			2,400	N	269	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0025	U			NS	NS	2,740	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0062	U			NS	NS	696	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0025	U			24,200	N	33,100	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.012	U			89,600	N	1,210	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0025	U			NS	NS	17,700	N	NMED[C]			
n-Propylbenzene	103-65-1	mg/kg	0.0025	U			NS	NS	6,730	N	NMED[C]			
Naphthalene	91-20-3	mg/kg	0.0025	U			633	N	159	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0031	U			NS	NS	736	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.0025	U			NS	NS	2,740	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.0025	U			NS	NS	35,400	N	NMED[C]			
Styrene	100-42-5	mg/kg	0.0025	U			NS	NS	10,200	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0025	U			NS	NS	35,400	N	NMED[C]			
Tetrachloroethene	127-18-4	mg/kg	0.0025	U			7,910	N	120	N	NMED			
Toluene	108-88-3	mg/kg	0.0025	U			NS	NS	14,000	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0025	U			NS	NS	206	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0025	U			781	N	130	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0025	U			5,370	N	7	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0025	U			NS	NS	1,130	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0025	U			161	N	162	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	U			8,540	N	79	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	U			NS	NS	2,500	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	U			45,900	N	24,800	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	U			45,900	N	24,800	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	U			NS	NS	26,900	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	U			17,000	N	269	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	U			NS	NS	807	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	U			NS	NS	5,380	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	U			NS	NS	538	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	U			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	U			165	N	81	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	U			NS	NS	28,300	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.17	U			NS	NS	1,770	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.17	U			NS	NS	1,000	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	U			NS	NS	13,500	N	NMED[C]			
2-Nitroaniline	88-74-4	mg/kg	0.17	U			NS	NS	2,690	N	NMED[C]			
2-Nitrophenol	88-75-5	mg/kg	0.17	U			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	U			410	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.17	U			135	N	1,080	N	NMED[SC]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	U			NS	NS	22	N	NMED			
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	U			NS	NS	NS	NS	NS			

TABLE D1-AB24-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AB24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg),continued														
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	U			NS	NS	26,900	N	NMED[C]			
4-Chloroaniline	106-47-8	mg/kg	0.17	U			14	N	135	N	NMED[C]			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	U			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.17	U			135	N	1,080	N	NMED[C]			
4-Nitrophenol	100-02-7	mg/kg	0.17	U			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.17	U			NS	NS	15,100	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.17	U			NS	NS	7,530	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.17	U			NS	NS	75,300	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.17	U			240	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			173	N	15	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	U			240	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	U			NS	NS	7,530	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	U			2,310	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.17	U			NS	NS	1,080,000	N	NMED[C]			
Benzyl Alcohol	100-51-6	mg/kg	0.17	U			NS	NS	26,900	N	NMED[C]			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	U			NS	NS	807	N	NMED[C]			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	U			2	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	U			3,540	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	U			13,400	N	5,380	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.17	U			1,420	N	53,800	N	NMED[C]			
Carbazole	86-74-8	mg/kg	0.17	U			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.17	U			23,100	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.17	U			NS	NS	26,900	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.17	U			NS	NS	2,690	N	NMED[C]			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			24	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.17	U			NS	NS	269	N	NMED[C]			
Diethylphthalate	84-66-2	mg/kg	0.17	U			NS	NS	215,000	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.17	U			NS	NS	269,000	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.17	U			NS	NS	10,000	N	NMED			
Fluorene	86-73-7	mg/kg	0.17	U			NS	NS	10,000	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.17	U			117	N	215	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	U			2,400	N	269	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.17	U			4,670	N	188	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	U			240	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.17	U			198,000	N	53,700	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	U			0.38	N	NA	N	NMED[C]			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	UJ			4	N	2	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	U			37,900	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.17	U			633	N	159	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.17	U			1,350	N	353	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.17	U			346	N	989	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.17	U			NS	NS	8,070	N	NMED			
Phenol	108-95-2	mg/kg	0.17	U			NS	NS	77,400	N	NMED			
Pyrene	129-00-0	mg/kg	0.17	U			NS	NS	7,530	N	NMED			

TABLE D1-AB24-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AB24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	8,070	N	NMED[C]			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	27	N	NMED[C]			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			626	N	2,420	N	NMED[C]			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.021	U			2,440	N	17	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.021	U			55	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.01	U			58	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.01	U			85	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.01	U			85	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.01	U			85	N	5	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.01	U			85	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (3)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000063	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.000000011		0.000036	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.0000011	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.000000065	J	0.0000065	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000017	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.00000015	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000016	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.00000014	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.00000034	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.00000021	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000014	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000018	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.00000015	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.00000055	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000019	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000029	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.00000023	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.000000076				0	N	0	N	NMED	4.41E-10	3.35E-04	

TABLE D1-AB24-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AB24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	11,000				NS	NS	41,400	N	NMED		2.66E-01	Nervous
Antimony	7440-36-0	mg/kg	0.1	J			NS	NS	142	N	NMED		7.04E-04	
Arsenic	7440-38-2	mg/kg	1.1				216	N	41	N	NMED	5.09E-08	2.67E-02	
Barium	7440-39-3	mg/kg	180				NS	NS	4,390	N	NMED		4.10E-02	
Beryllium	7440-41-7	mg/kg	0.47	J			2,710	N	148	N	NMED	1.73E-09	3.18E-03	
Cadmium	7440-43-9	mg/kg	0.57				3,610	N	72	N	NMED	1.58E-09	7.91E-03	
Calcium	7440-70-2	mg/kg	2,800				NS	NS	8,850,000	N	NMED		3.16E-04	
Chromium (Total) (4)	7440-47-3	mg/kg	10				468	N	134	N	NMED	2.14E-07	7.46E-02	
Cobalt	7440-48-4	mg/kg	4				722	N	37	N	NMED	5.54E-08	1.09E-01	Endocrine
Copper	7440-50-8	mg/kg	96				NS	NS	14,200	N	NMED		6.76E-03	
Iron	7439-89-6	mg/kg	8,200				NS	NS	248,000	N	NMED		3.31E-02	
Lead	7439-92-1	mg/kg	11				NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	3,600				NS	NS	1,550,000	N	NMED		2.32E-03	
Manganese	7439-96-5	mg/kg	380				NS	NS	464	N	NMED		8.19E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.024	J			NS	NS	21	N	NMED		1.16E-03	
Nickel	7440-02-0	mg/kg	8.2				20,500	N	753	N	NMED	4.00E-09	1.09E-02	
Potassium	7440-09-7	mg/kg	820				NS	NS	20,800,000	N	NMED		3.94E-05	
Selenium	7782-49-2	mg/kg	0.82				NS	NS	1,750	N	NMED		4.69E-04	
Silver	7440-22-4	mg/kg	0.12				NS	NS	1,770	N	NMED		6.78E-05	
Sodium	7440-23-5	mg/kg	45				NS	NS	10,200,000	N	NMED		4.41E-06	
Thallium	7440-28-0	mg/kg	0.07	J			NS	NS	4	N	NMED		1.98E-02	
Vanadium	7440-62-2	mg/kg	14				NS	NS	614	N	NMED		2.28E-02	
Zinc	7440-66-6	mg/kg	27				NS	NS	106,000	N	NMED		2.55E-04	

TABLE D1-AB24-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AB24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.32	U			NS	NS	12	N	NMED			
Nitrate	14797-55-8	mg/kg	2.5	J			NS	NS	566,000	N	NMED		4.42E-06	
Perchlorate	14797-73-0	mg/kg	0.0021	U			NS	NS	248	N	NMED			
										Cumulative Risk/Hazard		**3E-07**	**1.4**	
										Exceeds Target Level		**N**	Y	

System	Hazard Quotient
Nervous	1.1
Endocrine	0.11
All Others	0.25

Notes:

[s] = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update).

2) NMED[C] = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

3) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

4) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of Quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper tolerance limit

TABLE D1-AB25-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AB25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0023	U			28.1	N	2,350	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0023	U			NS	NS	14,400	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0023	U			7.98	N	1,560	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0023	U			18.8	N	2.61	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0023	U			78.6	N	15,600	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0023	U			NS	NS	440	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0023	U			29.3	N	141	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0023	U			NS	NS	63	N	RSL			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0057	U			0.051	N	7.09	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0023	U			240	N	82.9	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0023	U			NS	NS	300	N	RSL			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0057	U			0.0858	N	5.88	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0023	U			0.672	N	135	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0023	U			NS	NS	2,150	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0023	U			8.32	N	55.6	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0023	U			17.8	N	29	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0023	U			NS	NS	270	N	RSL			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0023	U			1,290	N	5,480	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0023	U			NS	NS	1,600	N	RSL			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0023	U			1,290	N	5,480	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0023	U			17.8	N	29	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.0034	U			NS	NS	37,400	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0023	U			NS	NS	1,560	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.0023	U			NS	NS	200	N	RSL			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0023	U			NS	NS	1,600	N	RSL			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0023	U			NS	NS	5,810	N	RSL			
Acetone	67-64-1	mg/kg	0.29				NS	NS	66,300	N	NMED		4.37E-06	
Benzene	71-43-2	mg/kg	0.0023	U			17.8	N	114	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.0023	U			NS	NS	290	N	RSL			
Bromochloromethane	74-97-5	mg/kg	0.0023	U			NS	NS	150	N	RSL			
Bromodichloromethane	75-27-4	mg/kg	0.0023	U			6.19	N	1,560	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0023	U			674	N	1,230	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0023	U			NS	NS	17.7	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.0023	U			NS	NS	1,550	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0023	U			10.7	N	144	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0023	U			NS	NS	378	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0023	U			NS	NS	19,000	N	NMED			
Chloroform	67-66-3	mg/kg	0.0023	U			5.9	N	306	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0057	U			41.1	N	268	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0023	U			NS	NS	156	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0023	U			29.3	N	141	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0023	U			13.9	N	1,230	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0023	U			NS	NS	57.9	N	NMED			
Dichlorodifluoromethane	75-71-8	mg/kg	0.0023	U			NS	NS	182	N	NMED			

TABLE D1-AB25-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AB25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Ethylbenzene	100-41-4	mg/kg	0.0023	U			75.1	N	3,930	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0023	U			68.3	N	61.6	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0023	U			NS	NS	2,360	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0057	U			NS	NS	764	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0023	U			975	N	37,800	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.011	U			766	N	409	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0023	U			NS	NS	3,900	N	RSL			
n-Propylbenzene	103-65-1	mg/kg	0.0023	U			NS	NS	3,800	N	RSL			
Naphthalene	91-20-3	mg/kg	0.0023	U			22.6	N	162	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0029	U			NS	NS	805	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.0023	U			NS	NS	2,360	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.0023	U			NS	NS	7,800	N	RSL			
Styrene	100-42-5	mg/kg	0.0023	U			NS	NS	7,260	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0023	U			NS	NS	7,800	N	RSL			
Tetrachloroethene	127-18-4	mg/kg	0.0023	U			337	N	111	N	NMED			
Toluene	108-88-3	mg/kg	0.0023	U			NS	NS	5,230	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0023	U			NS	NS	210	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0023	U			29.3	N	141	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0023	U			15.5	N	6.77	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0023	U			NS	NS	1,230	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0023	U			0.742	N	113	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	UJ			240	N	82.9	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	UJ			NS	NS	2,150	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	UJ			1,290	N	5,480	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	UJ			1,290	N	5,480	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	UJ			NS	NS	6,160	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	UJ			484	N	61.6	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	UJ			NS	NS	185	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	UJ			NS	NS	1,230	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	UJ			NS	NS	123	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	UJ			17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	UJ			3.56	N	18.5	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	UJ			NS	NS	6,260	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.17	UJ			NS	NS	391	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.17	UJ			NS	NS	232	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	UJ			NS	NS	3,200	N	RSL			
2-Nitroaniline	88-74-4	mg/kg	0.17	UJ			NS	NS	630	N	RSL			
2-Nitrophenol	88-75-5	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	UJ			11.8	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.17	UJ			270	N	250	N	RSL[S]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	UJ			NS	NS	4.93	N	NMED			
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	UJ			NS	NS	6,300	N	RSL			

TABLE D1-AB25-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AB25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Chloroaniline	106-47-8	mg/kg	0.17	UJ			27	N	32	N	RSL			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.17	UJ			270	N	250	N	RSL			
4-Nitrophenol	100-02-7	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.17	UJ			NS	NS	3,480	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.17	UJ			NS	NS	1,740	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.17	UJ			NS	NS	17,400	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.17	UJ			1.53	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.13	UJ			1.12	N	17.4	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	UJ			1.53	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	UJ			NS	NS	1,740	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	UJ			15.3	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.17	UJ			NS	NS	250,000	N	RSL			
Benzyl Alcohol	100-51-6	mg/kg	0.17	UJ			NS	NS	6,300	N	RSL			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	UJ			NS	NS	190	N	RSL			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	UJ			3.11	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	UJ			99.3	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	UJ			380	N	1,230	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.17	UJ			2,900	N	13,000	N	RSL			
Carbazole	86-74-8	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.17	UJ			153	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.17	UJ			NS	NS	6,160	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.17	UJ			NS	NS	630	N	RSL			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	UJ			0.153	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.17	UJ			NS	NS	78	N	RSL			
Diethylphthalate	84-66-2	mg/kg	0.17	UJ			NS	NS	49,300	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.17	UJ			NS	NS	61,600	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.17	UJ			NS	NS	2,320	N	NMED			
Fluorene	86-73-7	mg/kg	0.17	UJ			NS	NS	2,320	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.17	UJ			3.33	N	49.3	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	UJ			68.3	N	61.6	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.17	UJ			133	N	43.1	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	UJ			1.53	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.17	UJ			5,610	N	12,300	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	UJ			0.78	N	NS	NS	RSL			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.02	UJ			0.0234	N	0.493	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	UJ			1,090	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.17	UJ			22.6	N	162	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.17	UJ			60.4	N	131	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.17	UJ			9.85	N	234	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.17	UJ			NS	NS	1,740	N	NMED			
Phenol	108-95-2	mg/kg	0.17	UJ			NS	NS	18,500	N	NMED			
Pyrene	129-00-0	mg/kg	0.17	UJ			NS	NS	1,740	N	NMED			

TABLE D1-AB25-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AB25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	2,200	N	RSL			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	6.3	N	RSL			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			211	N	36	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			3.56	N	18.5	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	7.7	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			31.6	N	70.4	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	6.16	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	7.64	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			333	N	247	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			83.1	N	301	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	156	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			60.4	N	131	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			313	N	6.16	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	3,850	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			1,300	N	570	N	RSL			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.02	U			69.6	N	3.98	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.02	U			1.81	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.01	U			1.86	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.01	U			2.43	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.01	U			2.43	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.01	U			2.43	N	1.14	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.01	U			2.43	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (2)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.0000011	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000045	J	0.000015	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000052	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.000000027	J	0.0000027	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000017	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.0000001	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000022	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000095	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000093	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		UJ	0.00000013	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000014	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000022	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.00000012	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.00000025	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000023	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000032	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.00000012	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.000000032				0.000049	N	0.0000506	N	NMED	6.43E-09	6.23E-04	

TABLE D1-AB25-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AB25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	14,000				NS	NS	78,000	N	NMED		1.79E-01	Nervous
Antimony	7440-36-0	mg/kg	0.29				NS	NS	31.3	N	NMED		9.27E-03	
Arsenic	7440-38-2	mg/kg	1.6				7.07	N	13	N	NMED	2.26E-06	1.23E-01	Heart/Endocrine
Barium	7440-39-3	mg/kg	330				NS	NS	15,600	N	NMED		2.12E-02	
Beryllium	7440-41-7	mg/kg	0.84	J			64,400	N	156	N	NMED	1.30E-10	5.38E-03	
Cadmium	7440-43-9	mg/kg	1.2	J			85,900	N	70.5	N	NMED	1.40E-10	1.70E-02	
Calcium	7440-70-2	mg/kg	8,500				NS	NS	13,000,000	N	NMED		6.54E-04	
Chromium (Total) (3)	7440-47-3	mg/kg	13				96.6	N	45,200	N	NMED	1.35E-06	2.88E-04	
Cobalt	7440-48-4	mg/kg	4.5				17,200	N	23.4	N	NMED	2.62E-09	1.92E-01	Endocrine
Copper	7440-50-8	mg/kg	220	J			NS	NS	3,130	N	NMED		7.03E-02	
Iron	7439-89-6	mg/kg	9,900				NS	NS	54,800	N	NMED		1.81E-01	GI
Lead	7439-92-1	mg/kg	23				NS	NS	200	N	RSL			
Magnesium	7439-95-4	mg/kg	5,500				NS	NS	15,600,000	N	NMED		3.53E-04	
Manganese	7439-96-5	mg/kg	300				NS	NS	10,500	N	NMED		2.86E-02	
Mercury (Elemental)	7439-97-6	mg/kg	0.053	J			NS	NS	23.8	N	NMED		2.23E-03	
Nickel	7440-02-0	mg/kg	11				595,000	N	1,560	N	NMED	1.85E-10	7.05E-03	
Potassium	7440-09-7	mg/kg	1,200				NS	NS	15,600,000	N	NMED		7.69E-05	
Selenium	7782-49-2	mg/kg	1.1				NS	NS	391	N	NMED		2.81E-03	
Silver	7440-22-4	mg/kg	0.31				NS	NS	391	N	NMED		7.93E-04	
Sodium	7440-23-5	mg/kg	190	J			NS	NS	7,820,000	N	NMED		2.43E-05	
Thallium	7440-28-0	mg/kg	0.17				NS	NS	0.782	N	NMED		2.17E-01	Hair/Coat/Eyes
Vanadium	7440-62-2	mg/kg	14				NS	NS	394	N	NMED		3.55E-02	
Zinc	7440-66-6	mg/kg	60				NS	NS	23,500	N	NMED		2.55E-03	

TABLE D1-AB25-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AB25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.32	U			NS	NS	11.2	N	NMED			
Nitrate	14797-55-8	mg/kg	4.3	J			NS	NS	125,000	N	NMED		3.44E-05	
Perchlorate	14797-73-0	mg/kg	0.002	UJ			NS	NS	54.8	N	NMED			
										Cumulative Risk/Hazard		**4E-06**	**1.1**	
										Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	0.2
Endocrine	0.32
GI	0.18
Hair/Coat	0.22
Eyes	0.22
All Others	0.20

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of Quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper tolerance limit

TABLE D1-AB25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AB25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0023	U			137	N	39,400	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0023	U			NS	NS	72,500	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0023	U			39	N	26,000	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0023	U			92	N	12	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0023	U			383	N	260,000	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0023	U			NS	NS	2,260	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0023	U			146	N	695	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0023	U			NS	NS	930	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0057	U			1	N	34	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0023	U			1,250	N	423	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0023	U			NS	NS	1,800	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0057	U			1	N	41	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0023	U			3	N	738	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0023	U			NS	NS	13,000	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0023	U			41	N	286	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0023	U			87	N	137	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0023	U			NS	NS	1,500	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0023	U			6,730	N	90,800	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0023	U			NS	NS	23,000	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0023	U			6,730	N	90,800	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0023	U			87	N	137	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0034	U			NS	NS	411,000	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0023	U			NS	NS	26,000	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0023	U			NS	NS	1,300	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0023	U			NS	NS	23,000	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0023	U			NS	NS	81,600	N	RSL		
Acetone	67-64-1	mg/kg	0.29				NS	NS	960,000	N	NMED		3.02E-07
Benzene	71-43-2	mg/kg	0.0023	U			87	N	729	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0023	U			NS	NS	1,800	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0023	U			NS	NS	630	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0023	U			30	N	26,000	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0023	U			1,760	N	18,300	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0023	U			NS	NS	95	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0023	U			NS	NS	8,540	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0023	U			53	N	1,020	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0023	U			NS	NS	2,160	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0023	U			NS	NS	89,500	N	NMED		
Chloroform	67-66-3	mg/kg	0.0023	U			29	N	2,000	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0057	U			201	N	1,260	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0023	U			NS	NS	2,600	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0023	U			146	N	695	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0023	U			67	N	18,300	N	NMED		
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0023	U			NS	NS	288	N	NMED		

TABLE D1-AB25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AB25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dichlorodifluoromethane	75-71-8	mg/kg	0.0023	U			NS	NS	865	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0023	U			29,000	N	368	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0023	U			52	N	916	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0023	U			NS	NS	14,200	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0057	U			NS	NS	3,730	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0023	U			4,820	N	178,000	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.011	U			14,400	N	5,130	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0023	U			NS	NS	58,000	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0023	U			NS	NS	24,000	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0023	U			108	N	843	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0029	U			NS	NS	3,940	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0023	U			NS	NS	14,200	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0023	U			NS	NS	120,000	N	RSL		
Styrene	100-42-5	mg/kg	0.0023	U			NS	NS	51,300	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0023	U			NS	NS	120,000	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0023	U			1,650	N	629	N	NMED		
Toluene	108-88-3	mg/kg	0.0023	U			NS	NS	61,300	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0023	U			NS	NS	1,100	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0023	U			146	N	695	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0023	U			112	N	37	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0023	U			NS	NS	6,030	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0023	U			28	N	46	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	UJ			1,250	N	423	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	UJ			NS	NS	13,000	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	UJ			6,730	N	90,800	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	UJ			6,730	N	90,800	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	UJ			NS	NS	91,600	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	UJ			2,330	N	916	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	UJ			NS	NS	2,750	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	UJ			NS	NS	18,300	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	UJ			NS	NS	1,830	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	UJ			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	UJ			17	N	276	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	UJ			NS	NS	104,000	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.17	UJ			NS	NS	6,490	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.17	UJ			NS	NS	3,370	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	UJ			NS	NS	41,000	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.17	UJ			NS	NS	8,000	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	UJ			NS	NS	410	N	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.17	UJ			1,100	N	3,300	N	RSL[S]		
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	UJ			NS	NS	73	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	UJ			NS	NS	82,000	N	RSL		

TABLE D1-AB25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AB25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4-Chloroaniline	106-47-8	mg/kg	0.17	UJ			110	N	410	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.17	UJ			1,100	N	3,300	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.17	UJ			NS	NS	50,500	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.17	UJ			NS	NS	25,300	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.17	UJ			NS	NS	253,000	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.17	UJ			32	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.13	UJ			24	N	251	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	UJ			32	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	UJ			NS	NS	25,300	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	UJ			323	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.17	UJ			NS	NS	3,300,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.17	UJ			NS	NS	82,000	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	UJ			NS	NS	2,500	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	UJ			16	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	UJ			519	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	UJ			1,830	N	18,300	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.17	UJ			12,000	N	160,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.17	UJ			3,230	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.17	UJ			NS	NS	91,600	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.17	UJ			NS	NS	8,200	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	UJ			3	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.17	UJ			NS	NS	1,200	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.17	UJ			NS	NS	733,000	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.17	UJ			NS	NS	916,000	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.17	UJ			NS	NS	33,700	N	NMED		
Fluorene	86-73-7	mg/kg	0.17	UJ			NS	NS	33,700	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.17	UJ			16	N	733	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	UJ			52	N	916	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.17	UJ			641	N	641	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	UJ			32	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.17	UJ			27,000	N	183,000	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	UJ			3	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.02	UJ			1	N	7	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	UJ			5,240	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.17	UJ			108	N	843	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.17	UJ			293	N	1,540	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.17	UJ			45	N	3,180	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.17	UJ			NS	NS	27,500	N	NMED		
Phenol	108-95-2	mg/kg	0.17	UJ			NS	NS	275,000	N	NMED		
Pyrene	129-00-0	mg/kg	0.17	UJ			NS	NS	25,300	N	NMED		

TABLE D1-AB25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AB25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			5,300	N	7,400	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.02	U			304	N	57	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.02	U			9	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.01	U			9	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.01	U			11	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.01	U			11	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.01	U			11	N	16	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.01	U			11	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.0000011	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000045	J	0.000015	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000052	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.000000027	J	0.0000027	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000017	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.0000001	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000022	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000095	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000093	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		UJ	0.00000013	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000014	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000022	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.00000012	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.00000025	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000023	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000032	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.00000012	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.000000032				0.000238	N	0.000808	N	NMED	1.32E-09	3.90E-05

TABLE D1-AB25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AB25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	14,000				NS	NS	1,290,000	N	NMED		1.09E-02
Antimony	7440-36-0	mg/kg	0.29				NS	NS	519	N	NMED		5.59E-04
Arsenic	7440-38-2	mg/kg	1.6				36	N	208	N	NMED	4.46E-07	7.69E-03
Barium	7440-39-3	mg/kg	330				NS	NS	255,000	N	NMED		1.29E-03
Beryllium	7440-41-7	mg/kg	0.84	J			313,000	N	2,580	N	NMED	2.68E-11	3.26E-04
Cadmium	7440-43-9	mg/kg	1.2	J			417,000	N	1,110	N	NMED	2.88E-11	1.08E-03
Calcium	7440-70-2	mg/kg	8,500				NS	NS	32,400,000	N	NMED		2.62E-04
Chromium (Total) (3)	7440-47-3	mg/kg	13				505	N	314,000	N	NMED	2.57E-07	4.14E-05
Cobalt	7440-48-4	mg/kg	4.5				83,400	N	388	N	NMED	5.40E-10	1.16E-02
Copper	7440-50-8	mg/kg	220	J			NS	NS	51,900	N	NMED		4.24E-03
Iron	7439-89-6	mg/kg	9,900				NS	NS	908,000	N	NMED		1.09E-02
Lead	7439-92-1	mg/kg	23				NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	5,500				NS	NS	5,680,000	N	NMED		9.68E-04
Manganese	7439-96-5	mg/kg	300				NS	NS	160,000	N	NMED		1.88E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.053	J			NS	NS	112	N	NMED		4.73E-04
Nickel	7440-02-0	mg/kg	11				2,890,000	N	25,700	N	NMED	3.81E-11	4.28E-04
Potassium	7440-09-7	mg/kg	1,200				NS	NS	76,200,000	N	NMED		1.57E-05
Selenium	7782-49-2	mg/kg	1.1				NS	NS	6,490	N	NMED		1.69E-04
Silver	7440-22-4	mg/kg	0.31				NS	NS	6,490	N	NMED		4.78E-05
Sodium	7440-23-5	mg/kg	190	J			NS	NS	37,300,000	N	NMED		5.09E-06
Thallium	7440-28-0	mg/kg	0.17				NS	NS	13	N	NMED		1.31E-02
Vanadium	7440-62-2	mg/kg	14				NS	NS	6,530	N	NMED		2.14E-03
Zinc	7440-66-6	mg/kg	60				NS	NS	38,900	N	NMED		1.54E-03

TABLE D1-AB25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AB25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.32	U			NS	NS	63	N	NMED		
Nitrate	14797-55-8	mg/kg	4.3	J			NS	NS	2,080,000	N	NMED		2.07E-06
Perchlorate	14797-73-0	mg/kg	0.002	UJ			NS	NS	908	N	NMED		
										Cumulative Risk/Hazard		**7E-07**	**0.07**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of Quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper tolerance limit

TABLE D1-AB25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AB25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0023	U			659	N	10,600	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0023	U			NS	NS	13,600	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0023	U			197	N	7,080	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0023	U			4,300	N	2	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0023	U			1,820	N	70,800	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0023	U			NS	NS	424	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0023	U			781	N	130	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0023	U			NS	NS	283	N	NMED[C]			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0057	U			8	N	6	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0023	U			8,540	N	79	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0023	U			NS	NS	492	N	NMED[C]			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0057	U			6	N	8	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0023	U			16	N	140	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0023	U			NS	NS	2,500	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0023	U			195	N	54	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0023	U			415	N	25	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0023	U			NS	NS	422	N	NMED[C]			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0023	U			45,900	N	24,800	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0023	U			NS	NS	7,080	N	NMED[C]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0023	U			45,900	N	24,800	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0023	U			415	N	25	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.0034	U			NS	NS	90,700	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0023	U			NS	NS	7,080	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.0023	U			NS	NS	599	N	NMED[C]			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0023	U			NS	NS	7,080	N	NMED[C]			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0023	U			NS	NS	20,400	N	NMED[C]			
Acetone	67-64-1	mg/kg	0.29				NS	NS	242,000	N	NMED		1.20E-06	
Benzene	71-43-2	mg/kg	0.0023	U			423	N	142	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.0023	U			NS	NS	538	N	NMED[C]			
Bromochloromethane	74-97-5	mg/kg	0.0023	U			NS	NS	296	N	NMED[C]			
Bromodichloromethane	75-27-4	mg/kg	0.0023	U			143	N	7,080	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0023	U			23,700	N	5,380	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0023	U			NS	NS	18	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.0023	U			NS	NS	1,620	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0023	U			252	N	202	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0023	U			NS	NS	412	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0023	U			NS	NS	16,600	N	NMED			
Chloroform	67-66-3	mg/kg	0.0023	U			134	N	391	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0057	U			956	N	235	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0023	U			NS	NS	708	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0023	U			781	N	130	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0023	U			340	N	5,380	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0023	U			NS	NS	54	N	NMED			
Dichlorodifluoromethane	75-71-8	mg/kg	0.0023	U			NS	NS	161	N	NMED			

TABLE D1-AB25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AB25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Ethylbenzene	100-41-4	mg/kg	0.0023	U			1,770	N	5,800	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0023	U			2,400	N	269	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0023	U			NS	NS	2,740	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0057	U			NS	NS	696	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0023	U			24,200	N	33,100	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.011	U			89,600	N	1,210	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0023	U			NS	NS	17,700	N	NMED[C]			
n-Propylbenzene	103-65-1	mg/kg	0.0023	U			NS	NS	6,730	N	NMED[C]			
Naphthalene	91-20-3	mg/kg	0.0023	U			633	N	159	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0029	U			NS	NS	736	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.0023	U			NS	NS	2,740	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.0023	U			NS	NS	35,400	N	NMED[C]			
Styrene	100-42-5	mg/kg	0.0023	U			NS	NS	10,200	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0023	U			NS	NS	35,400	N	NMED[C]			
Tetrachloroethene	127-18-4	mg/kg	0.0023	U			7,910	N	120	N	NMED			
Toluene	108-88-3	mg/kg	0.0023	U			NS	NS	14,000	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0023	U			NS	NS	206	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0023	U			781	N	130	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0023	U			5,370	N	7	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0023	U			NS	NS	1,130	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0023	U			161	N	162	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	UJ			8,540	N	79	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	UJ			NS	NS	2,500	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	UJ			45,900	N	24,800	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	UJ			45,900	N	24,800	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	UJ			NS	NS	26,900	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	UJ			17,000	N	269	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	UJ			NS	NS	807	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	UJ			NS	NS	5,380	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	UJ			NS	NS	538	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	UJ			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	UJ			165	N	81	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	UJ			NS	NS	28,300	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.17	UJ			NS	NS	1,770	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.17	UJ			NS	NS	1,000	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	UJ			NS	NS	13,500	N	NMED[C]			
2-Nitroaniline	88-74-4	mg/kg	0.17	UJ			NS	NS	2,690	N	NMED[C]			
2-Nitrophenol	88-75-5	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	UJ			410	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.17	UJ			135	N	1,080	N	NMED[SC]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	UJ			NS	NS	22	N	NMED			
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	UJ			NS	NS	26,900	N	NMED[C]			

TABLE D1-AB25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AB25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Chloroaniline	106-47-8	mg/kg	0.17	UJ			14	N	135	N	NMED[C]			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.17	UJ			135	N	1,080	N	NMED[C]			
4-Nitrophenol	100-02-7	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.17	UJ			NS	NS	15,100	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.17	UJ			NS	NS	7,530	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.17	UJ			NS	NS	75,300	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.17	UJ			240	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.13	UJ			173	N	15	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	UJ			240	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	UJ			NS	NS	7,530	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	UJ			2,310	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.17	UJ			NS	NS	1,080,000	N	NMED[C]			
Benzyl Alcohol	100-51-6	mg/kg	0.17	UJ			NS	NS	26,900	N	NMED[C]			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	UJ			NS	NS	807	N	NMED[C]			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	UJ			2	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	UJ			3,540	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	UJ			13,400	N	5,380	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.17	UJ			1,420	N	53,800	N	NMED[C]			
Carbazole	86-74-8	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.17	UJ			23,100	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.17	UJ			NS	NS	26,900	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.17	UJ			NS	NS	2,690	N	NMED[C]			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	UJ			24	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.17	UJ			NS	NS	269	N	NMED[C]			
Diethylphthalate	84-66-2	mg/kg	0.17	UJ			NS	NS	215,000	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.17	UJ			NS	NS	269,000	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.17	UJ			NS	NS	10,000	N	NMED			
Fluorene	86-73-7	mg/kg	0.17	UJ			NS	NS	10,000	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.17	UJ			117	N	215	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	UJ			2,400	N	269	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.17	UJ			4,670	N	188	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	UJ			240	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.17	UJ			198,000	N	53,700	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	UJ			0.38	N	NA	N	NMED[C]			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.02	UJ			4	N	2	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	UJ			37,900	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.17	UJ			633	N	159	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.17	UJ			1,350	N	353	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.17	UJ			346	N	989	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.17	UJ			NS	NS	8,070	N	NMED			
Phenol	108-95-2	mg/kg	0.17	UJ			NS	NS	77,400	N	NMED			
Pyrene	129-00-0	mg/kg	0.17	UJ			NS	NS	7,530	N	NMED			

TABLE D1-AB25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AB25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	8,070	N	NMED[C]			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	27	N	NMED[C]			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			626	N	2,420	N	NMED[C]			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.02	U			2,440	N	17	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.02	U			55	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.01	U			58	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.01	U			85	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.01	U			85	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.01	U			85	N	5	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.01	U			85	N	NS	NS	NMED			
DIOXINS/FURANS (ηg/kg) (3)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.0000011	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000045	J	0.000015	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000052	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.000000027	J	0.0000027	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000017	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.0000001	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000022	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000095	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000093	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		UJ	0.00000013	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000014	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000022	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.00000012	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.00000025	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000023	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000032	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.00000012	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.000000032				0.00172	N	0.000226	N	NMED	1.83E-10	1.39E-04	

TABLE D1-AB25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AB25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	14,000				NS	NS	41,400	N	NMED		3.38E-01	Nervous
Antimony	7440-36-0	mg/kg	0.29				NS	NS	142	N	NMED		2.04E-03	
Arsenic	7440-38-2	mg/kg	1.6				216	N	41	N	NMED	7.41E-08	3.88E-02	
Barium	7440-39-3	mg/kg	330				NS	NS	4,390	N	NMED		7.52E-02	
Beryllium	7440-41-7	mg/kg	0.84	J			2,710	N	148	N	NMED	3.10E-09	5.68E-03	
Cadmium	7440-43-9	mg/kg	1.2	J			3,610	N	72	N	NMED	3.32E-09	1.66E-02	
Calcium	7440-70-2	mg/kg	8,500				NS	NS	8,850,000	N	NMED		9.60E-04	
Chromium (Total) (4)	7440-47-3	mg/kg	13				468	N	134	N	NMED	2.78E-07	9.70E-02	
Cobalt	7440-48-4	mg/kg	4.5				722	N	37	N	NMED	6.23E-08	1.23E-01	Endocrine
Copper	7440-50-8	mg/kg	220	J			NS	NS	14,200	N	NMED		1.55E-02	
Iron	7439-89-6	mg/kg	9,900				NS	NS	248,000	N	NMED		3.99E-02	
Lead	7439-92-1	mg/kg	23				NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	5,500				NS	NS	1,550,000	N	NMED		3.55E-03	
Manganese	7439-96-5	mg/kg	300				NS	NS	464	N	NMED		6.47E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.053	J			NS	NS	21	N	NMED		2.56E-03	
Nickel	7440-02-0	mg/kg	11				20,500	N	753	N	NMED	5.37E-09	1.46E-02	
Potassium	7440-09-7	mg/kg	1,200				NS	NS	20,800,000	N	NMED		5.77E-05	
Selenium	7782-49-2	mg/kg	1.1				NS	NS	1,750	N	NMED		6.29E-04	
Silver	7440-22-4	mg/kg	0.31				NS	NS	1,770	N	NMED		1.75E-04	
Sodium	7440-23-5	mg/kg	190	J			NS	NS	10,200,000	N	NMED		1.86E-05	
Thallium	7440-28-0	mg/kg	0.17				NS	NS	4	N	NMED		4.80E-02	
Vanadium	7440-62-2	mg/kg	14				NS	NS	614	N	NMED		2.28E-02	
Zinc	7440-66-6	mg/kg	60				NS	NS	106,000	N	NMED		5.66E-04	
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.32	U			NS	NS	12	N	NMED			
Nitrate	14797-55-8	mg/kg	4.3	J			NS	NS	566,000	N	NMED		7.60E-06	
Perchlorate	14797-73-0	mg/kg	0.002	UJ			NS	NS	248	N	NMED			
										Cumulative Risk/Hazard		**4E-07**	**1.49**	
										Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	0.98
Endocrine	0.12
All Others	0.38

Notes:

[s] = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update).

2) NMED[C] = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

3) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

4) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of Quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper tolerance limit

TABLE D1-AC25-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID AC25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0019	U			28.1	N	2,350	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0019	U			NS	NS	14,400	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0019	U			7.98	N	1,560	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0019	U			18.8	N	2.61	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0019	U			78.6	N	15,600	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0019	U			NS	NS	440	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0019	U			29.3	N	141	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0019	U			NS	NS	63	N	RSL			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0048	U			0.051	N	7.09	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0019	U			240	N	82.9	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0019	U			NS	NS	300	N	RSL			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0048	U			0.0858	N	5.88	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0019	U			0.672	N	135	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0019	U			NS	NS	2,150	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0019	U			8.32	N	55.6	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0019	U			17.8	N	29	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0019	U			NS	NS	270	N	RSL			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0019	U			1,290	N	5,480	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0019	U			NS	NS	1,600	N	RSL			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0019	U			1,290	N	5,480	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0019	U			17.8	N	29	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.0029	U			NS	NS	37,400	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0019	U			NS	NS	1,560	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.0019	U			NS	NS	200	N	RSL			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0019	U			NS	NS	1,600	N	RSL			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0019	U			NS	NS	5,810	N	RSL			
Acetone	67-64-1	mg/kg	0.057				NS	NS	66,300	N	NMED		8.60E-07	
Benzene	71-43-2	mg/kg	0.0019	U			17.8	N	114	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.0019	U			NS	NS	290	N	RSL			
Bromochloromethane	74-97-5	mg/kg	0.0019	U			NS	NS	150	N	RSL			
Bromodichloromethane	75-27-4	mg/kg	0.0019	U			6.19	N	1,560	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0019	U			674	N	1,230	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0019	U			NS	NS	17.7	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.0019	U			NS	NS	1,550	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0019	U			10.7	N	144	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0019	U			NS	NS	378	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0019	U			NS	NS	19,000	N	NMED			
Chloroform	67-66-3	mg/kg	0.0019	U			5.9	N	306	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0048	U			41.1	N	268	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0019	U			NS	NS	156	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0019	U			29.3	N	141	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0019	U			13.9	N	1,230	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0019	U			NS	NS	57.9	N	NMED			

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FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Dichlorodifluoromethane	75-71-8	mg/kg	0.0019	U			NS	NS	182	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.0019	U			75.1	N	3,930	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0019	U			68.3	N	61.6	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0019	U			NS	NS	2,360	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0019	U			NS	NS	764	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0048	U			975	N	37,800	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.0019	U			766	N	409	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0097	U			NS	NS	3,900	N	RSL			
n-Propylbenzene	103-65-1	mg/kg	0.0019	U			NS	NS	3,800	N	RSL			
Naphthalene	91-20-3	mg/kg	0.0019	U			22.6	N	162	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0019	U			NS	NS	805	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.0024	U			NS	NS	2,360	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.0019	U			NS	NS	7,800	N	RSL			
Styrene	100-42-5	mg/kg	0.0019	U			NS	NS	7,260	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0019	U			NS	NS	7,800	N	RSL			
Tetrachloroethene	127-18-4	mg/kg	0.0019	U			337	N	111	N	NMED			
Toluene	108-88-3	mg/kg	0.0019	U			NS	NS	5,230	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0019	U			NS	NS	210	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0019	U			29.3	N	141	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0019	U			15.5	N	6.77	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0019	U			NS	NS	1,230	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0019	U			0.742	N	113	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	U			240	N	82.9	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	U			NS	NS	2,150	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	U			1,290	N	5,480	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	U			1,290	N	5,480	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	U			NS	NS	6,160	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	U			484	N	61.6	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	U			NS	NS	185	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	U			NS	NS	1,230	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	U			NS	NS	123	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	U			17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	U			3.56	N	18.5	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	U			NS	NS	6,260	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.17	U			NS	NS	391	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.17	U			NS	NS	232	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	U			NS	NS	3,200	N	RSL			
2-Nitroaniline	88-74-4	mg/kg	0.17	U			NS	NS	630	N	RSL			
2-Nitrophenol	88-75-5	mg/kg	0.17	U			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	U			11.8	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.17	U			270	N	250	N	RSL[S]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	U			NS	NS	4.93	N	NMED			
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	U			NS	NS	NS	NS	NS			

TABLE D1-AC25-1
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FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	U			NS	NS	6,300	N	RSL			
4-Chloroaniline	106-47-8	mg/kg	0.17	U			27	N	32	N	RSL			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	U			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.17	U			270	N	250	N	RSL			
4-Nitrophenol	100-02-7	mg/kg	0.17	U			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.17	U			NS	NS	3,480	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.17	U			NS	NS	1,740	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.17	U			NS	NS	17,400	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.17	U			1.53	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.13	U			1.12	N	17.4	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	U			1.53	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	U			NS	NS	1,740	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	U			15.3	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.17	U			NS	NS	250,000	N	RSL			
Benzyl Alcohol	100-51-6	mg/kg	0.17	U			NS	NS	6,300	N	RSL			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	U			NS	NS	190	N	RSL			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	U			3.11	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	U			99.3	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	U			380	N	1,230	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.17	U			2,900	N	13,000	N	RSL			
Carbazole	86-74-8	mg/kg	0.17	U			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.17	U			153	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.17	U			NS	NS	6,160	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.17	U			NS	NS	630	N	RSL			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	U			0.153	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.17	U			NS	NS	78	N	RSL			
Diethylphthalate	84-66-2	mg/kg	0.17	U			NS	NS	49,300	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.17	U			NS	NS	61,600	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.17	U			NS	NS	2,320	N	NMED			
Fluorene	86-73-7	mg/kg	0.17	U			NS	NS	2,320	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.17	U			3.33	N	49.3	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	U			68.3	N	61.6	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.17	U			133	N	43.1	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	U			1.53	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.17	U			5,610	N	12,300	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.02	UJ			0.78	N	NS	NS	RSL			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.17	U			0.0234	Y	0.493	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	U			1,090	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.17	U			22.6	N	162	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.17	U			60.4	N	131	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.17	U			9.85	N	234	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.17	U			NS	NS	1,740	N	NMED			
Phenol	108-95-2	mg/kg	0.17	U			NS	NS	18,500	N	NMED			
Pyrene	129-00-0	mg/kg	0.17	U			NS	NS	1,740	N	NMED			

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MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	2,200	N	RSL			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	6.3	N	RSL			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			211	N	36	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			3.56	N	18.5	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	7.7	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			31.6	N	70.4	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	6.16	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	7.64	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			333	N	247	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			83.1	N	301	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	156	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			60.4	N	131	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			313	N	6.16	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	3,850	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			1,300	N	570	N	RSL			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.02	U			69.6	N	3.98	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.02	U			1.81	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.01	U			1.86	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.01	U			2.43	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.01	U			2.43	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.01	U			2.43	N	1.14	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.01	U			2.43	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (3)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.000000038	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg		U	0.0000017	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.000000045	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.00000045	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.000000057	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000035	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000054	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.00000003	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000049	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.000000043	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.000000052	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.0000001	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000071	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.000000036	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.0000001	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000016	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000051	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.000				0.000049	N	0.0000506	N	NMED			

TABLE D1-AC25-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID AC25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	20,000				NS	NS	78,000	N	NMED		2.56E-01	Nervous
Antimony	7440-36-0	mg/kg	0.11	J			NS	NS	31.3	N	NMED		3.51E-03	
Arsenic	7440-38-2	mg/kg	1.6				7.07	N	13	N	NMED	2.26E-06	1.23E-01	Heart/Endocrine
Barium	7440-39-3	mg/kg	270				NS	NS	15,600	N	NMED		1.73E-02	
Beryllium	7440-41-7	mg/kg	1.4				64,400	N	156	N	NMED	2.17E-10	8.97E-03	
Cadmium	7440-43-9	mg/kg	0.83				85,900	N	70.5	N	NMED	9.66E-11	1.18E-02	
Calcium	7440-70-2	mg/kg	18,000	J			NS	NS	13,000,000	N	NMED		1.38E-03	
Chromium (Total) (4)	7440-47-3	mg/kg	15				96.6	N	45,200	N	NMED	1.55E-06	3.32E-04	
Cobalt	7440-48-4	mg/kg	5				17,200	N	23.4	N	NMED	2.91E-09	2.14E-01	Endocrine
Copper	7440-50-8	mg/kg	80				NS	NS	3,130	N	NMED		2.56E-02	
Iron	7439-89-6	mg/kg	13,000				NS	NS	54,800	N	NMED		2.37E-01	GI
Lead	7439-92-1	mg/kg	14				NS	NS	200	N	RSL			
Magnesium	7439-95-4	mg/kg	6,500				NS	NS	15,600,000	N	NMED		4.17E-04	
Manganese	7439-96-5	mg/kg	650				NS	NS	10,500	N	NMED		6.19E-02	
Mercury (Elemental)	7439-97-6	mg/kg	0.043	J			NS	NS	23.8	N	NMED		1.81E-03	
Nickel	7440-02-0	mg/kg	12				595,000	N	1,560	N	NMED	2.02E-10	7.69E-03	
Potassium	7440-09-7	mg/kg	1,600				NS	NS	15,600,000	N	NMED		1.03E-04	
Selenium	7782-49-2	mg/kg	1.7				NS	NS	391	N	NMED		4.35E-03	
Silver	7440-22-4	mg/kg	0.15				NS	NS	391	N	NMED		3.84E-04	
Sodium	7440-23-5	mg/kg	49				NS	NS	7,820,000	N	NMED		6.27E-06	
Thallium	7440-28-0	mg/kg	0.072	J			NS	NS	0.782	N	NMED		9.21E-02	
Vanadium	7440-62-2	mg/kg	17				NS	NS	394	N	NMED		4.31E-02	
Zinc	7440-66-6	mg/kg	32				NS	NS	23,500	N	NMED		1.36E-03	

TABLE D1-AC25-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID AC25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.31	U			NS	NS	11.2	N	NMED			
Nitrate	14797-55-8	mg/kg	3.5	J			NS	NS	125,000	N	NMED		2.80E-05	
Perchlorate	14797-73-0	mg/kg	0.002	U			NS	NS	54.8	N	NMED			
										Cumulative Risk/Hazard		**4E-06**	**1.11**	
										Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	0.3
Endocrine	0.34
GI	0.24
Heart	0.12
All Others	0.28

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

2) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

3) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

4) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
TEF = toxicity equivalency factor
TEQ = toxicity equivalency quotient
U = Nondetect
UJ = Estimated Nondetect

TABLE D1-AC25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID AC25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0019	U			137	N	39,400	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0019	U			NS	NS	72,500	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0019	U			39	N	26,000	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0019	U			92	N	12	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0019	U			383	N	260,000	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0019	U			NS	NS	2,260	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0019	U			146	N	695	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0019	U			NS	NS	930	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0048	U			1	N	34	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0019	U			1,250	N	423	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0019	U			NS	NS	1,800	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0048	U			1	N	41	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0019	U			3	N	738	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0019	U			NS	NS	13,000	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0019	U			41	N	286	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0019	U			87	N	137	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0019	U			NS	NS	1,500	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0019	U			6,730	N	90,800	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0019	U			NS	NS	23,000	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0019	U			6,730	N	90,800	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0019	U			87	N	137	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0029	U			NS	NS	411,000	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0019	U			NS	NS	26,000	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0019	U			NS	NS	1,300	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0019	U			NS	NS	23,000	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0019	U			NS	NS	81,600	N	RSL		
Acetone	67-64-1	mg/kg	0.057				NS	NS	960,000	N	NMED		5.94E-08
Benzene	71-43-2	mg/kg	0.0019	U			87	N	729	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0019	U			NS	NS	1,800	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0019	U			NS	NS	630	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0019	U			30	N	26,000	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0019	U			1,760	N	18,300	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0019	U			NS	NS	95	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0019	U			NS	NS	8,540	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0019	U			53	N	1,020	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0019	U			NS	NS	2,160	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0019	U			NS	NS	89,500	N	NMED		
Chloroform	67-66-3	mg/kg	0.0019	U			29	N	2,000	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0048	U			201	N	1,260	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0019	U			NS	NS	2,600	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0019	U			146	N	695	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0019	U			67	N	18,300	N	NMED		
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0019	U			NS	NS	288	N	NMED		
Dichlorodifluoromethane	75-71-8	mg/kg	0.0019	U			NS	NS	865	N	NMED		

TABLE D1-AC25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID AC25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Ethylbenzene	100-41-4	mg/kg	0.0019	U			29,000	N	368	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0019	U			52	N	916	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0019	U			NS	NS	14,200	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0019	U			NS	NS	3,730	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0048	U			4,820	N	178,000	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.0019	U			14,400	N	5,130	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0097	U			NS	NS	58,000	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0019	U			NS	NS	24,000	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0019	U			108	N	843	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0019	U			NS	NS	3,940	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0024	U			NS	NS	14,200	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0019	U			NS	NS	120,000	N	RSL		
Styrene	100-42-5	mg/kg	0.0019	U			NS	NS	51,300	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0019	U			NS	NS	120,000	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0019	U			1,650	N	629	N	NMED		
Toluene	108-88-3	mg/kg	0.0019	U			NS	NS	61,300	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0019	U			NS	NS	1,100	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0019	U			146	N	695	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0019	U			112	N	37	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0019	U			NS	NS	6,030	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0019	U			28	N	46	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	U			1,250	N	423	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	U			NS	NS	13,000	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	U			6,730	N	90,800	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	U			6,730	N	90,800	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	U			NS	NS	91,600	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	U			2,330	N	916	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	U			NS	NS	2,750	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	U			NS	NS	18,300	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	U			NS	NS	1,830	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	U			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	U			17	N	276	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	U			NS	NS	104,000	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.17	U			NS	NS	6,490	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.17	U			NS	NS	3,370	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	U			NS	NS	41,000	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.17	U			NS	NS	8,000	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.17	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	U			NS	NS	410	N	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.17	U			1,100	N	3,300	N	RSL[S]		
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	U			NS	NS	73	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	U			NS	NS	NS	NS	NS		
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	U			NS	NS	82,000	N	RSL		

TABLE D1-AC25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID AC25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4-Chloroaniline	106-47-8	mg/kg	0.17	U			110	N	410	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.17	U			1,100	N	3,300	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.17	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.17	U			NS	NS	50,500	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.17	U			NS	NS	25,300	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.17	U			NS	NS	253,000	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.17	U			32	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.13	U			24	N	251	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	U			32	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	U			NS	NS	25,300	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	U			323	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.17	U			NS	NS	3,300,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.17	U			NS	NS	82,000	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	U			NS	NS	2,500	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	U			16	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	U			519	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	U			1,830	N	18,300	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.17	U			12,000	N	160,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.17	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.17	U			3,230	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.17	U			NS	NS	91,600	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.17	U			NS	NS	8,200	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	U			3	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.17	U			NS	NS	1,200	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.17	U			NS	NS	733,000	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.17	U			NS	NS	916,000	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.17	U			NS	NS	33,700	N	NMED		
Fluorene	86-73-7	mg/kg	0.17	U			NS	NS	33,700	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.17	U			16	N	733	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	U			52	N	916	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.17	U			641	N	641	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	U			32	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.17	U			27,000	N	183,000	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.02	UJ			3	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.17	U			1	N	7	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	U			5,240	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.17	U			108	N	843	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.17	U			293	N	1,540	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.17	U			45	N	3,180	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.17	U			NS	NS	27,500	N	NMED		
Phenol	108-95-2	mg/kg	0.17	U			NS	NS	275,000	N	NMED		
Pyrene	129-00-0	mg/kg	0.17	U			NS	NS	25,300	N	NMED		

TABLE D1-AC25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID AC25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			5,300	N	7,400	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.02	U			304	N	57	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.02	U			9	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.01	U			9	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.01	U			11	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.01	U			11	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.01	U			11	N	16	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.01	U			11	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.000000038	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg		U	0.0000017	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.000000045	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.00000045	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.000000057	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000035	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000054	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.00000003	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000049	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.000000043	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.000000052	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.0000001	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000071	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.000000036	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.0000001	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000016	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000051	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.000				0.000238	N	0.000808	N	NMED		

TABLE D1-AC25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID AC25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	20,000				NS	NS	1,290,000	N	NMED		1.55E-02
Antimony	7440-36-0	mg/kg	0.11	J			NS	NS	519	N	NMED		2.12E-04
Arsenic	7440-38-2	mg/kg	1.6				36	N	208	N	NMED	4.46E-07	7.69E-03
Barium	7440-39-3	mg/kg	270				NS	NS	255,000	N	NMED		1.06E-03
Beryllium	7440-41-7	mg/kg	1.4				313,000	N	2,580	N	NMED	4.47E-11	5.43E-04
Cadmium	7440-43-9	mg/kg	0.83				417,000	N	1,110	N	NMED	1.99E-11	7.48E-04
Calcium	7440-70-2	mg/kg	18,000	J			NS	NS	32,400,000	N	NMED		5.56E-04
Chromium (Total) (3)	7440-47-3	mg/kg	15				505	N	314,000	N	NMED	2.97E-07	4.78E-05
Cobalt	7440-48-4	mg/kg	5				83,400	N	388	N	NMED	6.00E-10	1.29E-02
Copper	7440-50-8	mg/kg	80				NS	NS	51,900	N	NMED		1.54E-03
Iron	7439-89-6	mg/kg	13,000				NS	NS	908,000	N	NMED		1.43E-02
Lead	7439-92-1	mg/kg	14				NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	6,500				NS	NS	5,680,000	N	NMED		1.14E-03
Manganese	7439-96-5	mg/kg	650				NS	NS	160,000	N	NMED		4.06E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.043	J			NS	NS	112	N	NMED		3.84E-04
Nickel	7440-02-0	mg/kg	12				2,890,000	N	25,700	N	NMED	4.15E-11	4.67E-04
Potassium	7440-09-7	mg/kg	1,600				NS	NS	76,200,000	N	NMED		2.10E-05
Selenium	7782-49-2	mg/kg	1.7				NS	NS	6,490	N	NMED		2.62E-04
Silver	7440-22-4	mg/kg	0.15				NS	NS	6,490	N	NMED		2.31E-05
Sodium	7440-23-5	mg/kg	49				NS	NS	37,300,000	N	NMED		1.31E-06
Thallium	7440-28-0	mg/kg	0.072	J			NS	NS	13	N	NMED		5.54E-03
Vanadium	7440-62-2	mg/kg	17				NS	NS	6,530	N	NMED		2.60E-03
Zinc	7440-66-6	mg/kg	32				NS	NS	38,900	N	NMED		8.23E-04

TABLE D1-AC25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID AC25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.31	U			NS	NS	63	N	NMED		
Nitrate	14797-55-8	mg/kg	3.5	J			NS	NS	2,080,000	N	NMED		1.68E-06
Perchlorate	14797-73-0	mg/kg	0.002	U			NS	NS	908	N	NMED		
										Cumulative Risk/Hazard		**7E-07**	**0.07**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service

IEUBK = Integrated Exposure Uptake Biokentic Model

J = Estimated

mg/kg = milligrams per kilogram

NS = No Standard

TEF = toxicity equivalency factor

TEQ = toxicity equivalency quotient

U = Nondetect

UJ = Estimated Nondetect

TABLE D1-AC25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID AC25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0019	U			659	N	10,600	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0019	U			NS	NS	13,600	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0019	U			197	N	7,080	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0019	U			4,300	N	2	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0019	U			1,820	N	70,800	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0019	U			NS	NS	424	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0019	U			781	N	130	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0019	U			NS	NS	283	N	NMED[C]			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0048	U			8	N	6	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0019	U			8,540	N	79	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0019	U			NS	NS	492	N	NMED[C]			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0048	U			6	N	8	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0019	U			16	N	140	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0019	U			NS	NS	2,500	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0019	U			195	N	54	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0019	U			415	N	25	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0019	U			NS	NS	422	N	NMED[C]			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0019	U			45,900	N	24,800	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0019	U			NS	NS	7,080	N	NMED[C]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0019	U			45,900	N	24,800	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0019	U			415	N	25	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.0029	U			NS	NS	90,700	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0019	U			NS	NS	7,080	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.0019	U			NS	NS	599	N	NMED[C]			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0019	U			NS	NS	7,080	N	NMED[C]			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0019	U			NS	NS	20,400	N	NMED[C]			
Acetone	67-64-1	mg/kg	0.057				NS	NS	242,000	N	NMED		2.36E-07	
Benzene	71-43-2	mg/kg	0.0019	U			423	N	142	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.0019	U			NS	NS	538	N	NMED[C]			
Bromochloromethane	74-97-5	mg/kg	0.0019	U			NS	NS	296	N	NMED[C]			
Bromodichloromethane	75-27-4	mg/kg	0.0019	U			143	N	7,080	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0019	U			23,700	N	5,380	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0019	U			NS	NS	18	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.0019	U			NS	NS	1,620	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0019	U			252	N	202	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0019	U			NS	NS	412	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0019	U			NS	NS	16,600	N	NMED			

TABLE D1-AC25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID AC25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Chloroform	67-66-3	mg/kg	0.0019	U			134	N	391	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0048	U			956	N	235	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0019	U			NS	NS	708	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0019	U			781	N	130	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0019	U			340	N	5,380	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0019	U			NS	NS	54	N	NMED			
Dichlorodifluoromethane	75-71-8	mg/kg	0.0019	U			NS	NS	161	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.0019	U			1,770	N	5,800	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0019	U			2,400	N	269	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0019	U			NS	NS	2,740	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0019	U			NS	NS	696	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0048	U			24,200	N	33,100	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.0019	U			89,600	N	1,210	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0097	U			NS	NS	17,700	N	NMED[C]			
n-Propylbenzene	103-65-1	mg/kg	0.0019	U			NS	NS	6,730	N	NMED[C]			
Naphthalene	91-20-3	mg/kg	0.0019	U			633	N	159	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0019	U			NS	NS	736	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.0024	U			NS	NS	2,740	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.0019	U			NS	NS	35,400	N	NMED[C]			
Styrene	100-42-5	mg/kg	0.0019	U			NS	NS	10,200	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0019	U			NS	NS	35,400	N	NMED[C]			
Tetrachloroethene	127-18-4	mg/kg	0.0019	U			7,910	N	120	N	NMED			
Toluene	108-88-3	mg/kg	0.0019	U			NS	NS	14,000	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0019	U			NS	NS	206	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0019	U			781	N	130	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0019	U			5,370	N	7	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0019	U			NS	NS	1,130	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0019	U			161	N	162	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	U			8,540	N	79	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	U			NS	NS	2,500	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	U			45,900	N	24,800	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	U			45,900	N	24,800	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	U			NS	NS	26,900	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	U			17,000	N	269	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	U			NS	NS	807	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	U			NS	NS	5,380	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	U			NS	NS	538	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	U			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	U			165	N	81	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	U			NS	NS	28,300	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.17	U			NS	NS	1,770	N	NMED			

TABLE D1-AC25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID AC25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
2-Methylnaphthalene	91-57-6	mg/kg	0.17	U			NS	NS	1,000	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	U			NS	NS	13,500	N	NMED[C]			
2-Nitroaniline	88-74-4	mg/kg	0.17	U			NS	NS	2,690	N	NMED[C]			
2-Nitrophenol	88-75-5	mg/kg	0.17	U			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	U			410	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.17	U			135	N	1,080	N	NMED[SC]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	U			NS	NS	22	N	NMED			
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	U			NS	NS	NS	NS	NS			
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	U			NS	NS	26,900	N	NMED[C]			
4-Chloroaniline	106-47-8	mg/kg	0.17	U			14	N	135	N	NMED[C]			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	U			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.17	U			135	N	1,080	N	NMED[C]			
4-Nitrophenol	100-02-7	mg/kg	0.17	U			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.17	U			NS	NS	15,100	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.17	U			NS	NS	7,530	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.17	U			NS	NS	75,300	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.17	U			240	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.13	U			173	N	15	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	U			240	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	U			NS	NS	7,530	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	U			2,310	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.17	U			NS	NS	1,080,000	N	NMED[C]			
Benzyl Alcohol	100-51-6	mg/kg	0.17	U			NS	NS	26,900	N	NMED[C]			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	U			NS	NS	807	N	NMED[C]			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	U			2	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	U			3,540	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	U			13,400	N	5,380	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.17	U			1,420	N	53,800	N	NMED[C]			
Carbazole	86-74-8	mg/kg	0.17	U			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.17	U			23,100	N	NS	NS	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Di-n-butylphthalate	84-74-2	mg/kg	0.17	U			NS	NS	26,900	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.17	U			NS	NS	2,690	N	NMED[C]			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	U			24	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.17	U			NS	NS	269	N	NMED[C]			
Diethylphthalate	84-66-2	mg/kg	0.17	U			NS	NS	215,000	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.17	U			NS	NS	269,000	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.17	U			NS	NS	10,000	N	NMED			
Fluorene	86-73-7	mg/kg	0.17	U			NS	NS	10,000	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.17	U			117	N	215	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	U			2,400	N	269	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.17	U			4,670	N	188	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	U			240	N	NS	NS	NMED			

TABLE D1-AC25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID AC25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
Isophorone	78-59-1	mg/kg	0.17	U			198,000	N	53,700	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.02	UJ			0.38	N	NA	N	NMED[C]			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.17	U			4	N	2	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	U			37,900	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.17	U			633	N	159	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.17	U			1,350	N	353	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.17	U			346	N	989	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.17	U			NS	NS	8,070	N	NMED			
Phenol	108-95-2	mg/kg	0.17	U			NS	NS	77,400	N	NMED			
Pyrene	129-00-0	mg/kg	0.17	U			NS	NS	7,530	N	NMED			
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	8,070	N	NMED[C]			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	27	N	NMED[C]			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			626	N	2,420	N	NMED[C]			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.02	U			2,440	N	17	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.02	U			55	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.01	U			58	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.01	U			85	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.01	U			85	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.01	U			85	N	5	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.01	U			85	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (3)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.000000038	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg		U	0.0000017	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.000000045	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.00000045	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.000000057	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000035	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000054	0.1	NS	NS	NS	NS	NMED			

TABLE D1-AC25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID AC25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.00000003	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000049	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.000000043	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.000000052	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.0000001	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000071	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.000000036	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.0000001	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000016	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000051	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.000				0.00172	N	0.000226	N	NMED			
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	20,000				NS	NS	41,400	N	NMED		4.83E-01	Nervous
Antimony	7440-36-0	mg/kg	0.11	J			NS	NS	142	N	NMED		7.75E-04	
Arsenic	7440-38-2	mg/kg	1.6				216	N	41	N	NMED	7.41E-08	3.88E-02	
Barium	7440-39-3	mg/kg	270				NS	NS	4,390	N	NMED		6.15E-02	
Beryllium	7440-41-7	mg/kg	1.4				2,710	N	148	N	NMED	5.17E-09	9.46E-03	
Cadmium	7440-43-9	mg/kg	0.83				3,610	N	72	N	NMED	2.30E-09	1.15E-02	
Calcium	7440-70-2	mg/kg	18,000	J			NS	NS	8,850,000	N	NMED		2.03E-03	
Chromium (Total) (4)	7440-47-3	mg/kg	15				468	N	134	N	NMED	3.21E-07	1.12E-01	GI, Blood
Cobalt	7440-48-4	mg/kg	5				722	N	37	N	NMED	6.93E-08	1.36E-01	Endocrine
Copper	7440-50-8	mg/kg	80				NS	NS	14,200	N	NMED		5.63E-03	
Iron	7439-89-6	mg/kg	13,000				NS	NS	248,000	N	NMED		5.24E-02	
Lead	7439-92-1	mg/kg	14				NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	6,500				NS	NS	1,550,000	N	NMED		4.19E-03	
Manganese	7439-96-5	mg/kg	650				NS	NS	464	Y	NMED		1.40E+00	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.043	J			NS	NS	21	N	NMED		2.08E-03	
Nickel	7440-02-0	mg/kg	12				20,500	N	753	N	NMED	5.85E-09	1.59E-02	
Potassium	7440-09-7	mg/kg	1,600				NS	NS	20,800,000	N	NMED		7.69E-05	
Selenium	7782-49-2	mg/kg	1.7				NS	NS	1,750	N	NMED		9.71E-04	
Silver	7440-22-4	mg/kg	0.15				NS	NS	1,770	N	NMED		8.47E-05	
Sodium	7440-23-5	mg/kg	49				NS	NS	10,200,000	N	NMED		4.80E-06	
Thallium	7440-28-0	mg/kg	0.072	J			NS	NS	4	N	NMED		2.03E-02	
Vanadium	7440-62-2	mg/kg	17				NS	NS	614	N	NMED		2.77E-02	
Zinc	7440-66-6	mg/kg	32				NS	NS	106,000	N	NMED		3.02E-04	

TABLE D1-AC25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID AC25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.31	U			NS	NS	12	N	NMED			
Nitrate	14797-55-8	mg/kg	3.5	J			NS	NS	566,000	N	NMED		6.18E-06	
Perchlorate	14797-73-0	mg/kg	0.002	U			NS	NS	248	N	NMED			
										Cumulative Risk/Hazard		**5E-07**	**2.39**	
										Exceeds Target Level		**N**	**Y**	

Notes:

[s] = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

System	Hazard Quotient
Nervous	1.9
Endocrine	0.14
GI	0.11
Blood	0.11
All Others	0.25

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update).

2) NMED[C] = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

3) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

4) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
TEF = toxicity equivalency factor
TEQ = toxicity equivalency quotient
U = Nondetect
UJ = Estimated Nondetect

TABLE D1-AD25-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID AD25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0021	U			28.1	N	2,350	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0021	U			NS	NS	14,400	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0021	U			7.98	N	1,560	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0021	U			18.8	N	2.61	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0021	U			78.6	N	15,600	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0021	U			NS	NS	440	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0021	U			29.3	N	141	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0021	U			NS	NS	63	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0052	U			0.051	N	7.09	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0021	U			240	N	82.9	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0021	U			NS	NS	300	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0052	U			0.0858	N	5.88	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0021	U			0.672	N	135	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0021	U			NS	NS	2,150	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0021	U			8.32	N	55.6	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0021	U			17.8	N	29	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0021	U			NS	NS	270	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0021	U			1,290	N	5,480	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0021	U			NS	NS	1,600	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0021	U			1,290	N	5,480	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0021	U			17.8	N	29	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.017	J			NS	NS	37,400	N	NMED		4.55E-07
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0021	U			NS	NS	1,560	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0021	U			NS	NS	200	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0021	U			NS	NS	1,600	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0021	U			NS	NS	5,810	N	RSL		
Acetone	67-64-1	mg/kg	0.35	J			NS	NS	66,300	N	NMED		5.28E-06
Benzene	71-43-2	mg/kg	0.0021	U			17.8	N	114	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0021	U			NS	NS	290	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0021	U			NS	NS	150	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0021	U			6.19	N	1,560	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0021	U			674	N	1,230	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0021	U			NS	NS	17.7	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0021	U			NS	NS	1,550	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0021	U			10.7	N	144	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0021	U			NS	NS	378	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0021	U			NS	NS	19,000	N	NMED		
Chloroform	67-66-3	mg/kg	0.0021	U			5.9	N	306	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0052	U			41.1	N	268	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0021	U			NS	NS	156	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0021	U			29.3	N	141	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0021	U			13.9	N	1,230	N	NMED		
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0021	U			NS	NS	57.9	N	NMED		

TABLE D1-AD25-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID AD25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dichlorodifluoromethane	75-71-8	mg/kg	0.0021	U			NS	NS	182	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0021	U			75.1	N	3,930	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0021	U			68.3	N	61.6	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0021	U			NS	NS	2,360	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0052	U			NS	NS	764	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0021	U			975	N	37,800	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.01	U			766	N	409	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0021	U			NS	NS	3,900	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0021	U			NS	NS	3,800	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0021	U			22.6	N	162	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0026	U			NS	NS	805	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0021	U			NS	NS	2,360	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0021	U			NS	NS	7,800	N	RSL		
Styrene	100-42-5	mg/kg	0.0021	U			NS	NS	7,260	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0021	U			NS	NS	7,800	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0021	U			337	N	111	N	NMED		
Toluene	108-88-3	mg/kg	0.0025	J			NS	NS	5,230	N	NMED		4.78E-07
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0021	U			NS	NS	210	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0021	U			29.3	N	141	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0021	U			15.5	N	6.77	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0021	U			NS	NS	1,230	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0021	U			0.742	N	113	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	U			240	N	82.9	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	U			NS	NS	2,150	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	U			1,290	N	5,480	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	U			1,290	N	5,480	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	U			NS	NS	6,160	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	U			484	N	61.6	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	U			NS	NS	185	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	U			NS	NS	1,230	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	U			NS	NS	123	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	U			17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	U			3.56	N	18.5	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	U			NS	NS	6,260	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.17	U			NS	NS	391	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.17	U			NS	NS	232	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	U			NS	NS	3,200	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.17	U			NS	NS	630	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.17	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	U			11.8	N	NS	NS	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.17	U			270	N	250	N	RSL[S]		
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	U			NS	NS	4.93	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	U			NS	NS	NS	NS	NS		

TABLE D1-AD25-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID AD25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	U			NS	NS	6,300	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.17	U			27	N	32	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.17	U			270	N	250	N	RSL		
Acenaphthene	100-02-7	mg/kg	0.17	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.17	U			NS	NS	3,480	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.17	U			NS	NS	1,740	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.17	U			NS	NS	17,400	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.17	U			1.53	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.13	U			1.12	N	17.4	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	U			1.53	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	U			NS	NS	1,740	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	U			15.3	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.17	U			NS	NS	250,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.17	U			NS	NS	6,300	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	U			NS	NS	190	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	U			3.11	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	U			99.3	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	U			380	N	1,230	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.17	U			2,900	N	13,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.17	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.17	U			153	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.17	U			NS	NS	6,160	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.17	U			NS	NS	630	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	U			0.153	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.17	U			NS	NS	78	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.17	U			NS	NS	49,300	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.17	U			NS	NS	61,600	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.17	U			NS	NS	2,320	N	NMED		
Fluorene	86-73-7	mg/kg	0.17	U			NS	NS	2,320	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.17	U			3.33	N	49.3	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	U			68.3	N	61.6	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.17	U			133	N	43.1	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	U			1.53	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.17	U			5,610	N	12,300	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.02	UJ			0.78	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.17	U			0.0234	Y	0.493	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	U			1,090	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.17	U			22.6	N	162	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.17	U			60.4	N	131	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.17	U			9.85	N	234	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.17	U			NS	NS	1,740	N	NMED		
Phenol	108-95-2	mg/kg	0.17	U			NS	NS	18,500	N	NMED		
Pyrene	129-00-0	mg/kg	0.17	U			NS	NS	1,740	N	NMED		

TABLE D1-AD25-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID AD25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			1,300	N	570	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.02	U			69.6	N	3.98	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.02	U			1.81	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.01	U			1.86	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.01	U			2.43	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.01	U			2.43	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.01	U			2.43	N	1.14	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.01	U			2.43	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.000000095	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000014	J	0.0000047	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000017	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.00000072	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.000000058	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000054	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000013	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.00000005	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000049	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.000000066	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.000000076	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.000000093	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000052	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.000000055	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.000000078	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000027	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000069	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.0000000014				0.000049	N	0.0000506	N	NMED	2.88E-10	2.79E-05

TABLE D1-AD25-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID AD25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	18,000				NS	NS	78,000	N	NMED		2.31E-01
Antimony	7440-36-0	mg/kg	0.1	J			NS	NS	31.3	N	NMED		3.19E-03
Arsenic	7440-38-2	mg/kg	1				7.07	N	13	N	NMED	1.41E-06	7.69E-02
Barium	7440-39-3	mg/kg	360				NS	NS	15,600	N	NMED		2.31E-02
Beryllium	7440-41-7	mg/kg	1				64,400	N	156	N	NMED	1.55E-10	6.41E-03
Cadmium	7440-43-9	mg/kg	0.63	J			85,900	N	70.5	N	NMED	7.33E-11	8.94E-03
Calcium	7440-70-2	mg/kg	28,000				NS	NS	13,000,000	N	NMED		2.15E-03
Chromium (Total) (3)	7440-47-3	mg/kg	12				96.6	N	45,200	N	NMED	1.24E-06	2.65E-04
Cobalt	7440-48-4	mg/kg	4.9				17,200	N	23.4	N	NMED	2.85E-09	2.09E-01
Copper	7440-50-8	mg/kg	52				NS	NS	3,130	N	NMED		1.66E-02
Iron	7439-89-6	mg/kg	9,700				NS	NS	54,800	N	NMED		1.77E-01
Lead	7439-92-1	mg/kg	10				NS	NS	200	N	RSL		
Magnesium	7439-95-4	mg/kg	6,900				NS	NS	15,600,000	N	NMED		4.42E-04
Manganese	7439-96-5	mg/kg	690				NS	NS	10,500	N	NMED		6.57E-02
Mercury (Elemental)	7439-97-6	mg/kg	0.023	J			NS	NS	23.8	N	NMED		9.66E-04
Nickel	7440-02-0	mg/kg	12				595,000	N	1,560	N	NMED	2.02E-10	7.69E-03
Potassium	7440-09-7	mg/kg	1,500				NS	NS	15,600,000	N	NMED		9.62E-05
Selenium	7782-49-2	mg/kg	1.5				NS	NS	391	N	NMED		3.84E-03
Silver	7440-22-4	mg/kg	0.088	J			NS	NS	391	N	NMED		2.25E-04
Sodium	7440-23-5	mg/kg	46				NS	NS	7,820,000	N	NMED		5.88E-06
Thallium	7440-28-0	mg/kg	0.064	J			NS	NS	0.782	N	NMED		8.18E-02
Vanadium	7440-62-2	mg/kg	13	J			NS	NS	394	N	NMED		3.30E-02
Zinc	7440-66-6	mg/kg	25				NS	NS	23,500	N	NMED		1.06E-03

TABLE D1-AD25-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID AD25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.31	U			NS	NS	11.2	N	NMED		
Nitrate	14797-55-8	mg/kg	2.6	J			NS	NS	125,000	N	NMED		2.08E-05
Perchlorate	14797-73-0	mg/kg	0.002	U			NS	NS	54.8	N	NMED		
										Cumulative Risk/Hazard		**3E-06**	**0.95**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service

J = Estimated

mg/kg = milligrams per kilogram

NS = No Standard

TEF = Toxicity equivalency factor

TEQ = toxicity equivalency quotient

U = Nondetect

UJ = Estimated Nondetect

TABLE D1-AD25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID AD25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0021	U			137	N	39,400	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0021	U			NS	NS	72,500	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0021	U			39	N	26,000	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0021	U			92	N	12	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0021	U			383	N	260,000	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0021	U			NS	NS	2,260	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0021	U			146	N	695	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0021	U			NS	NS	930	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0052	U			1	N	34	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0021	U			1,250	N	423	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0021	U			NS	NS	1,800	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0052	U			1	N	41	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0021	U			3	N	738	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0021	U			NS	NS	13,000	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0021	U			41	N	286	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0021	U			87	N	137	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0021	U			NS	NS	1,500	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0021	U			6,730	N	90,800	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0021	U			NS	NS	23,000	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0021	U			6,730	N	90,800	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0021	U			87	N	137	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.017	J			NS	NS	411,000	N	NMED		4.14E-08
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0021	U			NS	NS	26,000	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0021	U			NS	NS	1,300	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0021	U			NS	NS	23,000	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0021	U			NS	NS	81,600	N	RSL		
Acetone	67-64-1	mg/kg	0.35	J			NS	NS	960,000	N	NMED		3.65E-07
Benzene	71-43-2	mg/kg	0.0021	U			87	N	729	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0021	U			NS	NS	1,800	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0021	U			NS	NS	630	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0021	U			30	N	26,000	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0021	U			1,760	N	18,300	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0021	U			NS	NS	95	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0021	U			NS	NS	8,540	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0021	U			53	N	1,020	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0021	U			NS	NS	2,160	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0021	U			NS	NS	89,500	N	NMED		
Chloroform	67-66-3	mg/kg	0.0021	U			29	N	2,000	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0052	U			201	N	1,260	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0021	U			NS	NS	2,600	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0021	U			146	N	695	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0021	U			67	N	18,300	N	NMED		
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0021	U			NS	NS	288	N	NMED		

TABLE D1-AD25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID AD25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dichlorodifluoromethane	75-71-8	mg/kg	0.0021	U			NS	NS	865	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0021	U			29,000	N	368	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0021	U			52	N	916	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0021	U			NS	NS	14,200	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0052	U			NS	NS	3,730	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0021	U			4,820	N	178,000	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.01	U			14,400	N	5,130	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0021	U			NS	NS	58,000	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0021	U			NS	NS	24,000	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0021	U			108	N	843	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0026	U			NS	NS	3,940	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0021	U			NS	NS	14,200	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0021	U			NS	NS	120,000	N	RSL		
Styrene	100-42-5	mg/kg	0.0021	U			NS	NS	51,300	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0021	U			NS	NS	120,000	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0021	U			1,650	N	629	N	NMED		
Toluene	108-88-3	mg/kg	0.0025	J			NS	NS	61,300	N	NMED		4.08E-08
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0021	U			NS	NS	1,100	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0021	U			146	N	695	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0021	U			112	N	37	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0021	U			NS	NS	6,030	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0021	U			28	N	46	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	U			1,250	N	423	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	U			NS	NS	13,000	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	U			6,730	N	90,800	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	U			6,730	N	90,800	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	U			NS	NS	91,600	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	U			2,330	N	916	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	U			NS	NS	2,750	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	U			NS	NS	18,300	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	U			NS	NS	1,830	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	U			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	U			17	N	276	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	U			NS	NS	104,000	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.17	U			NS	NS	6,490	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.17	U			NS	NS	3,370	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	U			NS	NS	41,000	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.17	U			NS	NS	8,000	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.17	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	U			NS	NS	410	N	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.17	U			1,100	N	3,300	N	RSL[S]		
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	U			NS	NS	73	N	NMED		

TABLE D1-AD25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID AD25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	U			NS	NS	NS	NS	NS		
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	U			NS	NS	82,000	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.17	U			110	N	410	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.17	U			1,100	N	3,300	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.17	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.17	U			NS	NS	50,500	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.17	U			NS	NS	25,300	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.17	U			NS	NS	253,000	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.17	U			32	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.13	U			24	N	251	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	U			32	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	U			NS	NS	25,300	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	U			323	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.17	U			NS	NS	3,300,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.17	U			NS	NS	82,000	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	U			NS	NS	2,500	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	U			16	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	U			519	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	U			1,830	N	18,300	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.17	U			12,000	N	160,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.17	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.17	U			3,230	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.17	U			NS	NS	91,600	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.17	U			NS	NS	8,200	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	U			3	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.17	U			NS	NS	1,200	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.17	U			NS	NS	733,000	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.17	U			NS	NS	916,000	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.17	U			NS	NS	33,700	N	NMED		
Fluorene	86-73-7	mg/kg	0.17	U			NS	NS	33,700	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.17	U			16	N	733	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	U			52	N	916	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.17	U			641	N	641	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	U			32	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.17	U			27,000	N	183,000	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.02	UJ			3	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.17	U			1	N	7	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	U			5,240	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.17	U			108	N	843	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.17	U			293	N	1,540	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.17	U			45	N	3,180	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.17	U			NS	NS	27,500	N	NMED		
Phenol	108-95-2	mg/kg	0.17	U			NS	NS	275,000	N	NMED		
Pyrene	129-00-0	mg/kg	0.17	U			NS	NS	25,300	N	NMED		

TABLE D1-AD25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID AD25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			5,300	N	7,400	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.02	U			304	N	57	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.02	U			9	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.01	U			9	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.01	U			11	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.01	U			11	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.01	U			11	N	16	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.01	U			11	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (3)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.000000095	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000014	J	0.0000047	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000017	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.00000072	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.000000058	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000054	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000013	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.00000005	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000049	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.000000066	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.000000076	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.000000093	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000052	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.000000055	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.000000078	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000027	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000069	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.0000000014				0.000238	N	0.000808	N	NMED	5.92E-11	1.75E-06

TABLE D1-AD25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID AD25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	18,000				NS	NS	1,290,000	N	NMED		1.40E-02
Antimony	7440-36-0	mg/kg	0.1	J			NS	NS	519	N	NMED		1.93E-04
Arsenic	7440-38-2	mg/kg	1				36	N	208	N	NMED	2.79E-07	4.81E-03
Barium	7440-39-3	mg/kg	360				NS	NS	255,000	N	NMED		1.41E-03
Beryllium	7440-41-7	mg/kg	1				313,000	N	2,580	N	NMED	3.19E-11	3.88E-04
Cadmium	7440-43-9	mg/kg	0.63	J			417,000	N	1,110	N	NMED	1.51E-11	5.68E-04
Calcium	7440-70-2	mg/kg	28,000				NS	NS	32,400,000	N	NMED		8.64E-04
Chromium (Total) (4)	7440-47-3	mg/kg	12				505	N	314,000	N	NMED	2.38E-07	3.82E-05
Cobalt	7440-48-4	mg/kg	4.9				83,400	N	388	N	NMED	5.88E-10	1.26E-02
Copper	7440-50-8	mg/kg	52				NS	NS	51,900	N	NMED		1.00E-03
Iron	7439-89-6	mg/kg	9,700				NS	NS	908,000	N	NMED		1.07E-02
Lead	7439-92-1	mg/kg	10				NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	6,900				NS	NS	5,680,000	N	NMED		1.21E-03
Manganese	7439-96-5	mg/kg	690				NS	NS	160,000	N	NMED		4.31E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.023	J			NS	NS	112	N	NMED		2.05E-04
Nickel	7440-02-0	mg/kg	12				2,890,000	N	25,700	N	NMED	4.15E-11	4.67E-04
Potassium	7440-09-7	mg/kg	1,500				NS	NS	76,200,000	N	NMED		1.97E-05
Selenium	7782-49-2	mg/kg	1.5				NS	NS	6,490	N	NMED		2.31E-04
Silver	7440-22-4	mg/kg	0.088	J			NS	NS	6,490	N	NMED		1.36E-05
Sodium	7440-23-5	mg/kg	46				NS	NS	37,300,000	N	NMED		1.23E-06
Thallium	7440-28-0	mg/kg	0.064	J			NS	NS	13	N	NMED		4.92E-03
Vanadium	7440-62-2	mg/kg	13	J			NS	NS	6,530	N	NMED		1.99E-03
Zinc	7440-66-6	mg/kg	25				NS	NS	38,900	N	NMED		6.43E-04

TABLE D1-AD25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID AD25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.31	U			NS	NS	63	N	NMED		
Nitrate	14797-55-8	mg/kg	2.6	J			NS	NS	2,080,000	N	NMED		1.25E-06
Perchlorate	14797-73-0	mg/kg	0.002	U			NS	NS	908	N	NMED		
										Cumulative Risk/Hazard		**5E-07**	**0.06**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

2) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

3) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022,

4) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service

IEUBK = Integrated Exposure Uptake Biokentic Model

J = Estimated

mg/kg = milligrams per kilogram

NS = No Standard

TEF = Toxicity equivalency factor

TEQ = toxicity equivalency quotient

U = Nondetect

UJ = Estimated Nondetect

TABLE D1-AD25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID AD25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0021	U			659	N	10,600	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0021	U			NS	NS	13,600	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0021	U			197	N	7,080	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0021	U			4,300	N	2	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0021	U			1,820	N	70,800	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0021	U			NS	NS	424	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0021	U			781	N	130	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0021	U			NS	NS	283	N	NMED[C]			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0052	U			8	N	6	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0021	U			8,540	N	79	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0021	U			NS	NS	492	N	NMED[C]			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0052	U			6	N	8	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0021	U			16	N	140	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0021	U			NS	NS	2,500	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0021	U			195	N	54	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0021	U			415	N	25	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0021	U			NS	NS	422	N	NMED[C]			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0021	U			45,900	N	24,800	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0021	U			NS	NS	7,080	N	NMED[C]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0021	U			45,900	N	24,800	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0021	U			415	N	25	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.017	J			NS	NS	90,700	N	NMED		1.87E-07	
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0021	U			NS	NS	7,080	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.0021	U			NS	NS	599	N	NMED[C]			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0021	U			NS	NS	7,080	N	NMED[C]			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0021	U			NS	NS	20,400	N	NMED[C]			
Acetone	67-64-1	mg/kg	0.35	J			NS	NS	242,000	N	NMED		1.45E-06	
Benzene	71-43-2	mg/kg	0.0021	U			423	N	142	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.0021	U			NS	NS	538	N	NMED[C]			
Bromochloromethane	74-97-5	mg/kg	0.0021	U			NS	NS	296	N	NMED[C]			
Bromodichloromethane	75-27-4	mg/kg	0.0021	U			143	N	7,080	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0021	U			23,700	N	5,380	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0021	U			NS	NS	18	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.0021	U			NS	NS	1,620	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0021	U			252	N	202	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0021	U			NS	NS	412	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0021	U			NS	NS	16,600	N	NMED			
Chloroform	67-66-3	mg/kg	0.0021	U			134	N	391	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0052	U			956	N	235	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0021	U			NS	NS	708	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0021	U			781	N	130	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0021	U			340	N	5,380	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0021	U			NS	NS	54	N	NMED			

TABLE D1-AD25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID AD25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Dichlorodifluoromethane	75-71-8	mg/kg	0.0021	U			NS	NS	161	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.0021	U			1,770	N	5,800	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0021	U			2,400	N	269	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0021	U			NS	NS	2,740	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0052	U			NS	NS	696	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0021	U			24,200	N	33,100	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.01	U			89,600	N	1,210	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0021	U			NS	NS	17,700	N	NMED[C]			
n-Propylbenzene	103-65-1	mg/kg	0.0021	U			NS	NS	6,730	N	NMED[C]			
Naphthalene	91-20-3	mg/kg	0.0021	U			633	N	159	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0026	U			NS	NS	736	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.0021	U			NS	NS	2,740	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.0021	U			NS	NS	35,400	N	NMED[C]			
Styrene	100-42-5	mg/kg	0.0021	U			NS	NS	10,200	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0021	U			NS	NS	35,400	N	NMED[C]			
Tetrachloroethene	127-18-4	mg/kg	0.0021	U			7,910	N	120	N	NMED			
Toluene	108-88-3	mg/kg	0.0025	J			NS	NS	14,000	N	NMED		1.79E-07	
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0021	U			NS	NS	206	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0021	U			781	N	130	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0021	U			5,370	N	7	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0021	U			NS	NS	1,130	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0021	U			161	N	162	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	U			8,540	N	79	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	U			NS	NS	2,500	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	U			45,900	N	24,800	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	U			45,900	N	24,800	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	U			NS	NS	26,900	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	U			17,000	N	269	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	U			NS	NS	807	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	U			NS	NS	5,380	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	U			NS	NS	538	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	U			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	U			165	N	81	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	U			NS	NS	28,300	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.17	U			NS	NS	1,770	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.17	U			NS	NS	1,000	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	U			NS	NS	13,500	N	NMED[C]			
2-Nitroaniline	88-74-4	mg/kg	0.17	U			NS	NS	2,690	N	NMED[C]			
2-Nitrophenol	88-75-5	mg/kg	0.17	U			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	U			410	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.17	U			135	N	1,080	N	NMED[SC]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	U			NS	NS	22	N	NMED			
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	U			NS	NS	NS	NS	NS			
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	U			NS	NS	26,900	N	NMED[C]			

TABLE D1-AD25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID AD25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Chloroaniline	106-47-8	mg/kg	0.17	U			14	N	135	N	NMED[C]			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	U			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.17	U			135	N	1,080	N	NMED[C]			
4-Nitrophenol	100-02-7	mg/kg	0.17	U			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.17	U			NS	NS	15,100	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.17	U			NS	NS	7,530	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.17	U			NS	NS	75,300	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.17	U			240	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.13	U			173	N	15	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	U			240	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	U			NS	NS	7,530	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	U			2,310	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.17	U			NS	NS	1,080,000	N	NMED[C]			
Benzyl Alcohol	100-51-6	mg/kg	0.17	U			NS	NS	26,900	N	NMED[C]			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	U			NS	NS	807	N	NMED[C]			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	U			2	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	U			3,540	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	U			13,400	N	5,380	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.17	U			1,420	N	53,800	N	NMED[C]			
Carbazole	86-74-8	mg/kg	0.17	U			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.17	U			23,100	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.17	U			NS	NS	26,900	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.17	U			NS	NS	2,690	N	NMED[C]			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	U			24	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.17	U			NS	NS	269	N	NMED[C]			
Diethylphthalate	84-66-2	mg/kg	0.17	U			NS	NS	215,000	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.17	U			NS	NS	269,000	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.17	U			NS	NS	10,000	N	NMED			
Fluorene	86-73-7	mg/kg	0.17	U			NS	NS	10,000	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.17	U			117	N	215	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	U			2,400	N	269	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.17	U			4,670	N	188	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	U			240	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.17	U			198,000	N	53,700	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.02	UJ			0.38	N	NA	N	NMED[C]			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.17	U			4	N	2	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	U			37,900	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.17	U			633	N	159	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.17	U			1,350	N	353	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.17	U			346	N	989	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.17	U			NS	NS	8,070	N	NMED			
Phenol	108-95-2	mg/kg	0.17	U			NS	NS	77,400	N	NMED			
Pyrene	129-00-0	mg/kg	0.17	U			NS	NS	7,530	N	NMED			

TABLE D1-AD25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID AD25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	8,070	N	NMED[C]			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	27	N	NMED[C]			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			626	N	2,420	N	NMED[C]			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.02	U			2,440	N	17	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.02	U			55	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.01	U			58	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.01	U			85	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.01	U			85	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.01	U			85	N	5	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.01	U			85	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (3)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	9.5E-08	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000014	J	0.0000047	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000017	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.00000072	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	5.8E-08	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	5.4E-08	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000013	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.00000005	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	4.9E-08	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	6.6E-08	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	7.6E-08	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	9.3E-08	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	5.2E-08	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	5.5E-08	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	7.8E-08	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000027	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	6.9E-08	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.0000000014				0.00172	N	0.000226	N	NMED	8.20E-12	6.24E-06	

TABLE D1-AD25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID AD25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	18,000				NS	NS	41,400	N	NMED		4.35E-01	Nervous
Antimony	7440-36-0	mg/kg	0.1	J			NS	NS	142	N	NMED		7.04E-04	
Arsenic	7440-38-2	mg/kg	1				216	N	41	N	NMED	4.63E-08	2.43E-02	
Barium	7440-39-3	mg/kg	360				NS	NS	4,390	N	NMED		8.20E-02	
Beryllium	7440-41-7	mg/kg	1				2,710	N	148	N	NMED	3.69E-09	6.76E-03	
Cadmium	7440-43-9	mg/kg	0.63	J			3,610	N	72	N	NMED	1.75E-09	8.74E-03	
Calcium	7440-70-2	mg/kg	28,000				NS	NS	8,850,000	N	NMED		3.16E-03	
Chromium (Total) (4)	7440-47-3	mg/kg	12				468	N	134	N	NMED	2.56E-07	8.96E-02	
Cobalt	7440-48-4	mg/kg	4.9				722	N	37	N	NMED	6.79E-08	1.34E-01	Endocrine
Copper	7440-50-8	mg/kg	52				NS	NS	14,200	N	NMED		3.66E-03	
Iron	7439-89-6	mg/kg	9,700				NS	NS	248,000	N	NMED		3.91E-02	
Lead	7439-92-1	mg/kg	10				NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	6,900				NS	NS	1,550,000	N	NMED		4.45E-03	
Manganese	7439-96-5	mg/kg	690				NS	NS	464	Y	NMED		1.49E+00	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.023	J			NS	NS	21	N	NMED		1.11E-03	
Nickel	7440-02-0	mg/kg	12				20,500	N	753	N	NMED	5.85E-09	1.59E-02	
Potassium	7440-09-7	mg/kg	1,500				NS	NS	20,800,000	N	NMED		7.21E-05	
Selenium	7782-49-2	mg/kg	1.5				NS	NS	1,750	N	NMED		8.57E-04	
Silver	7440-22-4	mg/kg	0.088	J			NS	NS	1,770	N	NMED		4.97E-05	
Sodium	7440-23-5	mg/kg	46				NS	NS	10,200,000	N	NMED		4.51E-06	
Thallium	7440-28-0	mg/kg	0.064	J			NS	NS	4	N	NMED		1.81E-02	
Vanadium	7440-62-2	mg/kg	13	J			NS	NS	614	N	NMED		2.12E-02	
Zinc	7440-66-6	mg/kg	25				NS	NS	106,000	N	NMED		2.36E-04	

TABLE D1-AD25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID AD25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.31	U			NS	NS	12	N	NMED			
Nitrate	14797-55-8	mg/kg	2.6	J			NS	NS	566,000	N	NMED		4.59E-06	
Perchlorate	14797-73-0	mg/kg	0.002	U			NS	NS	248	N	NMED			
										Cumulative Risk/Hazard		**4E-07**	**2.4**	
										Exceeds Target Level		**N**	Y	

System	Hazard Quotient
Nervous	1.9
Endocrine	0.13
All Others	0.32

Notes:

[S] = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update).

2) NMED[C] = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

3) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den Berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update)

4) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
TEF = Toxicity equivalency factor
TEQ = toxicity equivalency quotient
U = Nondetect
UJ = Estimated Nondetect

TABLE D1-AE25-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID AE25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0018	U			28.1	N	2,350	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0018	U			NS	NS	14,400	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0018	U			7.98	N	1,560	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0018	U			18.8	N	2.61	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0018	U			78.6	N	15,600	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0018	U			NS	NS	440	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0018	U			29.3	N	141	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0018	U			NS	NS	63	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0046	U			0.051	N	7.09	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0018	U			240	N	82.9	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0018	U			NS	NS	300	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0046	U			0.0858	N	5.88	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0018	U			0.672	N	135	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0018	U			NS	NS	2,150	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0018	U			8.32	N	55.6	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0018	U			17.8	N	29	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0018	U			NS	NS	270	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0018	U			1,290	N	5,480	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0018	U			NS	NS	1,600	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0018	U			1,290	N	5,480	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0018	U			17.8	N	29	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0028	U			NS	NS	37,400	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0018	U			NS	NS	1,560	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0018	U			NS	NS	200	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0018	U			NS	NS	1,600	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0018	U			NS	NS	5,810	N	RSL		
Acetone	67-64-1	mg/kg	0.095				NS	NS	66,300	N	NMED		1.43E-06
Benzene	71-43-2	mg/kg	0.0018	U			17.8	N	114	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0018	U			NS	NS	290	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0018	U			NS	NS	150	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0018	U			6.19	N	1,560	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0018	U			674	N	1,230	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0018	U			NS	NS	17.7	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0018	U			NS	NS	1,550	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0018	U			10.7	N	144	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0018	U			NS	NS	378	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0018	U			NS	NS	19,000	N	NMED		
Chloroform	67-66-3	mg/kg	0.0018	U			5.9	N	306	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0046	U			41.1	N	268	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0018	U			NS	NS	156	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0018	U			29.3	N	141	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0018	U			13.9	N	1,230	N	NMED		
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0018	U			NS	NS	57.9	N	NMED		

TABLE D1-AE25-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID AE25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dichlorodifluoromethane	75-71-8	mg/kg	0.0018	U			NS	NS	182	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0018	U			75.1	N	3,930	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0018	U			68.3	N	61.6	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0018	U			NS	NS	2,360	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0046	U			NS	NS	764	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0018	U			975	N	37,800	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.0092	U			766	N	409	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0018	U			NS	NS	3,900	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0018	U			NS	NS	3,800	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0018	U			22.6	N	162	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0023	U			NS	NS	805	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0018	U			NS	NS	2,360	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0018	U			NS	NS	7,800	N	RSL		
Styrene	100-42-5	mg/kg	0.0018	U			NS	NS	7,260	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0018	U			NS	NS	7,800	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0018	U			337	N	111	N	NMED		
Toluene	108-88-3	mg/kg	0.0018	U			NS	NS	5,230	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0018	U			NS	NS	210	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0018	U			29.3	N	141	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0018	U			15.5	N	6.77	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0018	U			NS	NS	1,230	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0018	U			0.742	N	113	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.18	U			240	N	82.9	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.18	U			NS	NS	2,150	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.18	U			1,290	N	5,480	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.18	U			1,290	N	5,480	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.18	U			NS	NS	6,160	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.18	U			484	N	61.6	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.18	U			NS	NS	185	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.18	U			NS	NS	1,230	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.18	U			NS	NS	123	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.18	U			17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.18	U			3.56	N	18.5	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.18	U			NS	NS	6,260	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.18	U			NS	NS	391	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.18	U			NS	NS	232	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.18	U			NS	NS	3,200	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.18	U			NS	NS	630	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.18	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.18	U			11.8	N	NS	NS	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.18	U			270	N	250	N	RSL[S]		
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.18	U			NS	NS	4.93	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.18	U			NS	NS	NS	NS	NS		

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HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID AE25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.18	U			NS	NS	6,300	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.18	U			27	N	32	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.18	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.18	U			270	N	250	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.18	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.18	U			NS	NS	3,480	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.18	U			NS	NS	1,740	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.18	U			NS	NS	17,400	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.18	U			1.53	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			1.12	N	17.4	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.18	U			1.53	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.18	U			NS	NS	1,740	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.18	U			15.3	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.18	U			NS	NS	250,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.18	U			NS	NS	6,300	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.18	U			NS	NS	190	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.18	U			3.11	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.18	U			99.3	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.18	U			380	N	1,230	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.18	U			2,900	N	13,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.18	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.18	U			153	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.18	U			NS	NS	6,160	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.18	U			NS	NS	630	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			0.153	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.18	U			NS	NS	78	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.18	U			NS	NS	49,300	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.18	U			NS	NS	61,600	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.18	U			NS	NS	2,320	N	NMED		
Fluorene	86-73-7	mg/kg	0.18	U			NS	NS	2,320	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.18	U			3.33	N	49.3	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.18	U			68.3	N	61.6	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.18	U			133	N	43.1	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.18	U			1.53	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.18	U			5,610	N	12,300	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.021	UJ			0.78	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.18	U			0.0234	Y	0.493	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.18	U			1,090	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.18	U			22.6	N	162	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.18	U			60.4	N	131	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.18	U			9.85	N	234	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.18	U			NS	NS	1,740	N	NMED		
Phenol	108-95-2	mg/kg	0.18	U			NS	NS	18,500	N	NMED		
Pyrene	129-00-0	mg/kg	0.18	U			NS	NS	1,740	N	NMED		

TABLE D1-AE25-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID AE25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			1,300	N	570	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.021	U			69.6	N	3.98	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.021	U			1.81	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.01	U			1.86	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.01	U			2.43	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.01	U			2.43	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.01	U			2.43	N	1.14	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.01	U			2.43	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		UJ	0.00000027	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.00000000078	J	0.0000026	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg	0.0000000014	J	0.00000014	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.0000000047	J	0.00000047	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		UJ	0.000000078	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg	0.00000001	J	0.0000001	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000049	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000031	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000045	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		UJ	0.00000011	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		UJ	0.000000074	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		UJ	0.00000016	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		UJ	0.0000001	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		UJ	0.00000009	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		UJ	0.00000016	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg	0.00000006	J	0.0000006	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		UJ	0.0000001	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.000000077				0.000049	N	0.0000506	N	NMED	1.57E-08	1.52E-03

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FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	14,000				NS	NS	78,000	N	NMED		1.79E-01
Antimony	7440-36-0	mg/kg	0.15	U			NS	NS	31.3	N	NMED		
Arsenic	7440-38-2	mg/kg	1.4				7.07	N	13	N	NMED	1.98E-06	1.08E-01
Barium	7440-39-3	mg/kg	520				NS	NS	15,600	N	NMED		3.33E-02
Beryllium	7440-41-7	mg/kg	0.96	J			64,400	N	156	N	NMED	1.49E-10	6.15E-03
Cadmium	7440-43-9	mg/kg	0.38				85,900	N	70.5	N	NMED	4.42E-11	5.39E-03
Calcium	7440-70-2	mg/kg	23,000				NS	NS	13,000,000	N	NMED		1.77E-03
Chromium (Total) (3)	7440-47-3	mg/kg	8.8				96.6	N	45,200	N	NMED	9.11E-07	1.95E-04
Cobalt	7440-48-4	mg/kg	4.1				17,200	N	23.4	N	NMED	2.38E-09	1.75E-01
Copper	7440-50-8	mg/kg	89				NS	NS	3,130	N	NMED		2.84E-02
Iron	7439-89-6	mg/kg	7,000				NS	NS	54,800	N	NMED		1.28E-01
Lead	7439-92-1	mg/kg	21	J			NS	NS	200	N	RSL		
Magnesium	7439-95-4	mg/kg	5,200				NS	NS	15,600,000	N	NMED		3.33E-04
Manganese	7439-96-5	mg/kg	390				NS	NS	10,500	N	NMED		3.71E-02
Mercury (Elemental)	7439-97-6	mg/kg	0.037	J			NS	NS	23.8	N	NMED		1.55E-03
Nickel	7440-02-0	mg/kg	10				595,000	N	1,560	N	NMED	1.68E-10	6.41E-03
Potassium	7440-09-7	mg/kg	1,400				NS	NS	15,600,000	N	NMED		8.97E-05
Selenium	7782-49-2	mg/kg	1.8				NS	NS	391	N	NMED		4.60E-03
Silver	7440-22-4	mg/kg	0.083	J			NS	NS	391	N	NMED		2.12E-04
Sodium	7440-23-5	mg/kg	50				NS	NS	7,820,000	N	NMED		6.39E-06
Thallium	7440-28-0	mg/kg	0.047	J			NS	NS	0.782	N	NMED		6.01E-02
Vanadium	7440-62-2	mg/kg	7.9				NS	NS	394	N	NMED		2.01E-02
Zinc	7440-66-6	mg/kg	48	J			NS	NS	23,500	N	NMED		2.04E-03

TABLE D1-AE25-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID AE25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.32	U			NS	NS	11.2	N	NMED		
Nitrate	14797-55-8	mg/kg	1.9	J			NS	NS	125,000	N	NMED		1.52E-05
Perchlorate	14797-73-0	mg/kg	0.002	U			NS	NS	54.8	N	NMED		
										Cumulative Risk/Hazard		**3E-06**	**0.8**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
TEF = Toxicity equivalency factor
TEQ = Toxicity equivalency quotient
U = Nondetect
UJ = Estimated Nondetect

TABLE D1-AE25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID AE25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0018	U			137	N	39,400	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0018	U			NS	NS	72,500	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0018	U			39	N	26,000	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0018	U			92	N	12	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0018	U			383	N	260,000	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0018	U			NS	NS	2,260	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0018	U			146	N	695	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0018	U			NS	NS	930	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0046	U			1	N	34	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0018	U			1,250	N	423	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0018	U			NS	NS	1,800	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0046	U			1	N	41	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0018	U			3	N	738	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0018	U			NS	NS	13,000	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0018	U			41	N	286	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0018	U			87	N	137	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0018	U			NS	NS	1,500	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0018	U			6,730	N	90,800	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0018	U			NS	NS	23,000	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0018	U			6,730	N	90,800	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0018	U			87	N	137	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0028	U			NS	NS	411,000	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0018	U			NS	NS	26,000	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0018	U			NS	NS	1,300	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0018	U			NS	NS	23,000	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0018	U			NS	NS	81,600	N	RSL		
Acetone	67-64-1	mg/kg	0.095				NS	NS	960,000	N	NMED		9.90E-08
Benzene	71-43-2	mg/kg	0.0018	U			87	N	729	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0018	U			NS	NS	1,800	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0018	U			NS	NS	630	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0018	U			30	N	26,000	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0018	U			1,760	N	18,300	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0018	U			NS	NS	95	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0018	U			NS	NS	8,540	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0018	U			53	N	1,020	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0018	U			NS	NS	2,160	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0018	U			NS	NS	89,500	N	NMED		
Chloroform	67-66-3	mg/kg	0.0018	U			29	N	2,000	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0046	U			201	N	1,260	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0018	U			NS	NS	2,600	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0018	U			146	N	695	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0018	U			67	N	18,300	N	NMED		
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0018	U			NS	NS	288	N	NMED		

TABLE D1-AE25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID AE25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dichlorodifluoromethane	75-71-8	mg/kg	0.0018	U			NS	NS	865	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0018	U			29,000	N	368	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0018	U			52	N	916	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0018	U			NS	NS	14,200	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0046	U			NS	NS	3,730	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0018	U			4,820	N	178,000	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.0092	U			14,400	N	5,130	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0018	U			NS	NS	58,000	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0018	U			NS	NS	24,000	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0018	U			108	N	843	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0023	U			NS	NS	3,940	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0018	U			NS	NS	14,200	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0018	U			NS	NS	120,000	N	RSL		
Styrene	100-42-5	mg/kg	0.0018	U			NS	NS	51,300	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0018	U			NS	NS	120,000	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0018	U			1,650	N	629	N	NMED		
Toluene	108-88-3	mg/kg	0.0018	U			NS	NS	61,300	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0018	U			NS	NS	1,100	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0018	U			146	N	695	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0018	U			112	N	37	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0018	U			NS	NS	6,030	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0018	U			28	N	46	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.18	U			1,250	N	423	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.18	U			NS	NS	13,000	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.18	U			6,730	N	90,800	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.18	U			6,730	N	90,800	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.18	U			NS	NS	91,600	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.18	U			2,330	N	916	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.18	U			NS	NS	2,750	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.18	U			NS	NS	18,300	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.18	U			NS	NS	1,830	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.18	U			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.18	U			17	N	276	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.18	U			NS	NS	104,000	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.18	U			NS	NS	6,490	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.18	U			NS	NS	3,370	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.18	U			NS	NS	41,000	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.18	U			NS	NS	8,000	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.18	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.18	U			NS	NS	410	N	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.18	U			1,100	N	3,300	N	RSL[S]		
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.18	U			NS	NS	73	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.18	U			NS	NS	NS	NS	NS		
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.18	U			NS	NS	82,000	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.18	U			110	N	410	N	RSL		

TABLE D1-AE25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID AE25
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MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.18	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.18	U			1,100	N	3,300	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.18	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.18	U			NS	NS	50,500	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.18	U			NS	NS	25,300	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.18	U			NS	NS	253,000	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.18	U			32	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			24	N	251	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.18	U			32	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.18	U			NS	NS	25,300	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.18	U			323	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.18	U			NS	NS	3,300,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.18	U			NS	NS	82,000	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.18	U			NS	NS	2,500	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.18	U			16	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.18	U			519	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.18	U			1,830	N	18,300	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.18	U			12,000	N	160,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.18	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.18	U			3,230	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.18	U			NS	NS	91,600	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.18	U			NS	NS	8,200	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			3	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.18	U			NS	NS	1,200	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.18	U			NS	NS	733,000	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.18	U			NS	NS	916,000	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.18	U			NS	NS	33,700	N	NMED		
Fluorene	86-73-7	mg/kg	0.18	U			NS	NS	33,700	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.18	U			16	N	733	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.18	U			52	N	916	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.18	U			641	N	641	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.18	U			32	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.18	U			27,000	N	183,000	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.021	UJ			3	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.18	U			1	N	7	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.18	U			5,240	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.18	U			108	N	843	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.18	U			293	N	1,540	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.18	U			45	N	3,180	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.18	U			NS	NS	27,500	N	NMED		
Phenol	108-95-2	mg/kg	0.18	U			NS	NS	275,000	N	NMED		
Pyrene	129-00-0	mg/kg	0.18	U			NS	NS	25,300	N	NMED		

TABLE D1-AE25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID AE25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			5,300	N	7,400	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.021	U			304	N	57	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.021	U			9	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.01	U			9	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.01	U			11	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.01	U			11	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.01	U			11	N	16	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.01	U			11	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		UJ	0.00000027	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.00000000078	J	0.0000026	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg	0.0000000014	J	0.00000014	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.0000000047	J	0.00000047	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		UJ	0.000000078	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg	0.00000001	J	0.0000001	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000049	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000031	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000045	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		UJ	0.00000011	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		UJ	0.000000074	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		UJ	0.00000016	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		UJ	0.0000001	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		UJ	0.00000009	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		UJ	0.00000016	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg	0.00000006	J	0.0000006	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		UJ	0.0000001	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.000000077				0.000238	N	0.000808	N	NMED	3.23E-09	9.51E-05

TABLE D1-AE25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID AE25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	14,000				NS	NS	1,290,000	N	NMED		1.09E-02
Antimony	7440-36-0	mg/kg	0.15	U			NS	NS	519	N	NMED		
Arsenic	7440-38-2	mg/kg	1.4				36	N	208	N	NMED	3.90E-07	6.73E-03
Barium	7440-39-3	mg/kg	520				NS	NS	255,000	N	NMED		2.04E-03
Beryllium	7440-41-7	mg/kg	0.96	J			313,000	N	2,580	N	NMED	3.07E-11	3.72E-04
Cadmium	7440-43-9	mg/kg	0.38				417,000	N	1,110	N	NMED	9.11E-12	3.42E-04
Calcium	7440-70-2	mg/kg	23,000				NS	NS	32,400,000	N	NMED		7.10E-04
Chromium (Total) (3)	7440-47-3	mg/kg	8.8				505	N	314,000	N	NMED	1.74E-07	2.80E-05
Cobalt	7440-48-4	mg/kg	4.1				83,400	N	388	N	NMED	4.92E-10	1.06E-02
Copper	7440-50-8	mg/kg	89				NS	NS	51,900	N	NMED		1.71E-03
Iron	7439-89-6	mg/kg	7,000				NS	NS	908,000	N	NMED		7.71E-03
Lead	7439-92-1	mg/kg	21	J			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	5,200				NS	NS	5,680,000	N	NMED		9.15E-04
Manganese	7439-96-5	mg/kg	390				NS	NS	160,000	N	NMED		2.44E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.037	J			NS	NS	112	N	NMED		3.30E-04
Nickel	7440-02-0	mg/kg	10				2,890,000	N	25,700	N	NMED	3.46E-11	3.89E-04
Potassium	7440-09-7	mg/kg	1,400				NS	NS	76,200,000	N	NMED		1.84E-05
Selenium	7782-49-2	mg/kg	1.8				NS	NS	6,490	N	NMED		2.77E-04
Silver	7440-22-4	mg/kg	0.083	J			NS	NS	6,490	N	NMED		1.28E-05
Sodium	7440-23-5	mg/kg	50				NS	NS	37,300,000	N	NMED		1.34E-06
Thallium	7440-28-0	mg/kg	0.047	J			NS	NS	13	N	NMED		3.62E-03
Vanadium	7440-62-2	mg/kg	7.9				NS	NS	6,530	N	NMED		1.21E-03
Zinc	7440-66-6	mg/kg	48	J			NS	NS	38,900	N	NMED		1.23E-03

TABLE D1-AE25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID AE25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.32	U			NS	NS	63	N	NMED		
Nitrate	14797-55-8	mg/kg	1.9	J			NS	NS	2,080,000	N	NMED		9.13E-07
Perchlorate	14797-73-0	mg/kg	0.002	U			NS	NS	908	N	NMED		
										Cumulative Risk/Hazard		**6E-07**	**0.05**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service

IEUBK = Integrated Exposure Uptake Biokentic Model

J = Estimated

mg/kg = milligrams per kilogram

NS = No Standard

TEF = Toxicity equivalency factor

TEQ = Toxicity equivalency quotient

U = Nondetect

UJ = Estimated Nondetect

TABLE D1-AE25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID AE25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2,3)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0018	U			659	N	10,600	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0018	U			NS	NS	13,600	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0018	U			197	N	7,080	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0018	U			4,300	N	2	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0018	U			1,820	N	70,800	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0018	U			NS	NS	424	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0018	U			781	N	130	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0018	U			NS	NS	283	N	NMED[C]			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0046	U			8	N	6	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0018	U			8,540	N	79	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0018	U			NS	NS	492	N	NMED[C]			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0046	U			6	N	8	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0018	U			16	N	140	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0018	U			NS	NS	2,500	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0018	U			195	N	54	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0018	U			415	N	25	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0018	U			NS	NS	422	N	NMED[C]			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0018	U			45,900	N	24,800	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0018	U			NS	NS	7,080	N	NMED[C]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0018	U			45,900	N	24,800	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0018	U			415	N	25	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.0028	U			NS	NS	90,700	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0018	U			NS	NS	7,080	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.0018	U			NS	NS	599	N	NMED[C]			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0018	U			NS	NS	7,080	N	NMED[C]			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0018	U			NS	NS	20,400	N	NMED[C]			
Acetone	67-64-1	mg/kg	0.095				NS	NS	242,000	N	NMED		3.93E-07	
Benzene	71-43-2	mg/kg	0.0018	U			423	N	142	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.0018	U			NS	NS	538	N	NMED[C]			
Bromochloromethane	74-97-5	mg/kg	0.0018	U			NS	NS	296	N	NMED[C]			
Bromodichloromethane	75-27-4	mg/kg	0.0018	U			143	N	7,080	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0018	U			23,700	N	5,380	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0018	U			NS	NS	18	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.0018	U			NS	NS	1,620	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0018	U			252	N	202	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0018	U			NS	NS	412	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0018	U			NS	NS	16,600	N	NMED			
Chloroform	67-66-3	mg/kg	0.0018	U			134	N	391	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0046	U			956	N	235	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0018	U			NS	NS	708	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0018	U			781	N	130	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0018	U			340	N	5,380	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0018	U			NS	NS	54	N	NMED			

TABLE D1-AE25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID AE25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2,3)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Dichlorodifluoromethane	75-71-8	mg/kg	0.0018	U			NS	NS	161	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.0018	U			1,770	N	5,800	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0018	U			2,400	N	269	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0018	U			NS	NS	2,740	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0046	U			NS	NS	696	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0018	U			24,200	N	33,100	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.0092	U			89,600	N	1,210	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0018	U			NS	NS	17,700	N	NMED[C]			
n-Propylbenzene	103-65-1	mg/kg	0.0018	U			NS	NS	6,730	N	NMED[C]			
Naphthalene	91-20-3	mg/kg	0.0018	U			633	N	159	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0023	U			NS	NS	736	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.0018	U			NS	NS	2,740	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.0018	U			NS	NS	35,400	N	NMED[C]			
Styrene	100-42-5	mg/kg	0.0018	U			NS	NS	10,200	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0018	U			NS	NS	35,400	N	NMED[C]			
Tetrachloroethene	127-18-4	mg/kg	0.0018	U			7,910	N	120	N	NMED			
Toluene	108-88-3	mg/kg	0.0018	U			NS	NS	14,000	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0018	U			NS	NS	206	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0018	U			781	N	130	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0018	U			5,370	N	7	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0018	U			NS	NS	1,130	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0018	U			161	N	162	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.18	U			8,540	N	79	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.18	U			NS	NS	2,500	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.18	U			45,900	N	24,800	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.18	U			45,900	N	24,800	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.18	U			NS	NS	26,900	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.18	U			17,000	N	269	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.18	U			NS	NS	807	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.18	U			NS	NS	5,380	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.18	U			NS	NS	538	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.18	U			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.18	U			165	N	81	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.18	U			NS	NS	28,300	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.18	U			NS	NS	1,770	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.18	U			NS	NS	1,000	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.18	U			NS	NS	13,500	N	NMED[C]			
2-Nitroaniline	88-74-4	mg/kg	0.18	U			NS	NS	2,690	N	NMED[C]			
2-Nitrophenol	88-75-5	mg/kg	0.18	U			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.18	U			410	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.18	U			135	N	1,080	N	NMED[SC]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.18	U			NS	NS	22	N	NMED			
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.18	U			NS	NS	NS	NS	NS			
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.18	U			NS	NS	26,900	N	NMED[C]			

TABLE D1-AE25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID AE25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2,3)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Chloroaniline	106-47-8	mg/kg	0.18	U			14	N	135	N	NMED[C]			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.18	U			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.18	U			135	N	1,080	N	NMED[C]			
4-Nitrophenol	100-02-7	mg/kg	0.18	U			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.18	U			NS	NS	15,100	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.18	U			NS	NS	7,530	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.18	U			NS	NS	75,300	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.18	U			240	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			173	N	15	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.18	U			240	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.18	U			NS	NS	7,530	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.18	U			2,310	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.18	U			NS	NS	1,080,000	N	NMED[C]			
Benzyl Alcohol	100-51-6	mg/kg	0.18	U			NS	NS	26,900	N	NMED[C]			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.18	U			NS	NS	807	N	NMED[C]			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.18	U			2	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.18	U			3,540	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.18	U			13,400	N	5,380	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.18	U			1,420	N	53,800	N	NMED[C]			
Carbazole	86-74-8	mg/kg	0.18	U			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.18	U			23,100	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.18	U			NS	NS	26,900	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.18	U			NS	NS	2,690	N	NMED[C]			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			24	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.18	U			NS	NS	269	N	NMED[C]			
Diethylphthalate	84-66-2	mg/kg	0.18	U			NS	NS	215,000	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.18	U			NS	NS	269,000	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.18	U			NS	NS	10,000	N	NMED			
Fluorene	86-73-7	mg/kg	0.18	U			NS	NS	10,000	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.18	U			117	N	215	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.18	U			2,400	N	269	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.18	U			4,670	N	188	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.18	U			240	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.18	U			198,000	N	53,700	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.021	UJ			0.38	N	NA	N	NMED[C]			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.18	U			4	N	2	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.18	U			37,900	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.18	U			633	N	159	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.18	U			1,350	N	353	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.18	U			346	N	989	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.18	U			NS	NS	8,070	N	NMED			
Phenol	108-95-2	mg/kg	0.18	U			NS	NS	77,400	N	NMED			
Pyrene	129-00-0	mg/kg	0.18	U			NS	NS	7,530	N	NMED			

TABLE D1-AE25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID AE25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2,3)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	8,070	N	NMED[C]			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	27	N	NMED[C]			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			626	N	2,420	N	NMED[C]			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.021	U			2,440	N	17	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.021	U			55	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.01	U			58	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.01	U			85	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.01	U			85	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.01	U			85	N	5	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.01	U			85	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (4)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		UJ	0.00000027	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.00000000078	J	0.0000026	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg	0.0000000014	J	0.00000014	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.0000000047	J	0.00000047	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		UJ	0.000000078	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg	0.00000001	J	0.0000001	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000049	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000031	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000045	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		UJ	0.00000011	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		UJ	0.000000074	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		UJ	0.00000016	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		UJ	0.0000001	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		UJ	0.00000009	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		UJ	0.00000016	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg	0.00000006	J	0.0000006	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		UJ	0.0000001	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.000000077				0.00172	N	0.000226	N	NMED	4.47E-10	3.40E-04	

TABLE D1-AE25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID AE25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2,3)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	14,000				NS	NS	41,400	N	NMED		3.38E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	U			NS	NS	142	N	NMED			
Arsenic	7440-38-2	mg/kg	1.4				216	N	41	N	NMED	6.48E-08	3.40E-02	
Barium	7440-39-3	mg/kg	520				NS	NS	4,390	N	NMED		1.18E-01	Kidneys
Beryllium	7440-41-7	mg/kg	0.96	J			2,710	N	148	N	NMED	3.54E-09	6.49E-03	
Cadmium	7440-43-9	mg/kg	0.38				3,610	N	72	N	NMED	1.05E-09	5.27E-03	
Calcium	7440-70-2	mg/kg	23,000				NS	NS	8,850,000	N	NMED		2.60E-03	
Chromium (Total) (5)	7440-47-3	mg/kg	8.8				468	N	134	N	NMED	1.88E-07	6.57E-02	
Cobalt	7440-48-4	mg/kg	4.1				722	N	37	N	NMED	5.68E-08	1.12E-01	Endocrine
Copper	7440-50-8	mg/kg	89				NS	NS	14,200	N	NMED		6.27E-03	
Iron	7439-89-6	mg/kg	7,000				NS	NS	248,000	N	NMED		2.82E-02	
Lead	7439-92-1	mg/kg	21	J			NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	5,200				NS	NS	1,550,000	N	NMED		3.35E-03	
Manganese	7439-96-5	mg/kg	390				NS	NS	464	N	NMED		8.41E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.037	J			NS	NS	21	N	NMED		1.79E-03	
Nickel	7440-02-0	mg/kg	10				20,500	N	753	N	NMED	4.88E-09	1.33E-02	
Potassium	7440-09-7	mg/kg	1,400				NS	NS	20,800,000	N	NMED		6.73E-05	
Selenium	7782-49-2	mg/kg	1.8				NS	NS	1,750	N	NMED		1.03E-03	
Silver	7440-22-4	mg/kg	0.083	J			NS	NS	1,770	N	NMED		4.69E-05	
Sodium	7440-23-5	mg/kg	50				NS	NS	10,200,000	N	NMED		4.90E-06	
Thallium	7440-28-0	mg/kg	0.047	J			NS	NS	4	N	NMED		1.33E-02	
Vanadium	7440-62-2	mg/kg	7.9				NS	NS	614	N	NMED		1.29E-02	
Zinc	7440-66-6	mg/kg	48	J			NS	NS	106,000	N	NMED		4.53E-04	
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.32	U			NS	NS	12	N	NMED			
Nitrate	14797-55-8	mg/kg	1.9	J			NS	NS	566,000	N	NMED		3.36E-06	
Perchlorate	14797-73-0	mg/kg	0.002	U			NS	NS	248	N	NMED			
										Cumulative Risk/Hazard		**3E-07**	**1.6**	
										Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	1.2
Endocrine	0.11
Kidneys	0.12
All Others	0.20

Notes:

[s] = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update).

2) NMED[C] = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

3) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

4) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
TEF = Toxicity equivalency factor
TEQ = Toxicity equivalency quotient
U = Nondetect
UJ = Estimated Nondetect

TABLE D1-AF25-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AF25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0017	UJ			28.1	N	2,350	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0017	UJ			NS	NS	14,400	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0017	U			7.98	N	1,560	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0017	UJ			18.8	N	2.61	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0017	UJ			78.6	N	15,600	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0017	UJ			NS	NS	440	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0017	UJ			29.3	N	141	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0017	U			NS	NS	63	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0043	U			0.051	N	7.09	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0017	U			240	N	82.9	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0017	U			NS	NS	300	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0043	U			0.0858	N	5.88	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0017	UJ			0.672	N	135	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0017	U			NS	NS	2,150	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0017	UJ			8.32	N	55.6	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0017	UJ			17.8	N	29	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0017	U			NS	NS	270	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0017	U			1,290	N	5,480	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0017	UJ			NS	NS	1,600	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0017	U			1,290	N	5,480	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0017	UJ			17.8	N	29	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0026	UJ			NS	NS	37,400	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0017	U			NS	NS	1,560	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0017	UJ			NS	NS	200	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0017	U			NS	NS	1,600	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0017	UJ			NS	NS	5,810	N	RSL		
Acetone	67-64-1	mg/kg	0.11	J			NS	NS	66,300	N	NMED		1.66E-06
Benzene	71-43-2	mg/kg	0.0017	UJ			17.8	N	114	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0017	U			NS	NS	290	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0017	UJ			NS	NS	150	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0017	UJ			6.19	N	1,560	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0017	UJ			674	N	1,230	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0017	UJ			NS	NS	17.7	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0017	UJ			NS	NS	1,550	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0017	UJ			10.7	N	144	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0017	UJ			NS	NS	378	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0017	UJ			NS	NS	19,000	N	NMED		
Chloroform	67-66-3	mg/kg	0.0017	UJ			5.9	N	306	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0043	UJ			41.1	N	268	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0017	UJ			NS	NS	156	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0017	UJ			29.3	N	141	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0017	UJ			13.9	N	1,230	N	NMED		
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0017	UJ			NS	NS	57.9	N	NMED		

TABLE D1-AF25-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AF25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dichlorodifluoromethane	75-71-8	mg/kg	0.0017	UJ			NS	NS	182	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0017	UJ			75.1	N	3,930	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0017	U			68.3	N	61.6	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0017	U			NS	NS	2,360	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0043	UJ			NS	NS	764	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0017	UJ			975	N	37,800	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.0086	UJ			766	N	409	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0017	U			NS	NS	3,900	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0017	U			NS	NS	3,800	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0017	U			22.6	N	162	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0021	UJ			NS	NS	805	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0017	U			NS	NS	2,360	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0017	U			NS	NS	7,800	N	RSL		
Styrene	100-42-5	mg/kg	0.0017	UJ			NS	NS	7,260	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0017	U			NS	NS	7,800	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0017	UJ			337	N	111	N	NMED		
Toluene	108-88-3	mg/kg	0.0017	UJ			NS	NS	5,230	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0017	UJ			NS	NS	210	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0017	UJ			29.3	N	141	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0017	UJ			15.5	N	6.77	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0017	UJ			NS	NS	1,230	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0017	UJ			0.742	N	113	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	UJ			240	N	82.9	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	UJ			NS	NS	2,150	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	UJ			1,290	N	5,480	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	UJ			1,290	N	5,480	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	UJ			NS	NS	6,160	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	UJ			484	N	61.6	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	UJ			NS	NS	185	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	UJ			NS	NS	1,230	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	UJ			NS	NS	123	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	UJ			17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	UJ			3.56	N	18.5	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	UJ			NS	NS	6,260	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.17	UJ			NS	NS	391	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.17	UJ			NS	NS	232	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	UJ			NS	NS	3,200	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.17	UJ			NS	NS	630	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	UJ			11.8	N	NS	NS	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.17	UJ			270	N	250	N	RSL[S]		
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	UJ			NS	NS	4.93	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		

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HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AF25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	UJ			NS	NS	6,300	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.17	UJ			27	N	32	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.17	UJ			270	N	250	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.17	UJ			NS	NS	3,480	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.17	UJ			NS	NS	1,740	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.17	UJ			NS	NS	17,400	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.17	UJ			1.53	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.14	UJ			1.12	N	17.4	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	UJ			1.53	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	UJ			NS	NS	1,740	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	UJ			15.3	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.17	UJ			NS	NS	250,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.17	UJ			NS	NS	6,300	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	UJ			NS	NS	190	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	UJ			3.11	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	UJ			99.3	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	UJ			380	N	1,230	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.17	UJ			2,900	N	13,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.17	UJ			153	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.17	UJ			NS	NS	6,160	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.17	UJ			NS	NS	630	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	UJ			0.153	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.17	UJ			NS	NS	78	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.17	UJ			NS	NS	49,300	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.17	UJ			NS	NS	61,600	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.17	UJ			NS	NS	2,320	N	NMED		
Fluorene	86-73-7	mg/kg	0.17	UJ			NS	NS	2,320	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.17	UJ			3.33	N	49.3	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	UJ			68.3	N	61.6	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.17	UJ			133	N	43.1	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	UJ			1.53	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.17	UJ			5,610	N	12,300	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	UJ			0.78	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	UJ			0.0234	N	0.493	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	UJ			1,090	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.17	UJ			22.6	N	162	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.17	UJ			60.4	N	131	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.17	UJ			9.85	N	234	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.17	UJ			NS	NS	1,740	N	NMED		
Phenol	108-95-2	mg/kg	0.17	UJ			NS	NS	18,500	N	NMED		
Pyrene	129-00-0	mg/kg	0.17	UJ			NS	NS	1,740	N	NMED		

TABLE D1-AF25-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AF25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			1,300	N	570	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.019	U			69.6	N	3.98	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.019	U			1.81	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.0095	U			1.86	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.0095	U			2.43	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.0095	U			2.43	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.0095	U			2.43	N	1.14	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.0095	U			2.43	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg	0.00000000012	J	0.0000004	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000033	J	0.000011	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000033	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.000000016	J	0.0000016	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000011	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000074	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.00000011	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000068	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		UJ	0.00000014	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.000000071	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000022	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000067	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.00000015	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000022	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000018	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000096	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.000000019				0.000049	N	0.0000506	N	NMED	3.96E-09	3.84E-04

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HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AF25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	15,000				NS	NS	78,000	N	NMED		1.92E-01
Antimony	7440-36-0	mg/kg	0.097	J			NS	NS	31.3	N	NMED		3.10E-03
Arsenic	7440-38-2	mg/kg	1.2				7.07	N	13	N	NMED	1.70E-06	9.23E-02
Barium	7440-39-3	mg/kg	230				NS	NS	15,600	N	NMED		1.47E-02
Beryllium	7440-41-7	mg/kg	0.56	J			64,400	N	156	N	NMED	8.70E-11	3.59E-03
Cadmium	7440-43-9	mg/kg	0.68	J			85,900	N	70.5	N	NMED	7.92E-11	9.65E-03
Calcium	7440-70-2	mg/kg	3,500				NS	NS	13,000,000	N	NMED		2.69E-04
Chromium (Total) (3)	7440-47-3	mg/kg	11				96.6	N	45,200	N	NMED	1.14E-06	2.43E-04
Cobalt	7440-48-4	mg/kg	5				17,200	N	23.4	N	NMED	2.91E-09	2.14E-01
Copper	7440-50-8	mg/kg	110				NS	NS	3,130	N	NMED		3.51E-02
Iron	7439-89-6	mg/kg	9,200				NS	NS	54,800	N	NMED		1.68E-01
Lead	7439-92-1	mg/kg	13				NS	NS	200	N	RSL		
Magnesium	7439-95-4	mg/kg	6,400				NS	NS	15,600,000	N	NMED		4.10E-04
Manganese	7439-96-5	mg/kg	250				NS	NS	10,500	N	NMED		2.38E-02
Mercury (Elemental)	7439-97-6	mg/kg	0.03	J			NS	NS	23.8	N	NMED		1.26E-03
Nickel	7440-02-0	mg/kg	8.9				595,000	N	1,560	N	NMED	1.50E-10	5.71E-03
Potassium	7440-09-7	mg/kg	900				NS	NS	15,600,000	N	NMED		5.77E-05
Selenium	7782-49-2	mg/kg	0.84				NS	NS	391	N	NMED		2.15E-03
Silver	7440-22-4	mg/kg	0.11				NS	NS	391	N	NMED		2.81E-04
Sodium	7440-23-5	mg/kg	62				NS	NS	7,820,000	N	NMED		7.93E-06
Thallium	7440-28-0	mg/kg	0.045	J			NS	NS	0.782	N	NMED		5.75E-02
Vanadium	7440-62-2	mg/kg	19				NS	NS	394	N	NMED		4.82E-02
Zinc	7440-66-6	mg/kg	37				NS	NS	23,500	N	NMED		1.57E-03

TABLE D1-AF25-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AF25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.33	U			NS	NS	11.2	N	NMED		
Nitrate	14797-55-8	mg/kg	4.5	J			NS	NS	125,000	N	NMED		3.60E-05
Perchlorate	14797-73-0	mg/kg	0.0017	UJ			NS	NS	54.8	N	NMED		
										Cumulative Risk/Hazard		**3E-06**	**0.9**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of Quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper tolerance limit

TABLE D1-AF25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AF25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0017	UJ			137	N	39,400	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0017	UJ			NS	NS	72,500	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0017	U			39	N	26,000	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0017	UJ			92	N	12	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0017	UJ			383	N	260,000	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0017	UJ			NS	NS	2,260	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0017	UJ			146	N	695	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0017	U			NS	NS	930	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0043	U			1	N	34	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0017	U			1,250	N	423	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0017	U			NS	NS	1,800	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0043	U			1	N	41	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0017	UJ			3	N	738	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0017	U			NS	NS	13,000	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0017	UJ			41	N	286	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0017	UJ			87	N	137	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0017	U			NS	NS	1,500	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0017	U			6,730	N	90,800	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0017	UJ			NS	NS	23,000	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0017	U			6,730	N	90,800	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0017	UJ			87	N	137	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0026	UJ			NS	NS	411,000	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0017	U			NS	NS	26,000	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0017	UJ			NS	NS	1,300	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0017	U			NS	NS	23,000	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0017	UJ			NS	NS	81,600	N	RSL		
Acetone	67-64-1	mg/kg	0.11	J			NS	NS	960,000	N	NMED		1.15E-07
Benzene	71-43-2	mg/kg	0.0017	UJ			87	N	729	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0017	U			NS	NS	1,800	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0017	UJ			NS	NS	630	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0017	UJ			30	N	26,000	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0017	UJ			1,760	N	18,300	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0017	UJ			NS	NS	95	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0017	UJ			NS	NS	8,540	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0017	UJ			53	N	1,020	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0017	UJ			NS	NS	2,160	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0017	UJ			NS	NS	89,500	N	NMED		
Chloroform	67-66-3	mg/kg	0.0017	UJ			29	N	2,000	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0043	UJ			201	N	1,260	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0017	UJ			NS	NS	2,600	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0017	UJ			146	N	695	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0017	UJ			67	N	18,300	N	NMED		

TABLE D1-AF25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AF25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0017	UJ			NS	NS	288	N	NMED		
Dichlorodifluoromethane	75-71-8	mg/kg	0.0017	UJ			NS	NS	865	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0017	UJ			29,000	N	368	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0017	U			52	N	916	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0017	U			NS	NS	14,200	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0043	UJ			NS	NS	3,730	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0017	UJ			4,820	N	178,000	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.0086	UJ			14,400	N	5,130	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0017	U			NS	NS	58,000	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0017	U			NS	NS	24,000	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0017	U			108	N	843	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0021	UJ			NS	NS	3,940	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0017	U			NS	NS	14,200	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0017	U			NS	NS	120,000	N	RSL		
Styrene	100-42-5	mg/kg	0.0017	UJ			NS	NS	51,300	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0017	U			NS	NS	120,000	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0017	UJ			1,650	N	629	N	NMED		
Toluene	108-88-3	mg/kg	0.0017	UJ			NS	NS	61,300	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0017	UJ			NS	NS	1,100	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0017	UJ			146	N	695	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0017	UJ			112	N	37	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0017	UJ			NS	NS	6,030	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0017	UJ			28	N	46	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	UJ			1,250	N	423	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	UJ			NS	NS	13,000	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	UJ			6,730	N	90,800	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	UJ			6,730	N	90,800	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	UJ			NS	NS	91,600	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	UJ			2,330	N	916	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	UJ			NS	NS	2,750	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	UJ			NS	NS	18,300	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	UJ			NS	NS	1,830	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	UJ			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	UJ			17	N	276	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	UJ			NS	NS	104,000	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.17	UJ			NS	NS	6,490	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.17	UJ			NS	NS	3,370	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	UJ			NS	NS	41,000	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.17	UJ			NS	NS	8,000	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	UJ			NS	NS	410	N	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.17	UJ			1,100	N	3,300	N	RSL[S]		

TABLE D1-AF25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AF25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	UJ			NS	NS	73	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	UJ			NS	NS	82,000	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.17	UJ			110	N	410	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.17	UJ			1,100	N	3,300	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.17	UJ			NS	NS	50,500	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.17	UJ			NS	NS	25,300	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.17	UJ			NS	NS	253,000	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.17	UJ			32	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.14	UJ			24	N	251	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	UJ			32	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	UJ			NS	NS	25,300	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	UJ			323	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.17	UJ			NS	NS	3,300,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.17	UJ			NS	NS	82,000	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	UJ			NS	NS	2,500	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	UJ			16	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	UJ			519	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	UJ			1,830	N	18,300	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.17	UJ			12,000	N	160,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.17	UJ			3,230	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.17	UJ			NS	NS	91,600	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.17	UJ			NS	NS	8,200	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	UJ			3	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.17	UJ			NS	NS	1,200	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.17	UJ			NS	NS	733,000	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.17	UJ			NS	NS	916,000	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.17	UJ			NS	NS	33,700	N	NMED		
Fluorene	86-73-7	mg/kg	0.17	UJ			NS	NS	33,700	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.17	UJ			16	N	733	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	UJ			52	N	916	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.17	UJ			641	N	641	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	UJ			32	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.17	UJ			27,000	N	183,000	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	UJ			3	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	UJ			1	N	7	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	UJ			5,240	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.17	UJ			108	N	843	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.17	UJ			293	N	1,540	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.17	UJ			45	N	3,180	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.17	UJ			NS	NS	27,500	N	NMED		
Phenol	108-95-2	mg/kg	0.17	UJ			NS	NS	275,000	N	NMED		
Pyrene	129-00-0	mg/kg	0.17	UJ			NS	NS	25,300	N	NMED		

TABLE D1-AF25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AF25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			5,300	N	7,400	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.019	U			304	N	57	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.019	U			9	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.0095	U			9	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.0095	U			11	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.0095	U			11	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.0095	U			11	N	16	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.0095	U			11	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (3)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg	0.00000000012	J	0.0000004	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000033	J	0.000011	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000033	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.000000016	J	0.0000016	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000011	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000074	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.00000011	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000068	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		UJ	0.00000014	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.000000071	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000022	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000067	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.00000015	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000022	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000018	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000096	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.000000019				0.000238	N	0.000808	N	NMED	8.16E-10	2.40E-05

TABLE D1-AF25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AF25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	15,000				NS	NS	1,290,000	N	NMED		1.16E-02
Antimony	7440-36-0	mg/kg	0.097	J			NS	NS	519	N	NMED		1.87E-04
Arsenic	7440-38-2	mg/kg	1.2				36	N	208	N	NMED	3.34E-07	5.77E-03
Barium	7440-39-3	mg/kg	230				NS	NS	255,000	N	NMED		9.02E-04
Beryllium	7440-41-7	mg/kg	0.56	J			313,000	N	2,580	N	NMED	1.79E-11	2.17E-04
Cadmium	7440-43-9	mg/kg	0.68	J			417,000	N	1,110	N	NMED	1.63E-11	6.13E-04
Calcium	7440-70-2	mg/kg	3,500				NS	NS	32,400,000	N	NMED		1.08E-04
Chromium (Total) (4)	7440-47-3	mg/kg	11				505	N	314,000	N	NMED	2.18E-07	3.50E-05
Cobalt	7440-48-4	mg/kg	5				83,400	N	388	N	NMED	6.00E-10	1.29E-02
Copper	7440-50-8	mg/kg	110				NS	NS	51,900	N	NMED		2.12E-03
Iron	7439-89-6	mg/kg	9,200				NS	NS	908,000	N	NMED		1.01E-02
Lead	7439-92-1	mg/kg	13				NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	6,400				NS	NS	5,680,000	N	NMED		1.13E-03
Manganese	7439-96-5	mg/kg	250				NS	NS	160,000	N	NMED		1.56E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.03	J			NS	NS	112	N	NMED		2.68E-04
Nickel	7440-02-0	mg/kg	8.9				2,890,000	N	25,700	N	NMED	3.08E-11	3.46E-04
Potassium	7440-09-7	mg/kg	900				NS	NS	76,200,000	N	NMED		1.18E-05
Selenium	7782-49-2	mg/kg	0.84				NS	NS	6,490	N	NMED		1.29E-04
Silver	7440-22-4	mg/kg	0.11				NS	NS	6,490	N	NMED		1.69E-05
Sodium	7440-23-5	mg/kg	62				NS	NS	37,300,000	N	NMED		1.66E-06
Thallium	7440-28-0	mg/kg	0.045	J			NS	NS	13	N	NMED		3.46E-03
Vanadium	7440-62-2	mg/kg	19				NS	NS	6,530	N	NMED		2.91E-03
Zinc	7440-66-6	mg/kg	37				NS	NS	38,900	N	NMED		9.51E-04

TABLE D1-AF25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AF25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.33	U			NS	NS	63	N	NMED		
Nitrate	14797-55-8	mg/kg	4.5	J			NS	NS	2,080,000	N	NMED		2.16E-06
Perchlorate	14797-73-0	mg/kg	0.0017	UJ			NS	NS	908	N	NMED		
										Cumulative Risk/Hazard		**6E-07**	**0.06**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

2) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

3) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

4) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of Quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper tolerance limit

TABLE D1-AF25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AF25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0017	UJ			659	N	10,600	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0017	UJ			NS	NS	13,600	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0017	U			197	N	7,080	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0017	UJ			4,300	N	2	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0017	UJ			1,820	N	70,800	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0017	UJ			NS	NS	424	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0017	UJ			781	N	130	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0017	U			NS	NS	283	N	NMED[C]			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0043	U			8	N	6	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0017	U			8,540	N	79	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0017	U			NS	NS	492	N	NMED[C]			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0043	U			6	N	8	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0017	UJ			16	N	140	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0017	U			NS	NS	2,500	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0017	UJ			195	N	54	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0017	UJ			415	N	25	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0017	U			NS	NS	422	N	NMED[C]			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0017	U			45,900	N	24,800	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0017	UJ			NS	NS	7,080	N	NMED[C]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0017	U			45,900	N	24,800	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0017	UJ			415	N	25	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.0026	UJ			NS	NS	90,700	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0017	U			NS	NS	7,080	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.0017	UJ			NS	NS	599	N	NMED[C]			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0017	U			NS	NS	7,080	N	NMED[C]			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0017	UJ			NS	NS	20,400	N	NMED[C]			
Acetone	67-64-1	mg/kg	0.11	J			NS	NS	242,000	N	NMED		4.55E-07	
Benzene	71-43-2	mg/kg	0.0017	UJ			423	N	142	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.0017	U			NS	NS	538	N	NMED[C]			
Bromochloromethane	74-97-5	mg/kg	0.0017	UJ			NS	NS	296	N	NMED[C]			
Bromodichloromethane	75-27-4	mg/kg	0.0017	UJ			143	N	7,080	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0017	UJ			23,700	N	5,380	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0017	UJ			NS	NS	18	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.0017	UJ			NS	NS	1,620	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0017	UJ			252	N	202	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0017	UJ			NS	NS	412	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0017	UJ			NS	NS	16,600	N	NMED			
Chloroform	67-66-3	mg/kg	0.0017	UJ			134	N	391	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0043	UJ			956	N	235	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0017	UJ			NS	NS	708	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0017	UJ			781	N	130	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0017	UJ			340	N	5,380	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0017	UJ			NS	NS	54	N	NMED			

TABLE D1-AF25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AF25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Dichlorodifluoromethane	75-71-8	mg/kg	0.0017	UJ			NS	NS	161	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.0017	UJ			1,770	N	5,800	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0017	U			2,400	N	269	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0017	U			NS	NS	2,740	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0043	UJ			NS	NS	696	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0017	UJ			24,200	N	33,100	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.0086	UJ			89,600	N	1,210	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0017	U			NS	NS	17,700	N	NMED[C]			
n-Propylbenzene	103-65-1	mg/kg	0.0017	U			NS	NS	6,730	N	NMED[C]			
Naphthalene	91-20-3	mg/kg	0.0017	U			633	N	159	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0021	UJ			NS	NS	736	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.0017	U			NS	NS	2,740	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.0017	U			NS	NS	35,400	N	NMED[C]			
Styrene	100-42-5	mg/kg	0.0017	UJ			NS	NS	10,200	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0017	U			NS	NS	35,400	N	NMED[C]			
Tetrachloroethene	127-18-4	mg/kg	0.0017	UJ			7,910	N	120	N	NMED			
Toluene	108-88-3	mg/kg	0.0017	UJ			NS	NS	14,000	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0017	UJ			NS	NS	206	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0017	UJ			781	N	130	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0017	UJ			5,370	N	7	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0017	UJ			NS	NS	1,130	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0017	UJ			161	N	162	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	UJ			8,540	N	79	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	UJ			NS	NS	2,500	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	UJ			45,900	N	24,800	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	UJ			45,900	N	24,800	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	UJ			NS	NS	26,900	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	UJ			17,000	N	269	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	UJ			NS	NS	807	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	UJ			NS	NS	5,380	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	UJ			NS	NS	538	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	UJ			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	UJ			165	N	81	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	UJ			NS	NS	28,300	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.17	UJ			NS	NS	1,770	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.17	UJ			NS	NS	1,000	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	UJ			NS	NS	13,500	N	NMED[C]			
2-Nitroaniline	88-74-4	mg/kg	0.17	UJ			NS	NS	2,690	N	NMED[C]			
2-Nitrophenol	88-75-5	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	UJ			410	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.17	UJ			135	N	1,080	N	NMED[SC]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	UJ			NS	NS	22	N	NMED			

TABLE D1-AF25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AF25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	UJ			NS	NS	26,900	N	NMED[C]			
4-Chloroaniline	106-47-8	mg/kg	0.17	UJ			14	N	135	N	NMED[C]			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.17	UJ			135	N	1,080	N	NMED[C]			
4-Nitrophenol	100-02-7	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.17	UJ			NS	NS	15,100	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.17	UJ			NS	NS	7,530	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.17	UJ			NS	NS	75,300	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.17	UJ			240	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.14	UJ			173	N	15	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	UJ			240	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	UJ			NS	NS	7,530	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	UJ			2,310	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.17	UJ			NS	NS	1,080,000	N	NMED[C]			
Benzyl Alcohol	100-51-6	mg/kg	0.17	UJ			NS	NS	26,900	N	NMED[C]			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	UJ			NS	NS	807	N	NMED[C]			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	UJ			2	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	UJ			3,540	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	UJ			13,400	N	5,380	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.17	UJ			1,420	N	53,800	N	NMED[C]			
Carbazole	86-74-8	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.17	UJ			23,100	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.17	UJ			NS	NS	26,900	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.17	UJ			NS	NS	2,690	N	NMED[C]			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	UJ			24	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.17	UJ			NS	NS	269	N	NMED[C]			
Diethylphthalate	84-66-2	mg/kg	0.17	UJ			NS	NS	215,000	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.17	UJ			NS	NS	269,000	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.17	UJ			NS	NS	10,000	N	NMED			
Fluorene	86-73-7	mg/kg	0.17	UJ			NS	NS	10,000	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.17	UJ			117	N	215	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	UJ			2,400	N	269	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.17	UJ			4,670	N	188	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	UJ			240	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.17	UJ			198,000	N	53,700	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	UJ			0.38	N	NA	N	NMED[C]			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	UJ			4	N	2	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	UJ			37,900	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.17	UJ			633	N	159	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.17	UJ			1,350	N	353	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.17	UJ			346	N	989	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.17	UJ			NS	NS	8,070	N	NMED			
Phenol	108-95-2	mg/kg	0.17	UJ			NS	NS	77,400	N	NMED			
Pyrene	129-00-0	mg/kg	0.17	UJ			NS	NS	7,530	N	NMED			

TABLE D1-AF25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AF25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	8,070	N	NMED[C]			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	27	N	NMED[C]			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			626	N	2,420	N	NMED[C]			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.019	U			2,440	N	17	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.019	U			55	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.0095	U			58	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.0095	U			85	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.0095	U			85	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.0095	U			85	N	5	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.0095	U			85	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (3)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg	0.00000000012	J	0.0000004	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000033	J	0.000011	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000033	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.000000016	J	0.0000016	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000011	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000074	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.00000011	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000068	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		UJ	0.00000014	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.000000071	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000022	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000067	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.00000015	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000022	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000018	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000096	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.000000019				0.00172	N	0.000226	N	NMED	1.13E-10	8.59E-05	

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	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	15,000				NS	NS	41,400	N	NMED		3.62E-01	Nervous
Antimony	7440-36-0	mg/kg	0.097	J			NS	NS	142	N	NMED		6.83E-04	
Arsenic	7440-38-2	mg/kg	1.2				216	N	41	N	NMED	5.56E-08	2.91E-02	
Barium	7440-39-3	mg/kg	230				NS	NS	4,390	N	NMED		5.24E-02	
Beryllium	7440-41-7	mg/kg	0.56	J			2,710	N	148	N	NMED	2.07E-09	3.78E-03	
Cadmium	7440-43-9	mg/kg	0.68	J			3,610	N	72	N	NMED	1.88E-09	9.43E-03	
Calcium	7440-70-2	mg/kg	3,500				NS	NS	8,850,000	N	NMED		3.95E-04	
Chromium (Total) (4)	7440-47-3	mg/kg	11				468	N	134	N	NMED	2.35E-07	8.21E-02	
Cobalt	7440-48-4	mg/kg	5				722	N	37	N	NMED	6.93E-08	1.36E-01	Endocrine
Copper	7440-50-8	mg/kg	110				NS	NS	14,200	N	NMED		7.75E-03	
Iron	7439-89-6	mg/kg	9,200				NS	NS	248,000	N	NMED		3.71E-02	
Lead	7439-92-1	mg/kg	13				NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	6,400				NS	NS	1,550,000	N	NMED		4.13E-03	
Manganese	7439-96-5	mg/kg	250				NS	NS	464	N	NMED		5.39E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.03	J			NS	NS	21	N	NMED		1.45E-03	
Nickel	7440-02-0	mg/kg	8.9				20,500	N	753	N	NMED	4.34E-09	1.18E-02	
Potassium	7440-09-7	mg/kg	900				NS	NS	20,800,000	N	NMED		4.33E-05	
Selenium	7782-49-2	mg/kg	0.84				NS	NS	1,750	N	NMED		4.80E-04	
Silver	7440-22-4	mg/kg	0.11				NS	NS	1,770	N	NMED		6.21E-05	
Sodium	7440-23-5	mg/kg	62				NS	NS	10,200,000	N	NMED		6.08E-06	
Thallium	7440-28-0	mg/kg	0.045	J			NS	NS	4	N	NMED		1.27E-02	
Vanadium	7440-62-2	mg/kg	19				NS	NS	614	N	NMED		3.09E-02	
Zinc	7440-66-6	mg/kg	37				NS	NS	106,000	N	NMED		3.49E-04	

TABLE D1-AF25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AF25
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MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.33	U			NS	NS	12	N	NMED			
Nitrate	14797-55-8	mg/kg	4.5	J			NS	NS	566,000	N	NMED		7.95E-06	
Perchlorate	14797-73-0	mg/kg	0.0017	UJ			NS	NS	248	N	NMED			
										Cumulative Risk/Hazard		**4E-07**	**1.3**	
										Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	0.9
Endocrine	0.14
All Others	0.28

Notes:

[s] = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update).

2) NMED[C] = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

3) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

4) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of Quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper tolerance limit

TABLE D1-AG25-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AG25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0021	U			28.1	N	2,350	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0021	U			NS	NS	14,400	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0021	U			7.98	N	1,560	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0021	U			18.8	N	2.61	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0021	U			78.6	N	15,600	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0021	U			NS	NS	440	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0021	U			29.3	N	141	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0021	U			NS	NS	63	N	RSL			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0052	U			0.051	N	7.09	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0021	U			240	N	82.9	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0021	U			NS	NS	300	N	RSL			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0052	U			0.0858	N	5.88	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0021	U			0.672	N	135	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0021	U			NS	NS	2,150	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0021	U			8.32	N	55.6	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0021	U			17.8	N	29	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0021	U			NS	NS	270	N	RSL			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0021	U			1,290	N	5,480	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0021	U			NS	NS	1,600	N	RSL			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0021	U			1,290	N	5,480	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0021	U			17.8	N	29	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.0031	U			NS	NS	37,400	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0021	U			NS	NS	1,560	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.0021	U			NS	NS	200	N	RSL			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0021	U			NS	NS	1,600	N	RSL			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0021	U			NS	NS	5,810	N	RSL			
Acetone	67-64-1	mg/kg	0.3				NS	NS	66,300	N	NMED		4.52E-06	
Benzene	71-43-2	mg/kg	0.0021	U			17.8	N	114	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.0021	U			NS	NS	290	N	RSL			
Bromochloromethane	74-97-5	mg/kg	0.0021	U			NS	NS	150	N	RSL			
Bromodichloromethane	75-27-4	mg/kg	0.0021	U			6.19	N	1,560	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0021	U			674	N	1,230	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0021	U			NS	NS	17.7	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.0021	U			NS	NS	1,550	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0021	U			10.7	N	144	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0021	U			NS	NS	378	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0021	U			NS	NS	19,000	N	NMED			
Chloroform	67-66-3	mg/kg	0.0021	U			5.9	N	306	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0052	U			41.1	N	268	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0021	U			NS	NS	156	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0021	U			29.3	N	141	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0021	U			13.9	N	1,230	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0021	U			NS	NS	57.9	N	NMED			
Dichlorodifluoromethane	75-71-8	mg/kg	0.0021	U			NS	NS	182	N	NMED			

TABLE D1-AG25-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AG25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Ethylbenzene	100-41-4	mg/kg	0.0021	U			75.1	N	3,930	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0021	U			68.3	N	61.6	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0021	U			NS	NS	2,360	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0052	U			NS	NS	764	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0021	U			975	N	37,800	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.01	U			766	N	409	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0021	U			NS	NS	3,900	N	RSL			
n-Propylbenzene	103-65-1	mg/kg	0.0021	U			NS	NS	3,800	N	RSL			
Naphthalene	91-20-3	mg/kg	0.0021	U			22.6	N	162	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0026	U			NS	NS	805	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.0021	U			NS	NS	2,360	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.0021	U			NS	NS	7,800	N	RSL			
Styrene	100-42-5	mg/kg	0.0021	U			NS	NS	7,260	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0021	U			NS	NS	7,800	N	RSL			
Tetrachloroethene	127-18-4	mg/kg	0.0021	U			337	N	111	N	NMED			
Toluene	108-88-3	mg/kg	0.0021	U			NS	NS	5,230	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0021	U			NS	NS	210	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0021	U			29.3	N	141	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0021	U			15.5	N	6.77	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0021	U			NS	NS	1,230	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0021	U			0.742	N	113	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	UJ			240	N	82.9	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	UJ			NS	NS	2,150	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	UJ			1,290	N	5,480	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	UJ			1,290	N	5,480	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	UJ			NS	NS	6,160	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	UJ			484	N	61.6	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	UJ			NS	NS	185	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	UJ			NS	NS	1,230	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	UJ			NS	NS	123	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	UJ			17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	UJ			3.56	N	18.5	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	UJ			NS	NS	6,260	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.17	UJ			NS	NS	391	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.17	UJ			NS	NS	232	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	UJ			NS	NS	3,200	N	RSL			
2-Nitroaniline	88-74-4	mg/kg	0.17	UJ			NS	NS	630	N	RSL			
2-Nitrophenol	88-75-5	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	UJ			11.8	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.17	UJ			270	N	250	N	RSL[S]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	UJ			NS	NS	4.93	N	NMED			
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	UJ			NS	NS	6,300	N	RSL			
4-Chloroaniline	106-47-8	mg/kg	0.17	UJ			27	N	32	N	RSL			

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FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.17	UJ			270	N	250	N	RSL			
4-Nitrophenol	100-02-7	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.17	UJ			NS	NS	3,480	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.17	UJ			NS	NS	1,740	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.17	UJ			NS	NS	17,400	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.17	UJ			1.53	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.13	UJ			1.12	N	17.4	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	UJ			1.53	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	UJ			NS	NS	1,740	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	UJ			15.3	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.17	UJ			NS	NS	250,000	N	RSL			
Benzyl Alcohol	100-51-6	mg/kg	0.17	UJ			NS	NS	6,300	N	RSL			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	UJ			NS	NS	190	N	RSL			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	UJ			3.11	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	UJ			99.3	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	UJ			380	N	1,230	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.17	UJ			2,900	N	13,000	N	RSL			
Carbazole	86-74-8	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.17	UJ			153	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.17	UJ			NS	NS	6,160	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.17	UJ			NS	NS	630	N	RSL			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	UJ			0.153	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.17	UJ			NS	NS	78	N	RSL			
Diethylphthalate	84-66-2	mg/kg	0.17	UJ			NS	NS	49,300	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.17	UJ			NS	NS	61,600	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.17	UJ			NS	NS	2,320	N	NMED			
Fluorene	86-73-7	mg/kg	0.17	UJ			NS	NS	2,320	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.17	UJ			3.33	N	49.3	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	UJ			68.3	N	61.6	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.17	UJ			133	N	43.1	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	UJ			1.53	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.17	UJ			5,610	N	12,300	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	UJ			0.78	N	NS	NS	RSL			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.02	UJ			0.0234	N	0.493	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	UJ			1,090	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.17	UJ			22.6	N	162	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.17	UJ			60.4	N	131	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.17	UJ			9.85	N	234	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.17	UJ			NS	NS	1,740	N	NMED			
Phenol	108-95-2	mg/kg	0.17	UJ			NS	NS	18,500	N	NMED			
Pyrene	129-00-0	mg/kg	0.17	UJ			NS	NS	1,740	N	NMED			

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FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	2,200	N	RSL			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	6.3	N	RSL			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			211	N	36	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			3.56	N	18.5	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	7.7	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			31.6	N	70.4	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	6.16	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	7.64	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			333	N	247	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			83.1	N	301	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	156	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			60.4	N	131	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			313	N	6.16	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	3,850	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			1,300	N	570	N	RSL			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.02	U			69.6	N	3.98	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.02	U			1.81	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.01	U			1.86	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.01	U			2.43	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.01	U			2.43	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.01	U			2.43	N	1.14	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.01	U			2.43	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (3)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg	0.00000000012	J	0.00000039	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.00000000249	J	0.0000083	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000034	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.0000011	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.000000093	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000098	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000015	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000091	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.00000014	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000022	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000011	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000067	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.00000017	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000011	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000029	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000051	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.0000000026				0.000049	N	0.0000506	N	NMED	5.32E-10	5.15E-05	

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MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	19,000				NS	NS	78,000	N	NMED		2.44E-01	Nervous
Antimony	7440-36-0	mg/kg	0.24				NS	NS	31.3	N	NMED		7.67E-03	
Arsenic	7440-38-2	mg/kg	1.1				7.07	N	13	N	NMED	1.56E-06	8.46E-02	
Barium	7440-39-3	mg/kg	210				NS	NS	15,600	N	NMED		1.35E-02	
Beryllium	7440-41-7	mg/kg	0.46	J			64,400	N	156	N	NMED	7.14E-11	2.95E-03	
Cadmium	7440-43-9	mg/kg	0.58				85,900	N	70.5	N	NMED	6.75E-11	8.23E-03	
Calcium	7440-70-2	mg/kg	3,000				NS	NS	13,000,000	N	NMED		2.31E-04	
Chromium (Total) (4)	7440-47-3	mg/kg	15				96.6	N	45,200	N	NMED	1.55E-06	3.32E-04	
Cobalt	7440-48-4	mg/kg	5.7				17,200	N	23.4	N	NMED	3.31E-09	2.44E-01	Endocrine
Copper	7440-50-8	mg/kg	79				NS	NS	3,130	N	NMED		2.52E-02	
Iron	7439-89-6	mg/kg	12,000				NS	NS	54,800	N	NMED		2.19E-01	GI
Lead	7439-92-1	mg/kg	13				NS	NS	200	N	RSL			
Magnesium	7439-95-4	mg/kg	7,800				NS	NS	15,600,000	N	NMED		5.00E-04	
Manganese	7439-96-5	mg/kg	340				NS	NS	10,500	N	NMED		3.24E-02	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.027	J			NS	NS	23.8	N	NMED		1.13E-03	
Nickel	7440-02-0	mg/kg	11				595,000	N	1,560	N	NMED	1.85E-10	7.05E-03	
Potassium	7440-09-7	mg/kg	1,100				NS	NS	15,600,000	N	NMED		7.05E-05	
Selenium	7782-49-2	mg/kg	1				NS	NS	391	N	NMED		2.56E-03	
Silver	7440-22-4	mg/kg	0.1				NS	NS	391	N	NMED		2.56E-04	
Sodium	7440-23-5	mg/kg	69				NS	NS	7,820,000	N	NMED		8.82E-06	
Thallium	7440-28-0	mg/kg	0.057	J			NS	NS	0.782	N	NMED		7.29E-02	
Vanadium	7440-62-2	mg/kg	25				NS	NS	394	N	NMED		6.35E-02	
Zinc	7440-66-6	mg/kg	35				NS	NS	23,500	N	NMED		1.49E-03	
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.32	U			NS	NS	11.2	N	NMED			
Nitrate	14797-55-8	mg/kg	4.8	J			NS	NS	125,000	N	NMED		3.84E-05	
Perchlorate	14797-73-0	mg/kg	0.0017	UJ			NS	NS	54.8	N	NMED			
										Cumulative Risk/Hazard		**3E-06**	**1.0**	
										Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	0.3
Endocrine	0.24
GI	0.22
All Others	0.29

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

2) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

3) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

4) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service

DL = Detection limit

J = Estimated

LOD = Limit of Detection

LOQ = Limit of Quantitation

mg/kg = milligrams per kilogram

NS = No Standard

U = Nondetect

UJ = Estimated Nondetect

UTL = Upper tolerance limit

TABLE D1-AG25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AG25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0021	U			137	N	39,400	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0021	U			NS	NS	72,500	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0021	U			39	N	26,000	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0021	U			92	N	12	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0021	U			383	N	260,000	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0021	U			NS	NS	2,260	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0021	U			146	N	695	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0021	U			NS	NS	930	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0052	U			1	N	34	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0021	U			1,250	N	423	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0021	U			NS	NS	1,800	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0052	U			1	N	41	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0021	U			3	N	738	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0021	U			NS	NS	13,000	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0021	U			41	N	286	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0021	U			87	N	137	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0021	U			NS	NS	1,500	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0021	U			6,730	N	90,800	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0021	U			NS	NS	23,000	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0021	U			6,730	N	90,800	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0021	U			87	N	137	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0031	U			NS	NS	411,000	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0021	U			NS	NS	26,000	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0021	U			NS	NS	1,300	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0021	U			NS	NS	23,000	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0021	U			NS	NS	81,600	N	RSL		
Acetone	67-64-1	mg/kg	0.3				NS	NS	960,000	N	NMED		3.13E-07
Benzene	71-43-2	mg/kg	0.0021	U			87	N	729	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0021	U			NS	NS	1,800	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0021	U			NS	NS	630	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0021	U			30	N	26,000	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0021	U			1,760	N	18,300	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0021	U			NS	NS	95	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0021	U			NS	NS	8,540	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0021	U			53	N	1,020	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0021	U			NS	NS	2,160	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0021	U			NS	NS	89,500	N	NMED		
Chloroform	67-66-3	mg/kg	0.0021	U			29	N	2,000	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0052	U			201	N	1,260	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0021	U			NS	NS	2,600	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0021	U			146	N	695	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0021	U			67	N	18,300	N	NMED		
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0021	U			NS	NS	288	N	NMED		
Dichlorodifluoromethane	75-71-8	mg/kg	0.0021	U			NS	NS	865	N	NMED		

TABLE D1-AG25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AG25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Ethylbenzene	100-41-4	mg/kg	0.0021	U			29,000	N	368	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0021	U			52	N	916	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0021	U			NS	NS	14,200	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0052	U			NS	NS	3,730	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0021	U			4,820	N	178,000	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.01	U			14,400	N	5,130	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0021	U			NS	NS	58,000	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0021	U			NS	NS	24,000	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0021	U			108	N	843	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0026	U			NS	NS	3,940	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0021	U			NS	NS	14,200	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0021	U			NS	NS	120,000	N	RSL		
Styrene	100-42-5	mg/kg	0.0021	U			NS	NS	51,300	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0021	U			NS	NS	120,000	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0021	U			1,650	N	629	N	NMED		
Toluene	108-88-3	mg/kg	0.0021	U			NS	NS	61,300	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0021	U			NS	NS	1,100	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0021	U			146	N	695	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0021	U			112	N	37	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0021	U			NS	NS	6,030	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0021	U			28	N	46	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	UJ			1,250	N	423	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	UJ			NS	NS	13,000	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	UJ			6,730	N	90,800	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	UJ			6,730	N	90,800	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	UJ			NS	NS	91,600	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	UJ			2,330	N	916	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	UJ			NS	NS	2,750	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	UJ			NS	NS	18,300	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	UJ			NS	NS	1,830	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	UJ			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	UJ			17	N	276	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	UJ			NS	NS	104,000	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.17	UJ			NS	NS	6,490	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.17	UJ			NS	NS	3,370	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	UJ			NS	NS	41,000	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.17	UJ			NS	NS	8,000	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	UJ			NS	NS	410	N	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.17	UJ			1,100	N	3,300	N	RSL[S]		
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	UJ			NS	NS	73	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	UJ			NS	NS	82,000	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.17	UJ			110	N	410	N	RSL		

TABLE D1-AG25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AG25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.17	UJ			1,100	N	3,300	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.17	UJ			NS	NS	50,500	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.17	UJ			NS	NS	25,300	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.17	UJ			NS	NS	253,000	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.17	UJ			32	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.13	UJ			24	N	251	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	UJ			32	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	UJ			NS	NS	25,300	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	UJ			323	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.17	UJ			NS	NS	3,300,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.17	UJ			NS	NS	82,000	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	UJ			NS	NS	2,500	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	UJ			16	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	UJ			519	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	UJ			1,830	N	18,300	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.17	UJ			12,000	N	160,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.17	UJ			3,230	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.17	UJ			NS	NS	91,600	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.17	UJ			NS	NS	8,200	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	UJ			3	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.17	UJ			NS	NS	1,200	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.17	UJ			NS	NS	733,000	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.17	UJ			NS	NS	916,000	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.17	UJ			NS	NS	33,700	N	NMED		
Fluorene	86-73-7	mg/kg	0.17	UJ			NS	NS	33,700	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.17	UJ			16	N	733	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	UJ			52	N	916	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.17	UJ			641	N	641	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	UJ			32	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.17	UJ			27,000	N	183,000	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	UJ			3	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.02	UJ			1	N	7	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	UJ			5,240	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.17	UJ			108	N	843	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.17	UJ			293	N	1,540	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.17	UJ			45	N	3,180	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.17	UJ			NS	NS	27,500	N	NMED		
Phenol	108-95-2	mg/kg	0.17	UJ			NS	NS	275,000	N	NMED		
Pyrene	129-00-0	mg/kg	0.17	UJ			NS	NS	25,300	N	NMED		

TABLE D1-AG25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AG25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			5,300	N	7,400	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.02	U			304	N	57	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.02	U			9	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.01	U			9	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.01	U			11	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.01	U			11	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.01	U			11	N	16	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.01	U			11	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg	0.00000000012	J	0.00000039	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.00000000249	J	0.0000083	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000034	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.0000011	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.000000093	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000098	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000015	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000091	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.00000014	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000022	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000011	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000067	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.00000017	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000011	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000029	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000051	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.0000000026				0.000238	N	0.000808	N	NMED	1.10E-10	3.23E-06

TABLE D1-AG25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AG25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	19,000				NS	NS	1,290,000	N	NMED		1.47E-02
Antimony	7440-36-0	mg/kg	0.24				NS	NS	519	N	NMED		4.62E-04
Arsenic	7440-38-2	mg/kg	1.1				36	N	208	N	NMED	3.06E-07	5.29E-03
Barium	7440-39-3	mg/kg	210				NS	NS	255,000	N	NMED		8.24E-04
Beryllium	7440-41-7	mg/kg	0.46	J			313,000	N	2,580	N	NMED	1.47E-11	1.78E-04
Cadmium	7440-43-9	mg/kg	0.58				417,000	N	1,110	N	NMED	1.39E-11	5.23E-04
Calcium	7440-70-2	mg/kg	3,000				NS	NS	32,400,000	N	NMED		
Chromium (Total) (3)	7440-47-3	mg/kg	15				505	N	314,000	N	NMED	2.97E-07	4.78E-05
Cobalt	7440-48-4	mg/kg	5.7				83,400	N	388	N	NMED	6.83E-10	1.47E-02
Copper	7440-50-8	mg/kg	79				NS	NS	51,900	N	NMED		1.52E-03
Iron	7439-89-6	mg/kg	12,000				NS	NS	908,000	N	NMED		1.32E-02
Lead	7439-92-1	mg/kg	13				NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	7,800				NS	NS	5,680,000	N	NMED		
Manganese	7439-96-5	mg/kg	340				NS	NS	160,000	N	NMED		2.13E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.027	J			NS	NS	112	N	NMED		2.41E-04
Nickel	7440-02-0	mg/kg	11				2,890,000	N	25,700	N	NMED	3.81E-11	4.28E-04
Potassium	7440-09-7	mg/kg	1,100				NS	NS	76,200,000	N	NMED		
Selenium	7782-49-2	mg/kg	1				NS	NS	6,490	N	NMED		1.54E-04
Silver	7440-22-4	mg/kg	0.1				NS	NS	6,490	N	NMED		1.54E-05
Sodium	7440-23-5	mg/kg	69				NS	NS	37,300,000	N	NMED		1.85E-06
Thallium	7440-28-0	mg/kg	0.057	J			NS	NS	13	N	NMED		4.38E-03
Vanadium	7440-62-2	mg/kg	25				NS	NS	6,530	N	NMED		3.83E-03
Zinc	7440-66-6	mg/kg	35				NS	NS	38,900	N	NMED		9.00E-04
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.32	U			NS	NS	63	N	NMED		
Nitrate	14797-55-8	mg/kg	4.8	J			NS	NS	2,080,000	N	NMED		2.31E-06
Perchlorate	14797-73-0	mg/kg	0.0017	UJ			NS	NS	908	N	NMED		
										Cumulative Risk/Hazard		**6E-07**	**0.06**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of Quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper tolerance limit

TABLE D1-AG25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AG25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0021	U			659	N	10,600	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0021	U			NS	NS	13,600	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0021	U			197	N	7,080	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0021	U			4,300	N	2	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0021	U			1,820	N	70,800	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0021	U			NS	NS	424	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0021	U			781	N	130	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0021	U			NS	NS	283	N	NMED[C]			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0052	U			8	N	6	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0021	U			8,540	N	79	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0021	U			NS	NS	492	N	NMED[C]			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0052	U			6	N	8	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0021	U			16	N	140	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0021	U			NS	NS	2,500	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0021	U			195	N	54	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0021	U			415	N	25	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0021	U			NS	NS	422	N	NMED[C]			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0021	U			45,900	N	24,800	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0021	U			NS	NS	7,080	N	NMED[C]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0021	U			45,900	N	24,800	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0021	U			415	N	25	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.0031	U			NS	NS	90,700	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0021	U			NS	NS	7,080	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.0021	U			NS	NS	599	N	NMED[C]			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0021	U			NS	NS	7,080	N	NMED[C]			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0021	U			NS	NS	20,400	N	NMED[C]			
Acetone	67-64-1	mg/kg	0.3				NS	NS	242,000	N	NMED		1.24E-06	
Benzene	71-43-2	mg/kg	0.0021	U			423	N	142	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.0021	U			NS	NS	538	N	NMED[C]			
Bromochloromethane	74-97-5	mg/kg	0.0021	U			NS	NS	296	N	NMED[C]			
Bromodichloromethane	75-27-4	mg/kg	0.0021	U			143	N	7,080	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0021	U			23,700	N	5,380	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0021	U			NS	NS	18	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.0021	U			NS	NS	1,620	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0021	U			252	N	202	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0021	U			NS	NS	412	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0021	U			NS	NS	16,600	N	NMED			
Chloroform	67-66-3	mg/kg	0.0021	U			134	N	391	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0052	U			956	N	235	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0021	U			NS	NS	708	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0021	U			781	N	130	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0021	U			340	N	5,380	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0021	U			NS	NS	54	N	NMED			
Dichlorodifluoromethane	75-71-8	mg/kg	0.0021	U			NS	NS	161	N	NMED			

TABLE D1-AG25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AG25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Ethylbenzene	100-41-4	mg/kg	0.0021	U			1,770	N	5,800	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0021	U			2,400	N	269	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0021	U			NS	NS	2,740	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0052	U			NS	NS	696	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0021	U			24,200	N	33,100	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.01	U			89,600	N	1,210	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0021	U			NS	NS	17,700	N	NMED[C]			
n-Propylbenzene	103-65-1	mg/kg	0.0021	U			NS	NS	6,730	N	NMED[C]			
Naphthalene	91-20-3	mg/kg	0.0021	U			633	N	159	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0026	U			NS	NS	736	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.0021	U			NS	NS	2,740	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.0021	U			NS	NS	35,400	N	NMED[C]			
Styrene	100-42-5	mg/kg	0.0021	U			NS	NS	10,200	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0021	U			NS	NS	35,400	N	NMED[C]			
Tetrachloroethene	127-18-4	mg/kg	0.0021	U			7,910	N	120	N	NMED			
Toluene	108-88-3	mg/kg	0.0021	U			NS	NS	14,000	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0021	U			NS	NS	206	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0021	U			781	N	130	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0021	U			5,370	N	7	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0021	U			NS	NS	1,130	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0021	U			161	N	162	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	UJ			8,540	N	79	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	UJ			NS	NS	2,500	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	UJ			45,900	N	24,800	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	UJ			45,900	N	24,800	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	UJ			NS	NS	26,900	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	UJ			17,000	N	269	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	UJ			NS	NS	807	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	UJ			NS	NS	5,380	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	UJ			NS	NS	538	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	UJ			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	UJ			165	N	81	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	UJ			NS	NS	28,300	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.17	UJ			NS	NS	1,770	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.17	UJ			NS	NS	1,000	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	UJ			NS	NS	13,500	N	NMED[C]			
2-Nitroaniline	88-74-4	mg/kg	0.17	UJ			NS	NS	2,690	N	NMED[C]			
2-Nitrophenol	88-75-5	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	UJ			410	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.17	UJ			135	N	1,080	N	NMED[SC]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	UJ			NS	NS	22	N	NMED			
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	UJ			NS	NS	26,900	N	NMED[C]			
4-Chloroaniline	106-47-8	mg/kg	0.17	UJ			14	N	135	N	NMED[C]			

TABLE D1-AG25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AG25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.17	UJ			135	N	1,080	N	NMED[C]			
4-Nitrophenol	100-02-7	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.17	UJ			NS	NS	15,100	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.17	UJ			NS	NS	7,530	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.17	UJ			NS	NS	75,300	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.17	UJ			240	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.13	UJ			173	N	15	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	UJ			240	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	UJ			NS	NS	7,530	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	UJ			2,310	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.17	UJ			NS	NS	1,080,000	N	NMED[C]			
Benzyl Alcohol	100-51-6	mg/kg	0.17	UJ			NS	NS	26,900	N	NMED[C]			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	UJ			NS	NS	807	N	NMED[C]			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	UJ			2	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	UJ			3,540	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	UJ			13,400	N	5,380	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.17	UJ			1,420	N	53,800	N	NMED[C]			
Carbazole	86-74-8	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.17	UJ			23,100	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.17	UJ			NS	NS	26,900	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.17	UJ			NS	NS	2,690	N	NMED[C]			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	UJ			24	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.17	UJ			NS	NS	269	N	NMED[C]			
Diethylphthalate	84-66-2	mg/kg	0.17	UJ			NS	NS	215,000	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.17	UJ			NS	NS	269,000	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.17	UJ			NS	NS	10,000	N	NMED			
Fluorene	86-73-7	mg/kg	0.17	UJ			NS	NS	10,000	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.17	UJ			117	N	215	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	UJ			2,400	N	269	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.17	UJ			4,670	N	188	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	UJ			240	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.17	UJ			198,000	N	53,700	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	UJ			0.38	N	NA	N	NMED[C]			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.02	UJ			4	N	2	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	UJ			37,900	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.17	UJ			633	N	159	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.17	UJ			1,350	N	353	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.17	UJ			346	N	989	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.17	UJ			NS	NS	8,070	N	NMED			
Phenol	108-95-2	mg/kg	0.17	UJ			NS	NS	77,400	N	NMED			
Pyrene	129-00-0	mg/kg	0.17	UJ			NS	NS	7,530	N	NMED			

TABLE D1-AG25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AG25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	8,070	N	NMED[C]			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	27	N	NMED[C]			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			626	N	2,420	N	NMED[C]			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.02	U			2,440	N	17	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.02	U			55	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.01	U			58	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.01	U			85	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.01	U			85	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.01	U			85	N	5	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.01	U			85	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (3)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg	0.00000000012	J	0.00000039	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.00000000249	J	0.0000083	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000034	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.0000011	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.000000093	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000098	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000015	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000091	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.00000014	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000022	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000011	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000067	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.00000017	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000011	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000029	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000051	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.0000000026				0.00172	N	0.000226	N	NMED	1.52E-11	1.15E-05	

TABLE D1-AG25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AG25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	19,000				NS	NS	41,400	N	NMED		4.59E-01	Nervous
Antimony	7440-36-0	mg/kg	0.24				NS	NS	142	N	NMED		1.69E-03	
Arsenic	7440-38-2	mg/kg	1.1				216	N	41	N	NMED	5.09E-08	2.67E-02	
Barium	7440-39-3	mg/kg	210				NS	NS	4,390	N	NMED		4.78E-02	
Beryllium	7440-41-7	mg/kg	0.46	J			2,710	N	148	N	NMED	1.70E-09	3.11E-03	
Cadmium	7440-43-9	mg/kg	0.58				3,610	N	72	N	NMED	1.61E-09	8.04E-03	
Calcium	7440-70-2	mg/kg	3,000				NS	NS	8,850,000	N	NMED		3.39E-04	
Chromium (Total) (4)	7440-47-3	mg/kg	15				468	N	134	N	NMED	3.21E-07	1.12E-01	GI, Blood
Cobalt	7440-48-4	mg/kg	5.7				722	N	37	N	NMED	7.89E-08	1.55E-01	Endocrine
Copper	7440-50-8	mg/kg	79				NS	NS	14,200	N	NMED		5.56E-03	
Iron	7439-89-6	mg/kg	12,000				NS	NS	248,000	N	NMED		4.84E-02	
Lead	7439-92-1	mg/kg	13				NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	7,800				NS	NS	1,550,000	N	NMED		5.03E-03	
Manganese	7439-96-5	mg/kg	340				NS	NS	464	N	NMED		7.33E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.027	J			NS	NS	21	N	NMED		1.30E-03	
Nickel	7440-02-0	mg/kg	11				20,500	N	753	N	NMED	5.37E-09	1.46E-02	
Potassium	7440-09-7	mg/kg	1,100				NS	NS	20,800,000	N	NMED		5.29E-05	
Selenium	7782-49-2	mg/kg	1				NS	NS	1,750	N	NMED		5.71E-04	
Silver	7440-22-4	mg/kg	0.1				NS	NS	1,770	N	NMED		5.65E-05	
Sodium	7440-23-5	mg/kg	69				NS	NS	10,200,000	N	NMED		6.76E-06	
Thallium	7440-28-0	mg/kg	0.057	J			NS	NS	4	N	NMED		1.61E-02	
Vanadium	7440-62-2	mg/kg	25				NS	NS	614	N	NMED		4.07E-02	
Zinc	7440-66-6	mg/kg	35				NS	NS	106,000	N	NMED		3.30E-04	
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.32	U			NS	NS	12	N	NMED			
Nitrate	14797-55-8	mg/kg	4.8	J			NS	NS	566,000	N	NMED		8.48E-06	
Perchlorate	14797-73-0	mg/kg	0.0017	UJ			NS	NS	248	N	NMED			
										Cumulative Risk/Hazard		**5E-07**	**1.7**	
										Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	1.2
Endocrine	0.16
GI	0.11
Blood	0.11
All Others	0.22

Notes:

[s] = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update).

2) NMED[C] = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

3) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

4) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of Quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper tolerance limit

TABLE D1-AH24-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AH24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0016	U			28.1	N	2,350	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0016	U			NS	NS	14,400	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0016	U			7.98	N	1,560	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0016	U			18.8	N	2.61	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0016	U			78.6	N	15,600	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0016	U			NS	NS	440	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0016	U			29.3	N	141	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0016	U			NS	NS	63	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0041	U			0.051	N	7.09	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0016	U			240	N	82.9	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0016	U			NS	NS	300	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0041	U			0.0858	N	5.88	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0016	U			0.672	N	135	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0016	U			NS	NS	2,150	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0016	U			8.32	N	55.6	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0016	U			17.8	N	29	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0016	U			NS	NS	270	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0016	U			1,290	N	5,480	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0016	U			NS	NS	1,600	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0016	U			1,290	N	5,480	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0016	U			17.8	N	29	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0025	U			NS	NS	37,400	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0016	U			NS	NS	1,560	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0016	U			NS	NS	200	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0016	U			NS	NS	1,600	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0016	U			NS	NS	5,810	N	RSL		
Acetone	67-64-1	mg/kg	0.17				NS	NS	66,300	N	NMED		2.56E-06
Benzene	71-43-2	mg/kg	0.0016	U			17.8	N	114	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0016	U			NS	NS	290	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0016	U			NS	NS	150	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0016	U			6.19	N	1,560	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0016	U			674	N	1,230	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0059				NS	NS	17.7	N	NMED		3.33E-04
Carbon Disulfide	75-15-0	mg/kg	0.0016	U			NS	NS	1,550	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0016	U			10.7	N	144	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0016	U			NS	NS	378	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0016	U			NS	NS	19,000	N	NMED		
Chloroform	67-66-3	mg/kg	0.0016	U			5.9	N	306	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0041	U			41.1	N	268	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0016	U			NS	NS	156	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0016	U			29.3	N	141	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0016	U			13.9	N	1,230	N	NMED		
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0016	U			NS	NS	57.9	N	NMED		
Dichlorodifluoromethane	75-71-8	mg/kg	0.0016	U			NS	NS	182	N	NMED		

TABLE D1-AH24-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AH24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Ethylbenzene	100-41-4	mg/kg	0.0016	U			75.1	N	3,930	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0016	U			68.3	N	61.6	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0016	U			NS	NS	2,360	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0041	U			NS	NS	764	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0016	U			975	N	37,800	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.0082	U			766	N	409	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0016	U			NS	NS	3,900	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0016	U			NS	NS	3,800	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0016	U			22.6	N	162	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0021	U			NS	NS	805	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0016	U			NS	NS	2,360	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0016	U			NS	NS	7,800	N	RSL		
Styrene	100-42-5	mg/kg	0.0016	U			NS	NS	7,260	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0016	U			NS	NS	7,800	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0016	U			337	N	111	N	NMED		
Toluene	108-88-3	mg/kg	0.0016	U			NS	NS	5,230	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0016	U			NS	NS	210	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0016	U			29.3	N	141	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0016	U			15.5	N	6.77	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0016	U			NS	NS	1,230	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0016	U			0.742	N	113	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	UJ			240	N	82.9	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	UJ			NS	NS	2,150	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	UJ			1,290	N	5,480	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	UJ			1,290	N	5,480	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	UJ			NS	NS	6,160	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	UJ			484	N	61.6	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	UJ			NS	NS	185	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	UJ			NS	NS	1,230	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	UJ			NS	NS	123	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	UJ			17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	UJ			3.56	N	18.5	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	UJ			NS	NS	6,260	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.17	UJ			NS	NS	391	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.17	UJ			NS	NS	232	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	UJ			NS	NS	3,200	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.17	UJ			NS	NS	630	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	UJ			11.8	N	NS	NS	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.17	UJ			270	N	250	N	RSL[S]		
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	UJ			NS	NS	4.93	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	UJ			NS	NS	6,300	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.17	UJ			27	N	32	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		

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FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4-Nitroaniline	100-01-6	mg/kg	0.17	UJ			270	N	250	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.17	UJ			NS	NS	3,480	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.17	UJ			NS	NS	1,740	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.17	UJ			NS	NS	17,400	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.17	UJ			1.53	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.13	UJ			1.12	N	17.4	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	UJ			1.53	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	UJ			NS	NS	1,740	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	UJ			15.3	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.17	UJ			NS	NS	250,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.17	UJ			NS	NS	6,300	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	UJ			NS	NS	190	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	UJ			3.11	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	UJ			99.3	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	UJ			380	N	1,230	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.17	UJ			2,900	N	13,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.17	UJ			153	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.17	UJ			NS	NS	6,160	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.17	UJ			NS	NS	630	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	UJ			0.153	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.17	UJ			NS	NS	78	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.17	UJ			NS	NS	49,300	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.17	UJ			NS	NS	61,600	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.17	UJ			NS	NS	2,320	N	NMED		
Fluorene	86-73-7	mg/kg	0.17	UJ			NS	NS	2,320	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.17	UJ			3.33	N	49.3	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	UJ			68.3	N	61.6	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.17	UJ			133	N	43.1	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	UJ			1.53	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.17	UJ			5,610	N	12,300	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	UJ			0.78	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.02	UJ			0.0234	N	0.493	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	UJ			1,090	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.17	UJ			22.6	N	162	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.17	UJ			60.4	N	131	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.17	UJ			9.85	N	234	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.17	UJ			NS	NS	1,740	N	NMED		
Phenol	108-95-2	mg/kg	0.17	UJ			NS	NS	18,500	N	NMED		
Pyrene	129-00-0	mg/kg	0.17	UJ			NS	NS	1,740	N	NMED		

TABLE D1-AH24-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AH24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			1,300	N	570	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.019	U			69.6	N	3.98	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.019	U			1.81	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.0093	U			1.86	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.0093	U			2.43	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.0093	U			2.43	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.0093	U			2.43	N	1.14	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.0093	U			2.43	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000072	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000036	J	0.000012	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg	0.0000000041	J	0.00000041	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.00000002	J	0.000002	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000017	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000049	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000066	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000058	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.00000006	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		UJ	0.000000076	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.000000071	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000011	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.00000012	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.00000024	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000012	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000022	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000064	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.000000028				0.000049	N	0.0000506	N	NMED	5.65E-09	5.47E-04

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HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AH24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	14,000				NS	NS	78,000	N	NMED		1.79E-01
Antimony	7440-36-0	mg/kg	0.11	J			NS	NS	31.3	N	NMED		3.51E-03
Arsenic	7440-38-2	mg/kg	1.2				7.07	N	13	N	NMED	1.70E-06	9.23E-02
Barium	7440-39-3	mg/kg	180				NS	NS	15,600	N	NMED		1.15E-02
Beryllium	7440-41-7	mg/kg	0.56	J			64,400	N	156	N	NMED	8.70E-11	3.59E-03
Cadmium	7440-43-9	mg/kg	0.44				85,900	N	70.5	N	NMED	5.12E-11	6.24E-03
Calcium	7440-70-2	mg/kg	3,400				NS	NS	13,000,000	N	NMED		2.62E-04
Chromium (Total) (3)	7440-47-3	mg/kg	11				96.6	N	45,200	N	NMED	1.14E-06	2.43E-04
Cobalt	7440-48-4	mg/kg	4.7				17,200	N	23.4	N	NMED	2.73E-09	2.01E-01
Copper	7440-50-8	mg/kg	74				NS	NS	3,130	N	NMED		2.36E-02
Iron	7439-89-6	mg/kg	9,000				NS	NS	54,800	N	NMED		1.64E-01
Lead	7439-92-1	mg/kg	13				NS	NS	200	N	RSL		
Magnesium	7439-95-4	mg/kg	5,800				NS	NS	15,600,000	N	NMED		3.72E-04
Manganese	7439-96-5	mg/kg	320				NS	NS	10,500	N	NMED		3.05E-02
Mercury (Elemental)	7439-97-6	mg/kg	0.024	J			NS	NS	23.8	N	NMED		1.01E-03
Nickel	7440-02-0	mg/kg	8.9				595,000	N	1,560	N	NMED	1.50E-10	5.71E-03
Potassium	7440-09-7	mg/kg	960				NS	NS	15,600,000	N	NMED		6.15E-05
Selenium	7782-49-2	mg/kg	0.92	J			NS	NS	391	N	NMED		2.35E-03
Silver	7440-22-4	mg/kg	0.071	J			NS	NS	391	N	NMED		1.82E-04
Sodium	7440-23-5	mg/kg	55				NS	NS	7,820,000	N	NMED		7.03E-06
Thallium	7440-28-0	mg/kg	0.044	J			NS	NS	0.782	N	NMED		5.63E-02
Vanadium	7440-62-2	mg/kg	16				NS	NS	394	N	NMED		4.06E-02
Zinc	7440-66-6	mg/kg	35				NS	NS	23,500	N	NMED		1.49E-03

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MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.31	U			NS	NS	11.2	N	NMED		
Nitrate	14797-55-8	mg/kg	3.7	J			NS	NS	125,000	N	NMED		2.96E-05
Perchlorate	14797-73-0	mg/kg	0.0016	UJ			NS	NS	54.8	N	NMED		
										Cumulative Risk/Hazard		**3E-06**	**0.8**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of Quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper tolerance limit

TABLE D1-AH24-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AH24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0016	U			137	N	39,400	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0016	U			NS	NS	72,500	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0016	U			39	N	26,000	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0016	U			92	N	12	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0016	U			383	N	260,000	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0016	U			NS	NS	2,260	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0016	U			146	N	695	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0016	U			NS	NS	930	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0041	U			1	N	34	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0016	U			1,250	N	423	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0016	U			NS	NS	1,800	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0041	U			1	N	41	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0016	U			3	N	738	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0016	U			NS	NS	13,000	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0016	U			41	N	286	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0016	U			87	N	137	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0016	U			NS	NS	1,500	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0016	U			6,730	N	90,800	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0016	U			NS	NS	23,000	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0016	U			6,730	N	90,800	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0016	U			87	N	137	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0025	U			NS	NS	411,000	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0016	U			NS	NS	26,000	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0016	U			NS	NS	1,300	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0016	U			NS	NS	23,000	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0016	U			NS	NS	81,600	N	RSL		
Acetone	67-64-1	mg/kg	0.17				NS	NS	960,000	N	NMED		1.77E-07
Benzene	71-43-2	mg/kg	0.0016	U			87	N	729	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0016	U			NS	NS	1,800	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0016	U			NS	NS	630	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0016	U			30	N	26,000	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0016	U			1,760	N	18,300	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0059				NS	NS	95	N	NMED		6.24E-05
Carbon Disulfide	75-15-0	mg/kg	0.0016	U			NS	NS	8,540	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0016	U			53	N	1,020	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0016	U			NS	NS	2,160	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0016	U			NS	NS	89,500	N	NMED		
Chloroform	67-66-3	mg/kg	0.0016	U			29	N	2,000	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0041	U			201	N	1,260	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0016	U			NS	NS	2,600	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0016	U			146	N	695	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0016	U			67	N	18,300	N	NMED		
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0016	U			NS	NS	288	N	NMED		
Dichlorodifluoromethane	75-71-8	mg/kg	0.0016	U			NS	NS	865	N	NMED		

TABLE D1-AH24-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AH24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Ethylbenzene	100-41-4	mg/kg	0.0016	U			29,000	N	368	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0016	U			52	N	916	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0016	U			NS	NS	14,200	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0041	U			NS	NS	3,730	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0016	U			4,820	N	178,000	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.0082	U			14,400	N	5,130	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0016	U			NS	NS	58,000	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0016	U			NS	NS	24,000	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0016	U			108	N	843	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0021	U			NS	NS	3,940	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0016	U			NS	NS	14,200	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0016	U			NS	NS	120,000	N	RSL		
Styrene	100-42-5	mg/kg	0.0016	U			NS	NS	51,300	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0016	U			NS	NS	120,000	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0016	U			1,650	N	629	N	NMED		
Toluene	108-88-3	mg/kg	0.0016	U			NS	NS	61,300	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0016	U			NS	NS	1,100	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0016	U			146	N	695	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0016	U			112	N	37	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0016	U			NS	NS	6,030	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0016	U			28	N	46	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	UJ			1,250	N	423	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	UJ			NS	NS	13,000	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	UJ			6,730	N	90,800	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	UJ			6,730	N	90,800	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	UJ			NS	NS	91,600	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	UJ			2,330	N	916	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	UJ			NS	NS	2,750	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	UJ			NS	NS	18,300	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	UJ			NS	NS	1,830	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	UJ			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	UJ			17	N	276	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	UJ			NS	NS	104,000	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.17	UJ			NS	NS	6,490	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.17	UJ			NS	NS	3,370	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	UJ			NS	NS	41,000	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.17	UJ			NS	NS	8,000	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	UJ			NS	NS	410	N	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.17	UJ			1,100	N	3,300	N	RSL[S]		
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	UJ			NS	NS	73	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	UJ			NS	NS	82,000	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.17	UJ			110	N	410	N	RSL		

TABLE D1-AH24-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AH24
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MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.17	UJ			1,100	N	3,300	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.17	UJ			NS	NS	50,500	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.17	UJ			NS	NS	25,300	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.17	UJ			NS	NS	253,000	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.17	UJ			32	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.13	UJ			24	N	251	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	UJ			32	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	UJ			NS	NS	25,300	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	UJ			323	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.17	UJ			NS	NS	3,300,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.17	UJ			NS	NS	82,000	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	UJ			NS	NS	2,500	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	UJ			16	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	UJ			519	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	UJ			1,830	N	18,300	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.17	UJ			12,000	N	160,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.17	UJ			3,230	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.17	UJ			NS	NS	91,600	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.17	UJ			NS	NS	8,200	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	UJ			3	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.17	UJ			NS	NS	1,200	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.17	UJ			NS	NS	733,000	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.17	UJ			NS	NS	916,000	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.17	UJ			NS	NS	33,700	N	NMED		
Fluorene	86-73-7	mg/kg	0.17	UJ			NS	NS	33,700	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.17	UJ			16	N	733	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	UJ			52	N	916	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.17	UJ			641	N	641	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	UJ			32	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.17	UJ			27,000	N	183,000	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	UJ			3	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.02	UJ			1	N	7	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	UJ			5,240	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.17	UJ			108	N	843	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.17	UJ			293	N	1,540	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.17	UJ			45	N	3,180	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.17	UJ			NS	NS	27,500	N	NMED		
Phenol	108-95-2	mg/kg	0.17	UJ			NS	NS	275,000	N	NMED		
Pyrene	129-00-0	mg/kg	0.17	UJ			NS	NS	25,300	N	NMED		

TABLE D1-AH24-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AH24
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MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			5,300	N	7,400	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.019	U			304	N	57	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.019	U			9	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.0093	U			9	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.0093	U			11	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.0093	U			11	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.0093	U			11	N	16	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.0093	U			11	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000072	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000036	J	0.000012	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg	0.0000000041	J	0.00000041	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.00000002	J	0.000002	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000017	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000049	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000066	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000058	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.00000006	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		UJ	0.000000076	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.000000071	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000011	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.00000012	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.00000024	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000012	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000022	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000064	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.000000028				0.000238	N	0.000808	N	NMED	1.16E-09	3.43E-05

TABLE D1-AH24-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AH24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	14,000				NS	NS	1,290,000	N	NMED		1.09E-02
Antimony	7440-36-0	mg/kg	0.11	J			NS	NS	519	N	NMED		2.12E-04
Arsenic	7440-38-2	mg/kg	1.2				36	N	208	N	NMED	3.34E-07	5.77E-03
Barium	7440-39-3	mg/kg	180				NS	NS	255,000	N	NMED		7.06E-04
Beryllium	7440-41-7	mg/kg	0.56	J			313,000	N	2,580	N	NMED	1.79E-11	2.17E-04
Cadmium	7440-43-9	mg/kg	0.44				417,000	N	1,110	N	NMED	1.06E-11	3.96E-04
Calcium	7440-70-2	mg/kg	3,400				NS	NS	32,400,000	N	NMED		1.05E-04
Chromium (Total) (3)	7440-47-3	mg/kg	11				505	N	314,000	N	NMED	2.18E-07	3.50E-05
Cobalt	7440-48-4	mg/kg	4.7				83,400	N	388	N	NMED	5.64E-10	1.21E-02
Copper	7440-50-8	mg/kg	74				NS	NS	51,900	N	NMED		1.43E-03
Iron	7439-89-6	mg/kg	9,000				NS	NS	908,000	N	NMED		9.91E-03
Lead	7439-92-1	mg/kg	13				NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	5,800				NS	NS	5,680,000	N	NMED		1.02E-03
Manganese	7439-96-5	mg/kg	320				NS	NS	160,000	N	NMED		2.00E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.024	J			NS	NS	112	N	NMED		2.14E-04
Nickel	7440-02-0	mg/kg	8.9				2,890,000	N	25,700	N	NMED	3.08E-11	3.46E-04
Potassium	7440-09-7	mg/kg	960				NS	NS	76,200,000	N	NMED		1.26E-05
Selenium	7782-49-2	mg/kg	0.92	J			NS	NS	6,490	N	NMED		1.42E-04
Silver	7440-22-4	mg/kg	0.071	J			NS	NS	6,490	N	NMED		1.09E-05
Sodium	7440-23-5	mg/kg	55				NS	NS	37,300,000	N	NMED		1.47E-06
Thallium	7440-28-0	mg/kg	0.044	J			NS	NS	13	N	NMED		3.38E-03
Vanadium	7440-62-2	mg/kg	16				NS	NS	6,530	N	NMED		2.45E-03
Zinc	7440-66-6	mg/kg	35				NS	NS	38,900	N	NMED		9.00E-04

TABLE D1-AH24-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AH24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.31	U			NS	NS	63	N	NMED		
Nitrate	14797-55-8	mg/kg	3.7	J			NS	NS	2,080,000	N	NMED		1.78E-06
Perchlorate	14797-73-0	mg/kg	0.0016	UJ			NS	NS	908	N	NMED		
										Cumulative Risk/Hazard		**6E-07**	**0.05**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of Quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper tolerance limit

TABLE D1-AH24-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AH24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2,3)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0016	U			659	N	10,600	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0016	U			NS	NS	13,600	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0016	U			197	N	7,080	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0016	U			4,300	N	2	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0016	U			1,820	N	70,800	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0016	U			NS	NS	424	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0016	U			781	N	130	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0016	U			NS	NS	283	N	NMED[C]			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0041	U			8	N	6	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0016	U			8,540	N	79	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0016	U			NS	NS	492	N	NMED[C]			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0041	U			6	N	8	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0016	U			16	N	140	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0016	U			NS	NS	2,500	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0016	U			195	N	54	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0016	U			415	N	25	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0016	U			NS	NS	422	N	NMED[C]			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0016	U			45,900	N	24,800	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0016	U			NS	NS	7,080	N	NMED[C]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0016	U			45,900	N	24,800	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0016	U			415	N	25	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.0025	U			NS	NS	90,700	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0016	U			NS	NS	7,080	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.0016	U			NS	NS	599	N	NMED[C]			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0016	U			NS	NS	7,080	N	NMED[C]			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0016	U			NS	NS	20,400	N	NMED[C]			
Acetone	67-64-1	mg/kg	0.17				NS	NS	242,000	N	NMED		7.02E-07	
Benzene	71-43-2	mg/kg	0.0016	U			423	N	142	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.0016	U			NS	NS	538	N	NMED[C]			
Bromochloromethane	74-97-5	mg/kg	0.0016	U			NS	NS	296	N	NMED[C]			
Bromodichloromethane	75-27-4	mg/kg	0.0016	U			143	N	7,080	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0016	U			23,700	N	5,380	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0059				NS	NS	18	N	NMED		3.30E-04	
Carbon Disulfide	75-15-0	mg/kg	0.0016	U			NS	NS	1,620	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0016	U			252	N	202	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0016	U			NS	NS	412	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0016	U			NS	NS	16,600	N	NMED			
Chloroform	67-66-3	mg/kg	0.0016	U			134	N	391	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0041	U			956	N	235	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0016	U			NS	NS	708	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0016	U			781	N	130	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0016	U			340	N	5,380	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0016	U			NS	NS	54	N	NMED			
Dichlorodifluoromethane	75-71-8	mg/kg	0.0016	U			NS	NS	161	N	NMED			

TABLE D1-AH24-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AH24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2,3)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Ethylbenzene	100-41-4	mg/kg	0.0016	U			1,770	N	5,800	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0016	U			2,400	N	269	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0016	U			NS	NS	2,740	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0041	U			NS	NS	696	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0016	U			24,200	N	33,100	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.0082	U			89,600	N	1,210	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0016	U			NS	NS	17,700	N	NMED[C]			
n-Propylbenzene	103-65-1	mg/kg	0.0016	U			NS	NS	6,730	N	NMED[C]			
Naphthalene	91-20-3	mg/kg	0.0016	U			633	N	159	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0021	U			NS	NS	736	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.0016	U			NS	NS	2,740	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.0016	U			NS	NS	35,400	N	NMED[C]			
Styrene	100-42-5	mg/kg	0.0016	U			NS	NS	10,200	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0016	U			NS	NS	35,400	N	NMED[C]			
Tetrachloroethene	127-18-4	mg/kg	0.0016	U			7,910	N	120	N	NMED			
Toluene	108-88-3	mg/kg	0.0016	U			NS	NS	14,000	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0016	U			NS	NS	206	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0016	U			781	N	130	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0016	U			5,370	N	7	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0016	U			NS	NS	1,130	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0016	U			161	N	162	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	UJ			8,540	N	79	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	UJ			NS	NS	2,500	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	UJ			45,900	N	24,800	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	UJ			45,900	N	24,800	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	UJ			NS	NS	26,900	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	UJ			17,000	N	269	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	UJ			NS	NS	807	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	UJ			NS	NS	5,380	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	UJ			NS	NS	538	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	UJ			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	UJ			165	N	81	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	UJ			NS	NS	28,300	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.17	UJ			NS	NS	1,770	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.17	UJ			NS	NS	1,000	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	UJ			NS	NS	13,500	N	NMED[C]			
2-Nitroaniline	88-74-4	mg/kg	0.17	UJ			NS	NS	2,690	N	NMED[C]			
2-Nitrophenol	88-75-5	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	UJ			410	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.17	UJ			135	N	1,080	N	NMED[SC]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	UJ			NS	NS	22	N	NMED			
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	UJ			NS	NS	26,900	N	NMED[C]			
4-Chloroaniline	106-47-8	mg/kg	0.17	UJ			14	N	135	N	NMED[C]			

TABLE D1-AH24-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AH24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2,3)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.17	UJ			135	N	1,080	N	NMED[C]			
4-Nitrophenol	100-02-7	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.17	UJ			NS	NS	15,100	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.17	UJ			NS	NS	7,530	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.17	UJ			NS	NS	75,300	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.17	UJ			240	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.13	UJ			173	N	15	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	UJ			240	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	UJ			NS	NS	7,530	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	UJ			2,310	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.17	UJ			NS	NS	1,080,000	N	NMED[C]			
Benzyl Alcohol	100-51-6	mg/kg	0.17	UJ			NS	NS	26,900	N	NMED[C]			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	UJ			NS	NS	807	N	NMED[C]			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	UJ			2	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	UJ			3,540	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	UJ			13,400	N	5,380	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.17	UJ			1,420	N	53,800	N	NMED[C]			
Carbazole	86-74-8	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.17	UJ			23,100	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.17	UJ			NS	NS	26,900	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.17	UJ			NS	NS	2,690	N	NMED[C]			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	UJ			24	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.17	UJ			NS	NS	269	N	NMED[C]			
Diethylphthalate	84-66-2	mg/kg	0.17	UJ			NS	NS	215,000	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.17	UJ			NS	NS	269,000	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.17	UJ			NS	NS	10,000	N	NMED			
Fluorene	86-73-7	mg/kg	0.17	UJ			NS	NS	10,000	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.17	UJ			117	N	215	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	UJ			2,400	N	269	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.17	UJ			4,670	N	188	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	UJ			240	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.17	UJ			198,000	N	53,700	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	UJ			0.38	N	NA	N	NMED[C]			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.02	UJ			4	N	2	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	UJ			37,900	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.17	UJ			633	N	159	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.17	UJ			1,350	N	353	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.17	UJ			346	N	989	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.17	UJ			NS	NS	8,070	N	NMED			
Phenol	108-95-2	mg/kg	0.17	UJ			NS	NS	77,400	N	NMED			
Pyrene	129-00-0	mg/kg	0.17	UJ			NS	NS	7,530	N	NMED			

TABLE D1-AH24-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AH24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2,3)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	8,070	N	NMED[C]			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	27	N	NMED[C]			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			626	N	2,420	N	NMED[C]			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.019	U			2,440	N	17	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.019	U			55	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.0093	U			58	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.0093	U			85	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.0093	U			85	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.0093	U			85	N	5	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.0093	U			85	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (4)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000072	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000036	J	0.000012	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg	0.0000000041	J	0.00000041	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.00000002	J	0.000002	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000017	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000049	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000066	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000058	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.00000006	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		UJ	0.000000076	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.000000071	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000011	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.00000012	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.00000024	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000012	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000022	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000064	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.000000028				0.00172	N	0.000226	N	NMED	1.61E-10	1.23E-04	

TABLE D1-AH24-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AH24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2,3)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	14,000				NS	NS	41,400	N	NMED		3.38E-01	Nervous
Antimony	7440-36-0	mg/kg	0.11	J			NS	NS	142	N	NMED		7.75E-04	
Arsenic	7440-38-2	mg/kg	1.2				216	N	41	N	NMED		2.91E-02	
Barium	7440-39-3	mg/kg	180				NS	NS	4,390	N	NMED		4.10E-02	
Beryllium	7440-41-7	mg/kg	0.56	J			2,710	N	148	N	NMED		3.78E-03	
Cadmium	7440-43-9	mg/kg	0.44				3,610	N	72	N	NMED		6.10E-03	
Calcium	7440-70-2	mg/kg	3,400				NS	NS	8,850,000	N	NMED		3.84E-04	
Chromium (Total) (5)	7440-47-3	mg/kg	11				468	N	134	N	NMED		8.21E-02	
Cobalt	7440-48-4	mg/kg	4.7				722	N	37	N	NMED		1.28E-01	Endocrine
Copper	7440-50-8	mg/kg	74				NS	NS	14,200	N	NMED		5.21E-03	
Iron	7439-89-6	mg/kg	9,000				NS	NS	248,000	N	NMED		3.63E-02	
Lead	7439-92-1	mg/kg	13				NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	5,800				NS	NS	1,550,000	N	NMED		3.74E-03	
Manganese	7439-96-5	mg/kg	320				NS	NS	464	N	NMED		6.90E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.024	J			NS	NS	21	N	NMED		1.16E-03	
Nickel	7440-02-0	mg/kg	8.9				20,500	N	753	N	NMED		1.18E-02	
Potassium	7440-09-7	mg/kg	960				NS	NS	20,800,000	N	NMED		4.62E-05	
Selenium	7782-49-2	mg/kg	0.92	J			NS	NS	1,750	N	NMED		5.26E-04	
Silver	7440-22-4	mg/kg	0.071	J			NS	NS	1,770	N	NMED		4.01E-05	
Sodium	7440-23-5	mg/kg	55				NS	NS	10,200,000	N	NMED		5.39E-06	
Thallium	7440-28-0	mg/kg	0.044	J			NS	NS	4	N	NMED		1.24E-02	
Vanadium	7440-62-2	mg/kg	16				NS	NS	614	N	NMED		2.61E-02	
Zinc	7440-66-6	mg/kg	35				NS	NS	106,000	N	NMED		3.30E-04	

TABLE D1-AH24-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AH24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2,3)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.31	U			NS	NS	12	N	NMED			
Nitrate	14797-55-8	mg/kg	3.7	J			NS	NS	566,000	N	NMED		6.54E-06	
Perchlorate	14797-73-0	mg/kg	0.0016	UJ			NS	NS	248	N	NMED			
										Cumulative Risk/Hazard		**2E-10**	**1.4**	
										Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	1.0
Endocrine	0.13
All Others	0.26

Notes:

[s] = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update).

2) NMED[C] = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

3) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

4) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of Quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper tolerance limit

TABLE D1-AI23-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AI23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0013	U			28.1	N	2,350	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0013	U			NS	NS	14,400	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0013	U			7.98	N	1,560	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0013	U			18.8	N	2.61	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0013	U			78.6	N	15,600	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0013	U			NS	NS	440	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0013	U			29.3	N	141	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0013	U			NS	NS	63	N	RSL			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0033	U			0.051	N	7.09	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0013	U			240	N	82.9	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0013	U			NS	NS	300	N	RSL			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0033	U			0.0858	N	5.88	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0013	U			0.672	N	135	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0013	U			NS	NS	2,150	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0013	U			8.32	N	55.6	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0013	U			17.8	N	29	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0013	U			NS	NS	270	N	RSL			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0013	U			1,290	N	5,480	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0013	U			NS	NS	1,600	N	RSL			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0013	U			1,290	N	5,480	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0013	U			17.8	N	29	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.002	U			NS	NS	37,400	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0013	U			NS	NS	1,560	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.0013	U			NS	NS	200	N	RSL			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0013	U			NS	NS	1,600	N	RSL			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0013	U			NS	NS	5,810	N	RSL			
Acetone	67-64-1	mg/kg	0.12				NS	NS	66,300	N	NMED		1.81E-06	
Benzene	71-43-2	mg/kg	0.0013	U			17.8	N	114	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.0013	U			NS	NS	290	N	RSL			
Bromochloromethane	74-97-5	mg/kg	0.0013	U			NS	NS	150	N	RSL			
Bromodichloromethane	75-27-4	mg/kg	0.0013	U			6.19	N	1,560	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0013	U			674	N	1,230	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0013	U			NS	NS	17.7	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.0013	U			NS	NS	1,550	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0013	U			10.7	N	144	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0013	U			NS	NS	378	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0013	U			NS	NS	19,000	N	NMED			
Chloroform	67-66-3	mg/kg	0.0013	U			5.9	N	306	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0033	U			41.1	N	268	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0013	U			NS	NS	156	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0013	U			29.3	N	141	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0013	U			13.9	N	1,230	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0013	U			NS	NS	57.9	N	NMED			
Dichlorodifluoromethane	75-71-8	mg/kg	0.0013	U			NS	NS	182	N	NMED			

TABLE D1-AI23-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AI23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Ethylbenzene	100-41-4	mg/kg	0.0013	U			75.1	N	3,930	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0013	U			68.3	N	61.6	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0013	U			NS	NS	2,360	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0033	U			NS	NS	764	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0013	U			975	N	37,800	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.0066	U			766	N	409	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0013	U			NS	NS	3,900	N	RSL			
n-Propylbenzene	103-65-1	mg/kg	0.0013	U			NS	NS	3,800	N	RSL			
Naphthalene	91-20-3	mg/kg	0.0013	U			22.6	N	162	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0016	U			NS	NS	805	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.0013	U			NS	NS	2,360	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.0013	U			NS	NS	7,800	N	RSL			
Styrene	100-42-5	mg/kg	0.0013	U			NS	NS	7,260	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0013	U			NS	NS	7,800	N	RSL			
Tetrachloroethene	127-18-4	mg/kg	0.0013	U			337	N	111	N	NMED			
Toluene	108-88-3	mg/kg	0.0013	U			NS	NS	5,230	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0013	U			NS	NS	210	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0013	U			29.3	N	141	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0013	U			15.5	N	6.77	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0013	U			NS	NS	1,230	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0013	U			0.742	N	113	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	UJ			240	N	82.9	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	UJ			NS	NS	2,150	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	UJ			1,290	N	5,480	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	UJ			1,290	N	5,480	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	UJ			NS	NS	6,160	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	UJ			484	N	61.6	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	UJ			NS	NS	185	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	UJ			NS	NS	1,230	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	UJ			NS	NS	123	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	UJ			17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	UJ			3.56	N	18.5	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	UJ			NS	NS	6,260	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.17	UJ			NS	NS	391	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.17	UJ			NS	NS	232	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	UJ			NS	NS	3,200	N	RSL			
2-Nitroaniline	88-74-4	mg/kg	0.17	UJ			NS	NS	630	N	RSL			
2-Nitrophenol	88-75-5	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	UJ			11.8	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.17	UJ			270	N	250	N	RSL[S]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	UJ			NS	NS	4.93	N	NMED			
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	UJ			NS	NS	6,300	N	RSL			
4-Chloroaniline	106-47-8	mg/kg	0.17	UJ			27	N	32	N	RSL			

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HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AI23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.17	UJ			270	N	250	N	RSL			
4-Nitrophenol	100-02-7	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.17	UJ			NS	NS	3,480	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.17	UJ			NS	NS	1,740	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.17	UJ			NS	NS	17,400	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.17	UJ			1.53	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.13	UJ			1.12	N	17.4	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	UJ			1.53	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	UJ			NS	NS	1,740	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	UJ			15.3	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.17	UJ			NS	NS	250,000	N	RSL			
Benzyl Alcohol	100-51-6	mg/kg	0.17	UJ			NS	NS	6,300	N	RSL			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	UJ			NS	NS	190	N	RSL			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	UJ			3.11	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	UJ			99.3	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	UJ			380	N	1,230	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.17	UJ			2,900	N	13,000	N	RSL			
Carbazole	86-74-8	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.17	UJ			153	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.17	UJ			NS	NS	6,160	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.17	UJ			NS	NS	630	N	RSL			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	UJ			0.153	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.17	UJ			NS	NS	78	N	RSL			
Diethylphthalate	84-66-2	mg/kg	0.17	UJ			NS	NS	49,300	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.17	UJ			NS	NS	61,600	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.17	UJ			NS	NS	2,320	N	NMED			
Fluorene	86-73-7	mg/kg	0.17	UJ			NS	NS	2,320	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.17	UJ			3.33	N	49.3	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	UJ			68.3	N	61.6	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.17	UJ			133	N	43.1	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	UJ			1.53	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.17	UJ			5,610	N	12,300	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	UJ			0.78	N	NS	NS	RSL			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	UJ			0.0234	N	0.493	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	UJ			1,090	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.17	UJ			22.6	N	162	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.17	UJ			60.4	N	131	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.17	UJ			9.85	N	234	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.17	UJ			NS	NS	1,740	N	NMED			
Phenol	108-95-2	mg/kg	0.17	UJ			NS	NS	18,500	N	NMED			
Pyrene	129-00-0	mg/kg	0.17	UJ			NS	NS	1,740	N	NMED			

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MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	2,200	N	RSL			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	6.3	N	RSL			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			211	N	36	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			3.56	N	18.5	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	7.7	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			31.6	N	70.4	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	6.16	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	7.64	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			333	N	247	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			83.1	N	301	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	156	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			60.4	N	131	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			313	N	6.16	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	3,850	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			1,300	N	570	N	RSL			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.02	U			69.6	N	3.98	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.02	U			1.81	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.01	U			1.86	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.01	U			2.43	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.01	U			2.43	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.01	U			2.43	N	1.14	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.01	U			2.43	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (2)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.0000007	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000063	J	0.000021	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000064	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.0000021	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.0000002	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000083	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000018	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.00000011	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.0000001	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.0000002	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000018	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.0000002	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000055	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.000000054	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000021	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000018	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000082	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.0000000063				0.000049	N	0.0000506	N	NMED	1.29E-09	1.25E-04	

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MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	22,000				NS	NS	78,000	N	NMED		2.82E-01	Nervous
Antimony	7440-36-0	mg/kg	0.11	J			NS	NS	31.3	N	NMED		3.51E-03	
Arsenic	7440-38-2	mg/kg	1.2				7.07	N	13	N	NMED	1.70E-06	9.23E-02	
Barium	7440-39-3	mg/kg	150				NS	NS	15,600	N	NMED		9.62E-03	
Beryllium	7440-41-7	mg/kg	0.54	J			64,400	N	156	N	NMED	8.39E-11	3.46E-03	
Cadmium	7440-43-9	mg/kg	1	J			85,900	N	70.5	N	NMED	1.16E-10	1.42E-02	
Calcium	7440-70-2	mg/kg	3,300	J			NS	NS	13,000,000	N	NMED		1.42E-02	
Chromium (Total) (3)	7440-47-3	mg/kg	15				96.6	N	45,200	N	NMED	1.55E-06	3.32E-04	
Cobalt	7440-48-4	mg/kg	6				17,200	N	23.4	N	NMED	3.49E-09	2.56E-01	Endocrine
Copper	7440-50-8	mg/kg	70				NS	NS	3,130	N	NMED		2.24E-02	
Iron	7439-89-6	mg/kg	12,000				NS	NS	54,800	N	NMED		2.19E-01	GI
Lead	7439-92-1	mg/kg	13				NS	NS	200	N	RSL			
Magnesium	7439-95-4	mg/kg	9,500				NS	NS	15,600,000	N	NMED		1.42E-02	
Manganese	7439-96-5	mg/kg	320				NS	NS	10,500	N	NMED		3.05E-02	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.02	J			NS	NS	23.8	N	NMED		8.40E-04	
Nickel	7440-02-0	mg/kg	11				595,000	N	1,560	N	NMED	1.85E-10	7.05E-03	
Potassium	7440-09-7	mg/kg	1,000				NS	NS	15,600,000	N	NMED		6.41E-05	
Selenium	7782-49-2	mg/kg	1.2				NS	NS	391	N	NMED		3.07E-03	
Silver	7440-22-4	mg/kg	0.087	J			NS	NS	391	N	NMED		2.23E-04	
Sodium	7440-23-5	mg/kg	72				NS	NS	7,820,000	N	NMED		9.21E-06	
Thallium	7440-28-0	mg/kg	0.052	J			NS	NS	0.782	N	NMED		6.65E-02	
Vanadium	7440-62-2	mg/kg	24				NS	NS	394	N	NMED		6.09E-02	
Zinc	7440-66-6	mg/kg	39				NS	NS	23,500	N	NMED		1.66E-03	

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MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.33	U			NS	NS	11.2	N	NMED			
Nitrate	14797-55-8	mg/kg	6.8	J			NS	NS	125,000	N	NMED		5.44E-05	
Perchlorate	14797-73-0	mg/kg	0.0018	UJ			NS	NS	54.8	N	NMED			
										Cumulative Risk/Hazard		**3E-06**	**1.1**	
										Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	0.3
Endocrine	0.26
GI	0.22
All Others	0.31

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of Quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper tolerance limit

TABLE D1-AI23-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AI23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0013	U			137	N	39,400	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0013	U			NS	NS	72,500	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0013	U			39	N	26,000	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0013	U			92	N	12	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0013	U			383	N	260,000	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0013	U			NS	NS	2,260	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0013	U			146	N	695	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0013	U			NS	NS	930	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0033	U			1	N	34	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0013	U			1,250	N	423	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0013	U			NS	NS	1,800	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0033	U			1	N	41	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0013	U			3	N	738	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0013	U			NS	NS	13,000	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0013	U			41	N	286	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0013	U			87	N	137	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0013	U			NS	NS	1,500	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0013	U			6,730	N	90,800	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0013	U			NS	NS	23,000	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0013	U			6,730	N	90,800	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0013	U			87	N	137	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.002	U			NS	NS	411,000	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0013	U			NS	NS	26,000	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0013	U			NS	NS	1,300	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0013	U			NS	NS	23,000	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0013	U			NS	NS	81,600	N	RSL		
Acetone	67-64-1	mg/kg	0.12				NS	NS	960,000	N	NMED		1.25E-07
Benzene	71-43-2	mg/kg	0.0013	U			87	N	729	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0013	U			NS	NS	1,800	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0013	U			NS	NS	630	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0013	U			30	N	26,000	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0013	U			1,760	N	18,300	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0013	U			NS	NS	95	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0013	U			NS	NS	8,540	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0013	U			53	N	1,020	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0013	U			NS	NS	2,160	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0013	U			NS	NS	89,500	N	NMED		
Chloroform	67-66-3	mg/kg	0.0013	U			29	N	2,000	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0033	U			201	N	1,260	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0013	U			NS	NS	2,600	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0013	U			146	N	695	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0013	U			67	N	18,300	N	NMED		
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0013	U			NS	NS	288	N	NMED		
Dichlorodifluoromethane	75-71-8	mg/kg	0.0013	U			NS	NS	865	N	NMED		

TABLE D1-AI23-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AI23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Ethylbenzene	100-41-4	mg/kg	0.0013	U			29,000	N	368	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0013	U			52	N	916	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0013	U			NS	NS	14,200	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0033	U			NS	NS	3,730	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0013	U			4,820	N	178,000	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.0066	U			14,400	N	5,130	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0013	U			NS	NS	58,000	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0013	U			NS	NS	24,000	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0013	U			108	N	843	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0016	U			NS	NS	3,940	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0013	U			NS	NS	14,200	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0013	U			NS	NS	120,000	N	RSL		
Styrene	100-42-5	mg/kg	0.0013	U			NS	NS	51,300	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0013	U			NS	NS	120,000	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0013	U			1,650	N	629	N	NMED		
Toluene	108-88-3	mg/kg	0.0013	U			NS	NS	61,300	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0013	U			NS	NS	1,100	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0013	U			146	N	695	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0013	U			112	N	37	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0013	U			NS	NS	6,030	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0013	U			28	N	46	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	UJ			1,250	N	423	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	UJ			NS	NS	13,000	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	UJ			6,730	N	90,800	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	UJ			6,730	N	90,800	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	UJ			NS	NS	91,600	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	UJ			2,330	N	916	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	UJ			NS	NS	2,750	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	UJ			NS	NS	18,300	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	UJ			NS	NS	1,830	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	UJ			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	UJ			17	N	276	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	UJ			NS	NS	104,000	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.17	UJ			NS	NS	6,490	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.17	UJ			NS	NS	3,370	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	UJ			NS	NS	41,000	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.17	UJ			NS	NS	8,000	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	UJ			NS	NS	410	N	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.17	UJ			1,100	N	3,300	N	RSL[S]		
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	UJ			NS	NS	73	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	UJ			NS	NS	82,000	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.17	UJ			110	N	410	N	RSL		

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MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.17	UJ			1,100	N	3,300	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.17	UJ			NS	NS	50,500	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.17	UJ			NS	NS	25,300	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.17	UJ			NS	NS	253,000	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.17	UJ			32	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.13	UJ			24	N	251	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	UJ			32	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	UJ			NS	NS	25,300	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	UJ			323	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.17	UJ			NS	NS	3,300,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.17	UJ			NS	NS	82,000	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	UJ			NS	NS	2,500	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	UJ			16	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	UJ			519	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	UJ			1,830	N	18,300	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.17	UJ			12,000	N	160,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.17	UJ			3,230	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.17	UJ			NS	NS	91,600	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.17	UJ			NS	NS	8,200	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	UJ			3	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.17	UJ			NS	NS	1,200	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.17	UJ			NS	NS	733,000	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.17	UJ			NS	NS	916,000	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.17	UJ			NS	NS	33,700	N	NMED		
Fluorene	86-73-7	mg/kg	0.17	UJ			NS	NS	33,700	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.17	UJ			16	N	733	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	UJ			52	N	916	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.17	UJ			641	N	641	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	UJ			32	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.17	UJ			27,000	N	183,000	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	UJ			3	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	UJ			1	N	7	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	UJ			5,240	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.17	UJ			108	N	843	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.17	UJ			293	N	1,540	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.17	UJ			45	N	3,180	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.17	UJ			NS	NS	27,500	N	NMED		
Phenol	108-95-2	mg/kg	0.17	UJ			NS	NS	275,000	N	NMED		
Pyrene	129-00-0	mg/kg	0.17	UJ			NS	NS	25,300	N	NMED		

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	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			5,300	N	7,400	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.02	U			304	N	57	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.02	U			9	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.01	U			9	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.01	U			11	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.01	U			11	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.01	U			11	N	16	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.01	U			11	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.0000007	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000063	J	0.000021	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000064	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.0000021	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.0000002	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000083	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000018	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.00000011	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.0000001	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.0000002	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000018	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.0000002	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000055	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.000000054	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000021	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000018	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000082	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.0000000063				0.000238	N	0.000808	N	NMED	2.65E-10	7.80E-06

TABLE D1-AI23-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AI23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	22,000				NS	NS	1,290,000	N	NMED		1.71E-02
Antimony	7440-36-0	mg/kg	0.11	J			NS	NS	519	N	NMED		2.12E-04
Arsenic	7440-38-2	mg/kg	1.2				36	N	208	N	NMED	3.34E-07	5.77E-03
Barium	7440-39-3	mg/kg	150				NS	NS	255,000	N	NMED		5.88E-04
Beryllium	7440-41-7	mg/kg	0.54	J			313,000	N	2,580	N	NMED	1.73E-11	2.09E-04
Cadmium	7440-43-9	mg/kg	1	J			417,000	N	1,110	N	NMED	2.40E-11	9.01E-04
Calcium	7440-70-2	mg/kg	3,300	J			NS	NS	32,400,000	N	NMED		1.02E-04
Chromium (Total) (3)	7440-47-3	mg/kg	15				505	N	314,000	N	NMED	2.97E-07	4.78E-05
Cobalt	7440-48-4	mg/kg	6				83,400	N	388	N	NMED	7.19E-10	1.55E-02
Copper	7440-50-8	mg/kg	70				NS	NS	51,900	N	NMED		1.35E-03
Iron	7439-89-6	mg/kg	12,000				NS	NS	908,000	N	NMED		1.32E-02
Lead	7439-92-1	mg/kg	13				NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	9,500				NS	NS	5,680,000	N	NMED		1.67E-03
Manganese	7439-96-5	mg/kg	320				NS	NS	160,000	N	NMED		2.00E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.02	J			NS	NS	112	N	NMED		1.79E-04
Nickel	7440-02-0	mg/kg	11				2,890,000	N	25,700	N	NMED	3.81E-11	4.28E-04
Potassium	7440-09-7	mg/kg	1,000				NS	NS	76,200,000	N	NMED		1.31E-05
Selenium	7782-49-2	mg/kg	1.2				NS	NS	6,490	N	NMED		1.85E-04
Silver	7440-22-4	mg/kg	0.087	J			NS	NS	6,490	N	NMED		1.34E-05
Sodium	7440-23-5	mg/kg	72				NS	NS	37,300,000	N	NMED		1.93E-06
Thallium	7440-28-0	mg/kg	0.052	J			NS	NS	13	N	NMED		4.00E-03
Vanadium	7440-62-2	mg/kg	24				NS	NS	6,530	N	NMED		3.68E-03
Zinc	7440-66-6	mg/kg	39				NS	NS	38,900	N	NMED		1.00E-03

TABLE D1-AI23-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AI23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.33	U			NS	NS	63	N	NMED		
Nitrate	14797-55-8	mg/kg	6.8	J			NS	NS	2,080,000	N	NMED		3.27E-06
Perchlorate	14797-73-0	mg/kg	0.0018	UJ			NS	NS	908	N	NMED		
										Cumulative Risk/Hazard		**6E-07**	**0.07**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper tolerance limit

TABLE D1-AI23-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AI23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0013	U			659	N	10,600	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0013	U			NS	NS	13,600	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0013	U			197	N	7,080	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0013	U			4,300	N	2	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0013	U			1,820	N	70,800	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0013	U			NS	NS	424	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0013	U			781	N	130	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0013	U			NS	NS	283	N	NMED[C]			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0033	U			8	N	6	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0013	U			8,540	N	79	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0013	U			NS	NS	492	N	NMED[C]			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0033	U			6	N	8	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0013	U			16	N	140	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0013	U			NS	NS	2,500	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0013	U			195	N	54	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0013	U			415	N	25	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0013	U			NS	NS	422	N	NMED[C]			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0013	U			45,900	N	24,800	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0013	U			NS	NS	7,080	N	NMED[C]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0013	U			45,900	N	24,800	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0013	U			415	N	25	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.002	U			NS	NS	90,700	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0013	U			NS	NS	7,080	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.0013	U			NS	NS	599	N	NMED[C]			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0013	U			NS	NS	7,080	N	NMED[C]			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0013	U			NS	NS	20,400	N	NMED[C]			
Acetone	67-64-1	mg/kg	0.12				NS	NS	242,000	N	NMED		4.96E-07	
Benzene	71-43-2	mg/kg	0.0013	U			423	N	142	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.0013	U			NS	NS	538	N	NMED[C]			
Bromochloromethane	74-97-5	mg/kg	0.0013	U			NS	NS	296	N	NMED[C]			
Bromodichloromethane	75-27-4	mg/kg	0.0013	U			143	N	7,080	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0013	U			23,700	N	5,380	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0013	U			NS	NS	18	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.0013	U			NS	NS	1,620	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0013	U			252	N	202	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0013	U			NS	NS	412	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0013	U			NS	NS	16,600	N	NMED			
Chloroform	67-66-3	mg/kg	0.0013	U			134	N	391	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0033	U			956	N	235	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0013	U			NS	NS	708	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0013	U			781	N	130	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0013	U			340	N	5,380	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0013	U			NS	NS	54	N	NMED			
Dichlorodifluoromethane	75-71-8	mg/kg	0.0013	U			NS	NS	161	N	NMED			

TABLE D1-AI23-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AI23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Ethylbenzene	100-41-4	mg/kg	0.0013	U			1,770	N	5,800	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0013	U			2,400	N	269	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0013	U			NS	NS	2,740	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0033	U			NS	NS	696	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0013	U			24,200	N	33,100	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.0066	U			89,600	N	1,210	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0013	U			NS	NS	17,700	N	NMED[C]			
n-Propylbenzene	103-65-1	mg/kg	0.0013	U			NS	NS	6,730	N	NMED[C]			
Naphthalene	91-20-3	mg/kg	0.0013	U			633	N	159	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0016	U			NS	NS	736	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.0013	U			NS	NS	2,740	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.0013	U			NS	NS	35,400	N	NMED[C]			
Styrene	100-42-5	mg/kg	0.0013	U			NS	NS	10,200	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0013	U			NS	NS	35,400	N	NMED[C]			
Tetrachloroethene	127-18-4	mg/kg	0.0013	U			7,910	N	120	N	NMED			
Toluene	108-88-3	mg/kg	0.0013	U			NS	NS	14,000	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0013	U			NS	NS	206	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0013	U			781	N	130	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0013	U			5,370	N	7	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0013	U			NS	NS	1,130	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0013	U			161	N	162	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	UJ			8,540	N	79	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	UJ			NS	NS	2,500	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	UJ			45,900	N	24,800	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	UJ			45,900	N	24,800	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	UJ			NS	NS	26,900	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	UJ			17,000	N	269	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	UJ			NS	NS	807	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	UJ			NS	NS	5,380	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	UJ			NS	NS	538	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	UJ			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	UJ			165	N	81	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	UJ			NS	NS	28,300	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.17	UJ			NS	NS	1,770	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.17	UJ			NS	NS	1,000	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	UJ			NS	NS	13,500	N	NMED[C]			
2-Nitroaniline	88-74-4	mg/kg	0.17	UJ			NS	NS	2,690	N	NMED[C]			
2-Nitrophenol	88-75-5	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	UJ			410	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.17	UJ			135	N	1,080	N	NMED[SC]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	UJ			NS	NS	22	N	NMED			
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	UJ			NS	NS	26,900	N	NMED[C]			
4-Chloroaniline	106-47-8	mg/kg	0.17	UJ			14	N	135	N	NMED[C]			

TABLE D1-AI23-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AI23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.17	UJ			135	N	1,080	N	NMED[C]			
4-Nitrophenol	100-02-7	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.17	UJ			NS	NS	15,100	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.17	UJ			NS	NS	7,530	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.17	UJ			NS	NS	75,300	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.17	UJ			240	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.13	UJ			173	N	15	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	UJ			240	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	UJ			NS	NS	7,530	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	UJ			2,310	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.17	UJ			NS	NS	1,080,000	N	NMED[C]			
Benzyl Alcohol	100-51-6	mg/kg	0.17	UJ			NS	NS	26,900	N	NMED[C]			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	UJ			NS	NS	807	N	NMED[C]			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	UJ			2	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	UJ			3,540	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	UJ			13,400	N	5,380	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.17	UJ			1,420	N	53,800	N	NMED[C]			
Carbazole	86-74-8	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.17	UJ			23,100	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.17	UJ			NS	NS	26,900	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.17	UJ			NS	NS	2,690	N	NMED[C]			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	UJ			24	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.17	UJ			NS	NS	269	N	NMED[C]			
Diethylphthalate	84-66-2	mg/kg	0.17	UJ			NS	NS	215,000	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.17	UJ			NS	NS	269,000	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.17	UJ			NS	NS	10,000	N	NMED			
Fluorene	86-73-7	mg/kg	0.17	UJ			NS	NS	10,000	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.17	UJ			117	N	215	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	UJ			2,400	N	269	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.17	UJ			4,670	N	188	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	UJ			240	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.17	UJ			198,000	N	53,700	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	UJ			0.38	N	NA	N	NMED[C]			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	UJ			4	N	2	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	UJ			37,900	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.17	UJ			633	N	159	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.17	UJ			1,350	N	353	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.17	UJ			346	N	989	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.17	UJ			NS	NS	8,070	N	NMED			
Phenol	108-95-2	mg/kg	0.17	UJ			NS	NS	77,400	N	NMED			
Pyrene	129-00-0	mg/kg	0.17	UJ			NS	NS	7,530	N	NMED			

TABLE D1-AI23-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AI23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	8,070	N	NMED[C]			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	27	N	NMED[C]			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			626	N	2,420	N	NMED[C]			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.02	U			2,440	N	17	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.02	U			55	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.01	U			58	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.01	U			85	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.01	U			85	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.01	U			85	N	5	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.01	U			85	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (3)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.0000007	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000063	J	0.000021	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000064	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.0000021	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.0000002	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000083	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000018	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.00000011	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.0000001	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.0000002	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000018	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.0000002	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000055	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.000000054	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000021	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000018	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000082	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.0000000063				0.00172	N	0.000226	N	NMED	3.66E-11	2.79E-05	

TABLE D1-AI23-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AI23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	22,000				NS	NS	41,400	N	NMED		5.31E-01	Nervous
Antimony	7440-36-0	mg/kg	0.11	J			NS	NS	142	N	NMED		7.75E-04	
Arsenic	7440-38-2	mg/kg	1.2				216	N	41	N	NMED	5.56E-08	2.91E-02	
Barium	7440-39-3	mg/kg	150				NS	NS	4,390	N	NMED		3.42E-02	
Beryllium	7440-41-7	mg/kg	0.54	J			2,710	N	148	N	NMED	1.99E-09	3.65E-03	
Cadmium	7440-43-9	mg/kg	1	J			3,610	N	72	N	NMED	2.77E-09	1.39E-02	
Calcium	7440-70-2	mg/kg	3,300	J			NS	NS	8,850,000	N	NMED		3.73E-04	
Chromium (Total) (4)	7440-47-3	mg/kg	15				468	N	134	N	NMED	3.21E-07	1.12E-01	
Cobalt	7440-48-4	mg/kg	6				722	N	37	N	NMED	8.31E-08	1.63E-01	Endocrine
Copper	7440-50-8	mg/kg	70				NS	NS	14,200	N	NMED		4.93E-03	
Iron	7439-89-6	mg/kg	12,000				NS	NS	248,000	N	NMED		4.84E-02	
Lead	7439-92-1	mg/kg	13				NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	9,500				NS	NS	1,550,000	N	NMED		6.13E-03	
Manganese	7439-96-5	mg/kg	320				NS	NS	464	N	NMED		6.90E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.02	J			NS	NS	21	N	NMED		9.66E-04	
Nickel	7440-02-0	mg/kg	11				20,500	N	753	N	NMED	5.37E-09	1.46E-02	
Potassium	7440-09-7	mg/kg	1,000				NS	NS	20,800,000	N	NMED		4.81E-05	
Selenium	7782-49-2	mg/kg	1.2				NS	NS	1,750	N	NMED		6.86E-04	
Silver	7440-22-4	mg/kg	0.087	J			NS	NS	1,770	N	NMED		4.92E-05	
Sodium	7440-23-5	mg/kg	72				NS	NS	10,200,000	N	NMED		7.06E-06	
Thallium	7440-28-0	mg/kg	0.052	J			NS	NS	4	N	NMED		1.47E-02	
Vanadium	7440-62-2	mg/kg	24				NS	NS	614	N	NMED		3.91E-02	
Zinc	7440-66-6	mg/kg	39				NS	NS	106,000	N	NMED		3.68E-04	

TABLE D1-AI23-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AI23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.33	U			NS	NS	12	N	NMED			
Nitrate	14797-55-8	mg/kg	6.8	J			NS	NS	566,000	N	NMED		1.20E-05	
Perchlorate	14797-73-0	mg/kg	0.0018	UJ			NS	NS	248	N	NMED			
										Cumulative Risk/Hazard		**5E-07**	**1.7**	
										Exceeds Target Level		**N**	Y	

System	Hazard Quotient
Nervous	1.2
Endocrine	0.16
All Others	0.32

Notes:

[s] = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update).

2) NMED[C] = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

3) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

4) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service

DL = Detection limit

J = Estimated

LOD = Limit of detection

LOQ = Limit of quantitation

mg/kg = milligrams per kilogram

NS = No Standard

U = Nondetect

UJ = Estimated Nondetect

UTL = Upper tolerance limit

TABLE D1-AI24-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AI24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0019	U			28.1	N	2,350	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0019	U			NS	NS	14,400	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0019	U			7.98	N	1,560	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0019	U			18.8	N	2.61	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0019	U			78.6	N	15,600	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0019	U			NS	NS	440	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0019	U			29.3	N	141	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0019	U			NS	NS	63	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0047	U			0.051	N	7.09	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0019	U			240	N	82.9	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0019	U			NS	NS	300	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0047	U			0.0858	N	5.88	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0019	U			0.672	N	135	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0019	U			NS	NS	2,150	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0019	U			8.32	N	55.6	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0019	U			17.8	N	29	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0019	U			NS	NS	270	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0019	U			1,290	N	5,480	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0019	U			NS	NS	1,600	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0019	U			1,290	N	5,480	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0019	U			17.8	N	29	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0028	U			NS	NS	37,400	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0019	U			NS	NS	1,560	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0019	U			NS	NS	200	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0019	U			NS	NS	1,600	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0019	U			NS	NS	5,810	N	RSL		
Acetone	67-64-1	mg/kg	0.33	J			NS	NS	66,300	N	NMED		4.98E-06
Benzene	71-43-2	mg/kg	0.0019	U			17.8	N	114	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0019	U			NS	NS	290	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0019	U			NS	NS	150	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0019	U			6.19	N	1,560	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0019	U			674	N	1,230	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0019	U			NS	NS	17.7	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0019	U			NS	NS	1,550	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0019	U			10.7	N	144	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0019	U			NS	NS	378	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0019	U			NS	NS	19,000	N	NMED		
Chloroform	67-66-3	mg/kg	0.0019	U			5.9	N	306	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0047	U			41.1	N	268	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0019	U			NS	NS	156	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0019	U			29.3	N	141	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0019	U			13.9	N	1,230	N	NMED		
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0019	U			NS	NS	57.9	N	NMED		
Dichlorodifluoromethane	75-71-8	mg/kg	0.0019	U			NS	NS	182	N	NMED		

TABLE D1-AI24-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AI24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Ethylbenzene	100-41-4	mg/kg	0.0019	U			75.1	N	3,930	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0019	U			68.3	N	61.6	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0019	U			NS	NS	2,360	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0047	U			NS	NS	764	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0019	U			975	N	37,800	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.0094	U			766	N	409	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0019	U			NS	NS	3,900	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0019	U			NS	NS	3,800	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0019	U			22.6	N	162	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0023	U			NS	NS	805	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0019	U			NS	NS	2,360	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0019	U			NS	NS	7,800	N	RSL		
Styrene	100-42-5	mg/kg	0.0019	U			NS	NS	7,260	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0019	U			NS	NS	7,800	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0019	U			337	N	111	N	NMED		
Toluene	108-88-3	mg/kg	0.0019	U			NS	NS	5,230	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0019	U			NS	NS	210	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0019	U			29.3	N	141	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0019	U			15.5	N	6.77	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0019	U			NS	NS	1,230	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0019	U			0.742	N	113	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	UJ			240	N	82.9	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	UJ			NS	NS	2,150	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	UJ			1,290	N	5,480	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	UJ			1,290	N	5,480	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	UJ			NS	NS	6,160	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	UJ			484	N	61.6	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	UJ			NS	NS	185	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	UJ			NS	NS	1,230	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	UJ			NS	NS	123	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	UJ			17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	UJ			3.56	N	18.5	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	UJ			NS	NS	6,260	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.17	UJ			NS	NS	391	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.17	UJ			NS	NS	232	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	UJ			NS	NS	3,200	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.17	UJ			NS	NS	630	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	UJ			11.8	N	NS	NS	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.17	UJ			270	N	250	N	RSL[S]		
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	UJ			NS	NS	4.93	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	UJ			NS	NS	6,300	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.17	UJ			27	N	32	N	RSL		

TABLE D1-AI24-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AI24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.17	UJ			270	N	250	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.17	UJ			NS	NS	3,480	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.17	UJ			NS	NS	1,740	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.17	UJ			NS	NS	17,400	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.17	UJ			1.53	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.13	UJ			1.12	N	17.4	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	UJ			1.53	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	UJ			NS	NS	1,740	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	UJ			15.3	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.17	UJ			NS	NS	250,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.17	UJ			NS	NS	6,300	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	UJ			NS	NS	190	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	UJ			3.11	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	UJ			99.3	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	UJ			380	N	1,230	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.17	UJ			2,900	N	13,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.17	UJ			153	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.17	UJ			NS	NS	6,160	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.17	UJ			NS	NS	630	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	UJ			0.153	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.17	UJ			NS	NS	78	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.17	UJ			NS	NS	49,300	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.17	UJ			NS	NS	61,600	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.17	UJ			NS	NS	2,320	N	NMED		
Fluorene	86-73-7	mg/kg	0.17	UJ			NS	NS	2,320	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.17	UJ			3.33	N	49.3	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	UJ			68.3	N	61.6	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.17	UJ			133	N	43.1	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	UJ			1.53	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.17	UJ			5,610	N	12,300	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	UJ			0.78	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.02	UJ			0.0234	N	0.493	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	UJ			1,090	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.17	UJ			22.6	N	162	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.17	UJ			60.4	N	131	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.17	UJ			9.85	N	234	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.17	UJ			NS	NS	1,740	N	NMED		
Phenol	108-95-2	mg/kg	0.17	UJ			NS	NS	18,500	N	NMED		
Pyrene	129-00-0	mg/kg	0.17	UJ			NS	NS	1,740	N	NMED		

TABLE D1-AI24-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AI24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			1,300	N	570	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.02	U			69.6	N	3.98	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.02	U			1.81	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.01	U			1.86	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.01	U			2.43	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.01	U			2.43	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.01	U			2.43	N	1.14	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.01	U			2.43	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000034	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000048	J	0.000016	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.0000007	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.000000035	J	0.0000035	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000015	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.00000014	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000014	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.00000013	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.00000013	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		UJ	0.00000017	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.0000002	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000023	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000087	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg	0.000000038	J	0.00000038	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000023	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.0000003	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.00000011	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.000000078				0.000049	N	0.0000506	N	NMED	1.59E-08	1.54E-03

TABLE D1-AI24-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AI24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	13,000				NS	NS	78,000	N	NMED		1.67E-01
Antimony	7440-36-0	mg/kg	0.2				NS	NS	31.3	N	NMED		6.39E-03
Arsenic	7440-38-2	mg/kg	1.2				7.07	N	13	N	NMED	1.70E-06	9.23E-02
Barium	7440-39-3	mg/kg	140				NS	NS	15,600	N	NMED		8.97E-03
Beryllium	7440-41-7	mg/kg	0.44	J			64,400	N	156	N	NMED	6.83E-11	2.82E-03
Cadmium	7440-43-9	mg/kg	0.6				85,900	N	70.5	N	NMED	6.98E-11	8.51E-03
Calcium	7440-70-2	mg/kg	3,100				NS	NS	13,000,000	N	NMED		2.38E-04
Chromium (Total) (3)	7440-47-3	mg/kg	10				96.6	N	45,200	N	NMED	1.04E-06	2.21E-04
Cobalt	7440-48-4	mg/kg	4.5				17,200	N	23.4	N	NMED	2.62E-09	1.92E-01
Copper	7440-50-8	mg/kg	99				NS	NS	3,130	N	NMED		3.16E-02
Iron	7439-89-6	mg/kg	8,300				NS	NS	54,800	N	NMED		1.51E-01
Lead	7439-92-1	mg/kg	14				NS	NS	200	N	RSL		
Magnesium	7439-95-4	mg/kg	6,100				NS	NS	15,600,000	N	NMED		3.91E-04
Manganese	7439-96-5	mg/kg	260				NS	NS	10,500	N	NMED		2.48E-02
Mercury (Elemental)	7439-97-6	mg/kg	0.03	J			NS	NS	23.8	N	NMED		1.26E-03
Nickel	7440-02-0	mg/kg	8.8				595,000	N	1,560	N	NMED	1.48E-10	5.64E-03
Potassium	7440-09-7	mg/kg	920				NS	NS	15,600,000	N	NMED		5.90E-05
Selenium	7782-49-2	mg/kg	0.93				NS	NS	391	N	NMED		2.38E-03
Silver	7440-22-4	mg/kg	0.16				NS	NS	391	N	NMED		4.09E-04
Sodium	7440-23-5	mg/kg	140	J			NS	NS	7,820,000	N	NMED		1.79E-05
Thallium	7440-28-0	mg/kg	0.045	J			NS	NS	0.782	N	NMED		5.75E-02
Vanadium	7440-62-2	mg/kg	17				NS	NS	394	N	NMED		4.31E-02
Zinc	7440-66-6	mg/kg	43				NS	NS	23,500	N	NMED		1.83E-03

TABLE D1-AI24-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AI24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.32	U			NS	NS	11.2	N	NMED		
Nitrate	14797-55-8	mg/kg	4.7	J			NS	NS	125,000	N	NMED		3.76E-05
Perchlorate	14797-73-0	mg/kg	0.002	UJ			NS	NS	54.8	N	NMED		
										Cumulative Risk/Hazard		**3E-06**	**0.8**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of Quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper tolerance limit

TABLE D1-AI24-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AI24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0019	U			137	N	39,400	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0019	U			NS	NS	72,500	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0019	U			39	N	26,000	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0019	U			92	N	12	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0019	U			383	N	260,000	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0019	U			NS	NS	2,260	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0019	U			146	N	695	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0019	U			NS	NS	930	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0047	U			1	N	34	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0019	U			1,250	N	423	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0019	U			NS	NS	1,800	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0047	U			1	N	41	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0019	U			3	N	738	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0019	U			NS	NS	13,000	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0019	U			41	N	286	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0019	U			87	N	137	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0019	U			NS	NS	1,500	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0019	U			6,730	N	90,800	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0019	U			NS	NS	23,000	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0019	U			6,730	N	90,800	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0019	U			87	N	137	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0028	U			NS	NS	411,000	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0019	U			NS	NS	26,000	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0019	U			NS	NS	1,300	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0019	U			NS	NS	23,000	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0019	U			NS	NS	81,600	N	RSL		
Acetone	67-64-1	mg/kg	0.33	J			NS	NS	960,000	N	NMED		3.44E-07
Benzene	71-43-2	mg/kg	0.0019	U			87	N	729	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0019	U			NS	NS	1,800	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0019	U			NS	NS	630	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0019	U			30	N	26,000	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0019	U			1,760	N	18,300	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0019	U			NS	NS	95	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0019	U			NS	NS	8,540	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0019	U			53	N	1,020	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0019	U			NS	NS	2,160	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0019	U			NS	NS	89,500	N	NMED		
Chloroform	67-66-3	mg/kg	0.0019	U			29	N	2,000	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0047	U			201	N	1,260	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0019	U			NS	NS	2,600	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0019	U			146	N	695	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0019	U			67	N	18,300	N	NMED		
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0019	U			NS	NS	288	N	NMED		
Dichlorodifluoromethane	75-71-8	mg/kg	0.0019	U			NS	NS	865	N	NMED		

TABLE D1-AI24-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AI24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Ethylbenzene	100-41-4	mg/kg	0.0019	U			29,000	N	368	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0019	U			52	N	916	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0019	U			NS	NS	14,200	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0047	U			NS	NS	3,730	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0019	U			4,820	N	178,000	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.0094	U			14,400	N	5,130	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0019	U			NS	NS	58,000	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0019	U			NS	NS	24,000	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0019	U			108	N	843	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0023	U			NS	NS	3,940	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0019	U			NS	NS	14,200	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0019	U			NS	NS	120,000	N	RSL		
Styrene	100-42-5	mg/kg	0.0019	U			NS	NS	51,300	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0019	U			NS	NS	120,000	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0019	U			1,650	N	629	N	NMED		
Toluene	108-88-3	mg/kg	0.0019	U			NS	NS	61,300	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0019	U			NS	NS	1,100	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0019	U			146	N	695	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0019	U			112	N	37	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0019	U			NS	NS	6,030	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0019	U			28	N	46	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	UJ			1,250	N	423	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	UJ			NS	NS	13,000	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	UJ			6,730	N	90,800	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	UJ			6,730	N	90,800	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	UJ			NS	NS	91,600	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	UJ			2,330	N	916	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	UJ			NS	NS	2,750	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	UJ			NS	NS	18,300	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	UJ			NS	NS	1,830	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	UJ			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	UJ			17	N	276	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	UJ			NS	NS	104,000	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.17	UJ			NS	NS	6,490	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.17	UJ			NS	NS	3,370	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	UJ			NS	NS	41,000	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.17	UJ			NS	NS	8,000	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	UJ			NS	NS	410	N	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.17	UJ			1,100	N	3,300	N	RSL[S]		
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	UJ			NS	NS	73	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	UJ			NS	NS	82,000	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.17	UJ			110	N	410	N	RSL		

TABLE D1-AI24-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AI24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.17	UJ			1,100	N	3,300	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.17	UJ			NS	NS	50,500	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.17	UJ			NS	NS	25,300	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.17	UJ			NS	NS	253,000	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.17	UJ			32	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.13	UJ			24	N	251	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	UJ			32	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	UJ			NS	NS	25,300	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	UJ			323	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.17	UJ			NS	NS	3,300,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.17	UJ			NS	NS	82,000	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	UJ			NS	NS	2,500	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	UJ			16	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	UJ			519	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	UJ			1,830	N	18,300	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.17	UJ			12,000	N	160,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.17	UJ			3,230	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.17	UJ			NS	NS	91,600	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.17	UJ			NS	NS	8,200	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	UJ			3	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.17	UJ			NS	NS	1,200	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.17	UJ			NS	NS	733,000	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.17	UJ			NS	NS	916,000	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.17	UJ			NS	NS	33,700	N	NMED		
Fluorene	86-73-7	mg/kg	0.17	UJ			NS	NS	33,700	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.17	UJ			16	N	733	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	UJ			52	N	916	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.17	UJ			641	N	641	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	UJ			32	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.17	UJ			27,000	N	183,000	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	UJ			3	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.02	UJ			1	N	7	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	UJ			5,240	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.17	UJ			108	N	843	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.17	UJ			293	N	1,540	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.17	UJ			45	N	3,180	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.17	UJ			NS	NS	27,500	N	NMED		
Phenol	108-95-2	mg/kg	0.17	UJ			NS	NS	275,000	N	NMED		
Pyrene	129-00-0	mg/kg	0.17	UJ			NS	NS	25,300	N	NMED		

TABLE D1-AI24-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AI24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			5,300	N	7,400	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.02	U			304	N	57	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.02	U			9	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.01	U			9	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.01	U			11	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.01	U			11	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.01	U			11	N	16	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.01	U			11	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000034	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000048	J	0.000016	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.0000007	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.000000035	J	0.0000035	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000015	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.00000014	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000014	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.00000013	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.00000013	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		UJ	0.00000017	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.0000002	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000023	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000087	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg	0.000000038	J	0.00000038	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000023	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.0000003	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.00000011	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.000000078				0.000238	N	0.000808	N	NMED	3.27E-09	9.63E-05

TABLE D1-AI24-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AI24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	13,000				NS	NS	1,290,000	N	NMED		1.01E-02
Antimony	7440-36-0	mg/kg	0.2				NS	NS	519	N	NMED		3.85E-04
Arsenic	7440-38-2	mg/kg	1.2				36	N	208	N	NMED	3.34E-07	5.77E-03
Barium	7440-39-3	mg/kg	140				NS	NS	255,000	N	NMED		5.49E-04
Beryllium	7440-41-7	mg/kg	0.44	J			313,000	N	2,580	N	NMED	1.41E-11	1.71E-04
Cadmium	7440-43-9	mg/kg	0.6				417,000	N	1,110	N	NMED	1.44E-11	5.41E-04
Calcium	7440-70-2	mg/kg	3,100				NS	NS	32,400,000	N	NMED		9.57E-05
Chromium (Total) (3)	7440-47-3	mg/kg	10				505	N	314,000	N	NMED	1.98E-07	3.18E-05
Cobalt	7440-48-4	mg/kg	4.5				83,400	N	388	N	NMED	5.40E-10	1.16E-02
Copper	7440-50-8	mg/kg	99				NS	NS	51,900	N	NMED		1.91E-03
Iron	7439-89-6	mg/kg	8,300				NS	NS	908,000	N	NMED		9.14E-03
Lead	7439-92-1	mg/kg	14				NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	6,100				NS	NS	5,680,000	N	NMED		1.07E-03
Manganese	7439-96-5	mg/kg	260				NS	NS	160,000	N	NMED		1.63E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.03	J			NS	NS	112	N	NMED		2.68E-04
Nickel	7440-02-0	mg/kg	8.8				2,890,000	N	25,700	N	NMED	3.04E-11	3.42E-04
Potassium	7440-09-7	mg/kg	920				NS	NS	76,200,000	N	NMED		1.21E-05
Selenium	7782-49-2	mg/kg	0.93				NS	NS	6,490	N	NMED		1.43E-04
Silver	7440-22-4	mg/kg	0.16				NS	NS	6,490	N	NMED		2.47E-05
Sodium	7440-23-5	mg/kg	140	J			NS	NS	37,300,000	N	NMED		3.75E-06
Thallium	7440-28-0	mg/kg	0.045	J			NS	NS	13	N	NMED		3.46E-03
Vanadium	7440-62-2	mg/kg	17				NS	NS	6,530	N	NMED		2.60E-03
Zinc	7440-66-6	mg/kg	43				NS	NS	38,900	N	NMED		1.11E-03

TABLE D1-AI24-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AI24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.32	U			NS	NS	63	N	NMED		
Nitrate	14797-55-8	mg/kg	4.7	J			NS	NS	2,080,000	N	NMED		2.26E-06
Perchlorate	14797-73-0	mg/kg	0.002	UJ			NS	NS	908	N	NMED		
										Cumulative Risk/Hazard		**5E-07**	**0.05**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of qauntitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper tolerance limit

TABLE D1-AI24-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AI24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0019	U			659	N	10,600	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0019	U			NS	NS	13,600	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0019	U			197	N	7,080	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0019	U			4,300	N	2	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0019	U			1,820	N	70,800	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0019	U			NS	NS	424	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0019	U			781	N	130	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0019	U			NS	NS	283	N	NMED[C]			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0047	U			8	N	6	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0019	U			8,540	N	79	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0019	U			NS	NS	492	N	NMED[C]			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0047	U			6	N	8	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0019	U			16	N	140	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0019	U			NS	NS	2,500	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0019	U			195	N	54	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0019	U			415	N	25	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0019	U			NS	NS	422	N	NMED[C]			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0019	U			45,900	N	24,800	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0019	U			NS	NS	7,080	N	NMED[C]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0019	U			45,900	N	24,800	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0019	U			415	N	25	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.0028	U			NS	NS	90,700	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0019	U			NS	NS	7,080	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.0019	U			NS	NS	599	N	NMED[C]			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0019	U			NS	NS	7,080	N	NMED[C]			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0019	U			NS	NS	20,400	N	NMED[C]			
Acetone	67-64-1	mg/kg	0.33	J			NS	NS	242,000	N	NMED		1.36E-06	
Benzene	71-43-2	mg/kg	0.0019	U			423	N	142	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.0019	U			NS	NS	538	N	NMED[C]			
Bromochloromethane	74-97-5	mg/kg	0.0019	U			NS	NS	296	N	NMED[C]			
Bromodichloromethane	75-27-4	mg/kg	0.0019	U			143	N	7,080	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0019	U			23,700	N	5,380	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0019	U			NS	NS	18	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.0019	U			NS	NS	1,620	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0019	U			252	N	202	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0019	U			NS	NS	412	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0019	U			NS	NS	16,600	N	NMED			
Chloroform	67-66-3	mg/kg	0.0019	U			134	N	391	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0047	U			956	N	235	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0019	U			NS	NS	708	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0019	U			781	N	130	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0019	U			340	N	5,380	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0019	U			NS	NS	54	N	NMED			
Dichlorodifluoromethane	75-71-8	mg/kg	0.0019	U			NS	NS	161	N	NMED			

TABLE D1-AI24-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AI24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Ethylbenzene	100-41-4	mg/kg	0.0019	U			1,770	N	5,800	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0019	U			2,400	N	269	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0019	U			NS	NS	2,740	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0047	U			NS	NS	696	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0019	U			24,200	N	33,100	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.0094	U			89,600	N	1,210	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0019	U			NS	NS	17,700	N	NMED[C]			
n-Propylbenzene	103-65-1	mg/kg	0.0019	U			NS	NS	6,730	N	NMED[C]			
Naphthalene	91-20-3	mg/kg	0.0019	U			633	N	159	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0023	U			NS	NS	736	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.0019	U			NS	NS	2,740	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.0019	U			NS	NS	35,400	N	NMED[C]			
Styrene	100-42-5	mg/kg	0.0019	U			NS	NS	10,200	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0019	U			NS	NS	35,400	N	NMED[C]			
Tetrachloroethene	127-18-4	mg/kg	0.0019	U			7,910	N	120	N	NMED			
Toluene	108-88-3	mg/kg	0.0019	U			NS	NS	14,000	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0019	U			NS	NS	206	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0019	U			781	N	130	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0019	U			5,370	N	7	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0019	U			NS	NS	1,130	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0019	U			161	N	162	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	UJ			8,540	N	79	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	UJ			NS	NS	2,500	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	UJ			45,900	N	24,800	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	UJ			45,900	N	24,800	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	UJ			NS	NS	26,900	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	UJ			17,000	N	269	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	UJ			NS	NS	807	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	UJ			NS	NS	5,380	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	UJ			NS	NS	538	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	UJ			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	UJ			165	N	81	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	UJ			NS	NS	28,300	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.17	UJ			NS	NS	1,770	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.17	UJ			NS	NS	1,000	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	UJ			NS	NS	13,500	N	NMED[C]			
2-Nitroaniline	88-74-4	mg/kg	0.17	UJ			NS	NS	2,690	N	NMED[C]			
2-Nitrophenol	88-75-5	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	UJ			410	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.17	UJ			135	N	1,080	N	NMED[SC]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	UJ			NS	NS	22	N	NMED			
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	UJ			NS	NS	26,900	N	NMED[C]			
4-Chloroaniline	106-47-8	mg/kg	0.17	UJ			14	N	135	N	NMED[C]			

TABLE D1-AI24-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AI24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.17	UJ			135	N	1,080	N	NMED[C]			
4-Nitrophenol	100-02-7	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.17	UJ			NS	NS	15,100	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.17	UJ			NS	NS	7,530	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.17	UJ			NS	NS	75,300	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.17	UJ			240	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.13	UJ			173	N	15	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	UJ			240	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	UJ			NS	NS	7,530	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	UJ			2,310	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.17	UJ			NS	NS	1,080,000	N	NMED[C]			
Benzyl Alcohol	100-51-6	mg/kg	0.17	UJ			NS	NS	26,900	N	NMED[C]			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	UJ			NS	NS	807	N	NMED[C]			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	UJ			2	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	UJ			3,540	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	UJ			13,400	N	5,380	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.17	UJ			1,420	N	53,800	N	NMED[C]			
Carbazole	86-74-8	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.17	UJ			23,100	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.17	UJ			NS	NS	26,900	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.17	UJ			NS	NS	2,690	N	NMED[C]			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	UJ			24	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.17	UJ			NS	NS	269	N	NMED[C]			
Diethylphthalate	84-66-2	mg/kg	0.17	UJ			NS	NS	215,000	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.17	UJ			NS	NS	269,000	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.17	UJ			NS	NS	10,000	N	NMED			
Fluorene	86-73-7	mg/kg	0.17	UJ			NS	NS	10,000	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.17	UJ			117	N	215	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	UJ			2,400	N	269	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.17	UJ			4,670	N	188	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	UJ			240	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.17	UJ			198,000	N	53,700	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	UJ			0.38	N	NA	N	NMED[C]			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.02	UJ			4	N	2	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	UJ			37,900	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.17	UJ			633	N	159	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.17	UJ			1,350	N	353	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.17	UJ			346	N	989	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.17	UJ			NS	NS	8,070	N	NMED			
Phenol	108-95-2	mg/kg	0.17	UJ			NS	NS	77,400	N	NMED			
Pyrene	129-00-0	mg/kg	0.17	UJ			NS	NS	7,530	N	NMED			

TABLE D1-AI24-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AI24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	8,070	N	NMED[C]			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	27	N	NMED[C]			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			626	N	2,420	N	NMED[C]			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.02	U			2,440	N	17	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.02	U			55	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.01	U			58	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.01	U			85	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.01	U			85	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.01	U			85	N	5	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.01	U			85	N	NS	NS	NMED			
DIOXINS/FURANS (ηg/kg) (3)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000034	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000048	J	0.000016	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.0000007	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.000000035	J	0.0000035	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000015	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.00000014	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000014	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.00000013	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.00000013	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		UJ	0.00000017	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.0000002	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000023	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000087	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg	0.000000038	J	0.00000038	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000023	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.0000003	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.00000011	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.000000078				0.00172	N	0.000226	N	NMED	4.52E-10	3.44E-04	

TABLE D1-AI24-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AI24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	13,000				NS	NS	41,400	N	NMED		3.14E-01	Nervous
Antimony	7440-36-0	mg/kg	0.2				NS	NS	142	N	NMED		1.41E-03	
Arsenic	7440-38-2	mg/kg	1.2				216	N	41	N	NMED	5.56E-08	2.91E-02	
Barium	7440-39-3	mg/kg	140				NS	NS	4,390	N	NMED		3.19E-02	
Beryllium	7440-41-7	mg/kg	0.44	J			2,710	N	148	N	NMED	1.62E-09	2.97E-03	
Cadmium	7440-43-9	mg/kg	0.6				3,610	N	72	N	NMED	1.66E-09	8.32E-03	
Calcium	7440-70-2	mg/kg	3,100				NS	NS	8,850,000	N	NMED		3.50E-04	
Chromium (Total) (4)	7440-47-3	mg/kg	10				468	N	134	N	NMED	2.14E-07	7.46E-02	
Cobalt	7440-48-4	mg/kg	4.5				722	N	37	N	NMED	6.23E-08	1.23E-01	Endocrine
Copper	7440-50-8	mg/kg	99				NS	NS	14,200	N	NMED		6.97E-03	
Iron	7439-89-6	mg/kg	8,300				NS	NS	248,000	N	NMED		3.35E-02	
Lead	7439-92-1	mg/kg	14				NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	6,100				NS	NS	1,550,000	N	NMED		3.94E-03	
Manganese	7439-96-5	mg/kg	260				NS	NS	464	N	NMED		5.60E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.03	J			NS	NS	21	N	NMED		1.45E-03	
Nickel	7440-02-0	mg/kg	8.8				20,500	N	753	N	NMED	4.29E-09	1.17E-02	
Potassium	7440-09-7	mg/kg	920				NS	NS	20,800,000	N	NMED		4.42E-05	
Selenium	7782-49-2	mg/kg	0.93				NS	NS	1,750	N	NMED		5.31E-04	
Silver	7440-22-4	mg/kg	0.16				NS	NS	1,770	N	NMED		9.04E-05	
Sodium	7440-23-5	mg/kg	140	J			NS	NS	10,200,000	N	NMED		1.37E-05	
Thallium	7440-28-0	mg/kg	0.045	J			NS	NS	4	N	NMED		1.27E-02	
Vanadium	7440-62-2	mg/kg	17				NS	NS	614	N	NMED		2.77E-02	
Zinc	7440-66-6	mg/kg	43				NS	NS	106,000	N	NMED		4.06E-04	

TABLE D1-AI24-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AI24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.32	U			NS	NS	12	N	NMED			
Nitrate	14797-55-8	mg/kg	4.7	J			NS	NS	566,000	N	NMED		8.30E-06	
Perchlorate	14797-73-0	mg/kg	0.002	UJ			NS	NS	248	N	NMED			
										Cumulative Risk/Hazard		**3E-07**	**1.2**	
										Exceeds Target Level		**N**	Y	

System	Hazard Quotient
Nervous	0.9
Endocrine	0.12
All Others	0.25

Notes:

[s] = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update).

2) NMED[C] = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

3) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

4) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)
N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.
According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.
CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper tolerance limit

TABLE D1-AJ23-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AJ23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0019	U			28.1	N	2,350	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0019	U			NS	NS	14,400	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0019	U			7.98	N	1,560	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0019	U			18.8	N	2.61	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0019	U			78.6	N	15,600	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0019	U			NS	NS	440	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0019	U			29.3	N	141	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0019	U			NS	NS	63	N	RSL			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0049	U			0.051	N	7.09	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0019	U			240	N	82.9	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0019	U			NS	NS	300	N	RSL			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0049	U			0.0858	N	5.88	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0019	U			0.672	N	135	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0019	U			NS	NS	2,150	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0019	U			8.32	N	55.6	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0019	U			17.8	N	29	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0019	U			NS	NS	270	N	RSL			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0019	U			1,290	N	5,480	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0019	U			NS	NS	1,600	N	RSL			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0019	U			1,290	N	5,480	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0019	U			17.8	N	29	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.0029	U			NS	NS	37,400	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0019	U			NS	NS	1,560	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.0019	U			NS	NS	200	N	RSL			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0019	U			NS	NS	1,600	N	RSL			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0019	U			NS	NS	5,810	N	RSL			
Acetone	67-64-1	mg/kg	0.34				NS	NS	66,300	N	NMED		5.13E-06	
Benzene	71-43-2	mg/kg	0.0019	U			17.8	N	114	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.0019	U			NS	NS	290	N	RSL			
Bromochloromethane	74-97-5	mg/kg	0.0019	U			NS	NS	150	N	RSL			
Bromodichloromethane	75-27-4	mg/kg	0.0019	U			6.19	N	1,560	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0019	U			674	N	1,230	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0019	U			NS	NS	17.7	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.0019	U			NS	NS	1,550	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0019	U			10.7	N	144	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0019	U			NS	NS	378	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0019	U			NS	NS	19,000	N	NMED			
Chloroform	67-66-3	mg/kg	0.0019	U			5.9	N	306	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0049	U			41.1	N	268	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0019	U			NS	NS	156	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0019	U			29.3	N	141	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0019	U			13.9	N	1,230	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0019	U			NS	NS	57.9	N	NMED			

TABLE D1-AJ23-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AJ23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Dichlorodifluoromethane	75-71-8	mg/kg	0.0019	U			NS	NS	182	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.0019	U			75.1	N	3,930	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0019	U			68.3	N	61.6	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0019	U			NS	NS	2,360	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0049	U			NS	NS	764	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0019	U			975	N	37,800	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.0097	U			766	N	409	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0019	U			NS	NS	3,900	N	RSL			
n-Propylbenzene	103-65-1	mg/kg	0.0019	U			NS	NS	3,800	N	RSL			
Naphthalene	91-20-3	mg/kg	0.0019	U			22.6	N	162	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0024	U			NS	NS	805	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.0019	U			NS	NS	2,360	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.0019	U			NS	NS	7,800	N	RSL			
Styrene	100-42-5	mg/kg	0.0019	U			NS	NS	7,260	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0019	U			NS	NS	7,800	N	RSL			
Tetrachloroethene	127-18-4	mg/kg	0.0019	U			337	N	111	N	NMED			
Toluene	108-88-3	mg/kg	0.0041	J			NS	NS	5,230	N	NMED		7.84E-07	
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0019	U			NS	NS	210	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0019	U			29.3	N	141	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0019	U			15.5	N	6.77	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0019	U			NS	NS	1,230	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0019	U			0.742	N	113	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	UJ			240	N	82.9	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	UJ			NS	NS	2,150	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	UJ			1,290	N	5,480	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	UJ			1,290	N	5,480	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	UJ			NS	NS	6,160	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	UJ			484	N	61.6	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	UJ			NS	NS	185	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	UJ			NS	NS	1,230	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	UJ			NS	NS	123	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	UJ			17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	UJ			3.56	N	18.5	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	UJ			NS	NS	6,260	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.17	UJ			NS	NS	391	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.17	UJ			NS	NS	232	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	UJ			NS	NS	3,200	N	RSL			
2-Nitroaniline	88-74-4	mg/kg	0.17	UJ			NS	NS	630	N	RSL			
2-Nitrophenol	88-75-5	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	UJ			11.8	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.17	UJ			270	N	250	N	RSL[S]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	UJ			NS	NS	4.93	N	NMED			
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	UJ			NS	NS	6,300	N	RSL			

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HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AJ23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Chloroaniline	106-47-8	mg/kg	0.17	UJ			27	N	32	N	RSL			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.17	UJ			270	N	250	N	RSL			
4-Nitrophenol	100-02-7	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.17	UJ			NS	NS	3,480	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.17	UJ			NS	NS	1,740	N	NMED[$]			
Anthracene	120-12-7	mg/kg	0.17	UJ			NS	NS	17,400	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.17	UJ			1.53	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.13	UJ			1.12	N	17.4	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	UJ			1.53	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	UJ			NS	NS	1,740	N	NMED[$]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	UJ			15.3	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.17	UJ			NS	NS	250,000	N	RSL			
Benzyl Alcohol	100-51-6	mg/kg	0.17	UJ			NS	NS	6,300	N	RSL			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	UJ			NS	NS	190	N	RSL			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	UJ			3.11	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	UJ			99.3	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	UJ			380	N	1,230	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.17	UJ			2,900	N	13,000	N	RSL			
Carbazole	86-74-8	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.17	UJ			153	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.17	UJ			NS	NS	6,160	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.17	UJ			NS	NS	630	N	RSL			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	UJ			0.153	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.17	UJ			NS	NS	78	N	RSL			
Diethylphthalate	84-66-2	mg/kg	0.17	UJ			NS	NS	49,300	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.17	UJ			NS	NS	61,600	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.17	UJ			NS	NS	2,320	N	NMED			
Fluorene	86-73-7	mg/kg	0.17	UJ			NS	NS	2,320	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.17	UJ			3.33	N	49.3	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	UJ			68.3	N	61.6	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.17	UJ			133	N	43.1	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	UJ			1.53	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.17	UJ			5,610	N	12,300	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	UJ			0.78	N	NS	NS	RSL			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.02	UJ			0.0234	N	0.493	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	UJ			1,090	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.17	UJ			22.6	N	162	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.17	UJ			60.4	N	131	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.17	UJ			9.85	N	234	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.17	UJ			NS	NS	1,740	N	NMED			
Phenol	108-95-2	mg/kg	0.17	UJ			NS	NS	18,500	N	NMED			
Pyrene	129-00-0	mg/kg	0.17	UJ			NS	NS	1,740	N	NMED			

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MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	2,200	N	RSL			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	6.3	N	RSL			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			211	N	36	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			3.56	N	18.5	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	7.7	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			31.6	N	70.4	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	6.16	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	7.64	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			333	N	247	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			83.1	N	301	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	156	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			60.4	N	131	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			313	N	6.16	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	3,850	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			1,300	N	570	N	RSL			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.02	U			69.6	N	3.98	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.02	U			1.81	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.01	U			1.86	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.01	U			2.43	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.01	U			2.43	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.01	U			2.43	N	1.14	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.01	U			2.43	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (2)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000029	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000033	J	0.000011	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg	0.000000015	J	0.0000015	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.0000018	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.000000059	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg	0.0000000058	J	0.000000058	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000082	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000047	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000075	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		UJ	0.000000061	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.0000001	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg	0.0000000023	J	0.000000076	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000077	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.0000002	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000013	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.000005	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000058	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.000000026				0.000049	N	0.0000506	N	NMED	5.38E-09	5.21E-04	

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FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	19,000				NS	NS	78,000	N	NMED		2.44E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	U			NS	NS	31.3	N	NMED			
Arsenic	7440-38-2	mg/kg	1				7.07	N	13	N	NMED	1.41E-06	7.69E-02	
Barium	7440-39-3	mg/kg	140				NS	NS	15,600	N	NMED		8.97E-03	
Beryllium	7440-41-7	mg/kg	0.46	J			64,400	N	156	N	NMED	7.14E-11	2.95E-03	
Cadmium	7440-43-9	mg/kg	0.74				85,900	N	70.5	N	NMED	8.61E-11	1.05E-02	
Calcium	7440-70-2	mg/kg	2,900				NS	NS	13,000,000	N	NMED		2.23E-04	
Chromium (Total) (3)	7440-47-3	mg/kg	13				96.6	N	45,200	N	NMED	1.35E-06	2.88E-04	
Cobalt	7440-48-4	mg/kg	4.7				17,200	N	23.4	N	NMED	2.73E-09	2.01E-01	Endocrine
Copper	7440-50-8	mg/kg	92				NS	NS	3,130	N	NMED		2.94E-02	
Iron	7439-89-6	mg/kg	11,000				NS	NS	54,800	N	NMED		2.01E-01	GI
Lead	7439-92-1	mg/kg	13				NS	NS	200	N	RSL			
Magnesium	7439-95-4	mg/kg	8,500				NS	NS	15,600,000	N	NMED		5.45E-04	
Manganese	7439-96-5	mg/kg	240				NS	NS	10,500	N	NMED		2.29E-02	
Mercury (Elemental)	7439-97-6	mg/kg	0.024	J			NS	NS	23.8	N	NMED		1.01E-03	
Nickel	7440-02-0	mg/kg	9.2				595,000	N	1,560	N	NMED	1.55E-10	5.90E-03	
Potassium	7440-09-7	mg/kg	860				NS	NS	15,600,000	N	NMED		5.51E-05	
Selenium	7782-49-2	mg/kg	1				NS	NS	391	N	NMED		2.56E-03	
Silver	7440-22-4	mg/kg	0.098	J			NS	NS	391	N	NMED		2.51E-04	
Sodium	7440-23-5	mg/kg	66				NS	NS	7,820,000	N	NMED		8.44E-06	
Thallium	7440-28-0	mg/kg	0.13				NS	NS	0.782	N	NMED		1.66E-01	
Vanadium	7440-62-2	mg/kg	18				NS	NS	394	N	NMED		4.57E-02	
Zinc	7440-66-6	mg/kg	48				NS	NS	23,500	N	NMED		2.04E-03	

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HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AJ23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.32	U			NS	NS	11.2	N	NMED			
Nitrate	14797-55-8	mg/kg	2.3	J			NS	NS	125,000	N	NMED		1.84E-05	
Perchlorate	14797-73-0	mg/kg	0.0018	UJ			NS	NS	54.8	N	NMED			
										Cumulative Risk/Hazard		**3E-06**	**1.0**	
										Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	0.3
Endocrine	0.20
GI	0.20
All Others	0.38

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of Quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper tolerance limit

TABLE D1-AJ23-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AJ23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0019	U			137	N	39,400	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0019	U			NS	NS	72,500	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0019	U			39	N	26,000	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0019	U			92	N	12	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0019	U			383	N	260,000	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0019	U			NS	NS	2,260	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0019	U			146	N	695	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0019	U			NS	NS	930	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0049	U			1	N	34	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0019	U			1,250	N	423	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0019	U			NS	NS	1,800	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0049	U			1	N	41	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0019	U			3	N	738	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0019	U			NS	NS	13,000	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0019	U			41	N	286	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0019	U			87	N	137	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0019	U			NS	NS	1,500	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0019	U			6,730	N	90,800	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0019	U			NS	NS	23,000	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0019	U			6,730	N	90,800	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0019	U			87	N	137	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0029	U			NS	NS	411,000	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0019	U			NS	NS	26,000	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0019	U			NS	NS	1,300	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0019	U			NS	NS	23,000	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0019	U			NS	NS	81,600	N	RSL		
Acetone	67-64-1	mg/kg	0.34				NS	NS	960,000	N	NMED		3.54E-07
Benzene	71-43-2	mg/kg	0.0019	U			87	N	729	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0019	U			NS	NS	1,800	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0019	U			NS	NS	630	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0019	U			30	N	26,000	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0019	U			1,760	N	18,300	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0019	U			NS	NS	95	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0019	U			NS	NS	8,540	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0019	U			53	N	1,020	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0019	U			NS	NS	2,160	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0019	U			NS	NS	89,500	N	NMED		
Chloroform	67-66-3	mg/kg	0.0019	U			29	N	2,000	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0049	U			201	N	1,260	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0019	U			NS	NS	2,600	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0019	U			146	N	695	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0019	U			67	N	18,300	N	NMED		
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0019	U			NS	NS	288	N	NMED		

TABLE D1-AJ23-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AJ23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dichlorodifluoromethane	75-71-8	mg/kg	0.0019	U			NS	NS	865	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0019	U			29,000	N	368	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0019	U			52	N	916	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0019	U			NS	NS	14,200	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0049	U			NS	NS	3,730	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0019	U			4,820	N	178,000	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.0097	U			14,400	N	5,130	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0019	U			NS	NS	58,000	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0019	U			NS	NS	24,000	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0019	U			108	N	843	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0024	U			NS	NS	3,940	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0019	U			NS	NS	14,200	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0019	U			NS	NS	120,000	N	RSL		
Styrene	100-42-5	mg/kg	0.0019	U			NS	NS	51,300	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0019	U			NS	NS	120,000	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0019	U			1,650	N	629	N	NMED		
Toluene	108-88-3	mg/kg	0.0041	J			NS	NS	61,300	N	NMED		6.69E-08
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0019	U			NS	NS	1,100	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0019	U			146	N	695	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0019	U			112	N	37	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0019	U			NS	NS	6,030	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0019	U			28	N	46	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	UJ			1,250	N	423	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	UJ			NS	NS	13,000	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	UJ			6,730	N	90,800	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	UJ			6,730	N	90,800	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	UJ			NS	NS	91,600	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	UJ			2,330	N	916	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	UJ			NS	NS	2,750	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	UJ			NS	NS	18,300	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	UJ			NS	NS	1,830	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	UJ			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	UJ			17	N	276	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	UJ			NS	NS	104,000	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.17	UJ			NS	NS	6,490	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.17	UJ			NS	NS	3,370	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	UJ			NS	NS	41,000	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.17	UJ			NS	NS	8,000	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	UJ			NS	NS	410	N	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.17	UJ			1,100	N	3,300	N	RSL[S]		
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	UJ			NS	NS	73	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	UJ			NS	NS	82,000	N	RSL		

TABLE D1-AJ23-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AJ23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4-Chloroaniline	106-47-8	mg/kg	0.17	UJ			110	N	410	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.17	UJ			1,100	N	3,300	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.17	UJ			NS	NS	50,500	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.17	UJ			NS	NS	25,300	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.17	UJ			NS	NS	253,000	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.17	UJ			32	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.13	UJ			24	N	251	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	UJ			32	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	UJ			NS	NS	25,300	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	UJ			323	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.17	UJ			NS	NS	3,300,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.17	UJ			NS	NS	82,000	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	UJ			NS	NS	2,500	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	UJ			16	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	UJ			519	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	UJ			1,830	N	18,300	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.17	UJ			12,000	N	160,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.17	UJ			3,230	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.17	UJ			NS	NS	91,600	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.17	UJ			NS	NS	8,200	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	UJ			3	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.17	UJ			NS	NS	1,200	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.17	UJ			NS	NS	733,000	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.17	UJ			NS	NS	916,000	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.17	UJ			NS	NS	33,700	N	NMED		
Fluorene	86-73-7	mg/kg	0.17	UJ			NS	NS	33,700	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.17	UJ			16	N	733	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	UJ			52	N	916	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.17	UJ			641	N	641	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	UJ			32	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.17	UJ			27,000	N	183,000	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	UJ			3	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.02	UJ			1	N	7	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	UJ			5,240	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.17	UJ			108	N	843	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.17	UJ			293	N	1,540	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.17	UJ			45	N	3,180	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.17	UJ			NS	NS	27,500	N	NMED		
Phenol	108-95-2	mg/kg	0.17	UJ			NS	NS	275,000	N	NMED		
Pyrene	129-00-0	mg/kg	0.17	UJ			NS	NS	25,300	N	NMED		

TABLE D1-AJ23-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AJ23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			5,300	N	7,400	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.02	U			304	N	57	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.02	U			9	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.01	U			9	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.01	U			11	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.01	U			11	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.01	U			11	N	16	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.01	U			11	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (3)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000029	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000033	J	0.000011	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg	0.000000015	J	0.0000015	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.0000018	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.000000059	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg	0.0000000058	J	0.000000058	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000082	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000047	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000075	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		UJ	0.000000061	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.0000001	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg	0.0000000023	J	0.000000076	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000077	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.0000002	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000013	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.000005	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000058	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.000000026				0.000238	N	0.000808	N	NMED	1.11E-09	3.26E-05

TABLE D1-AJ23-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AJ23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	19,000				NS	NS	1,290,000	N	NMED		1.47E-02
Antimony	7440-36-0	mg/kg	0.15	U			NS	NS	519	N	NMED		
Arsenic	7440-38-2	mg/kg	1				36	N	208	N	NMED	2.79E-07	4.81E-03
Barium	7440-39-3	mg/kg	140				NS	NS	255,000	N	NMED		5.49E-04
Beryllium	7440-41-7	mg/kg	0.46	J			313,000	N	2,580	N	NMED	1.47E-11	1.78E-04
Cadmium	7440-43-9	mg/kg	0.74				417,000	N	1,110	N	NMED	1.77E-11	6.67E-04
Calcium	7440-70-2	mg/kg	2,900				NS	NS	32,400,000	N	NMED		8.95E-05
Chromium (Total) (4)	7440-47-3	mg/kg	13				505	N	314,000	N	NMED	2.57E-07	4.14E-05
Cobalt	7440-48-4	mg/kg	4.7				83,400	N	388	N	NMED	5.64E-10	1.21E-02
Copper	7440-50-8	mg/kg	92				NS	NS	51,900	N	NMED		1.77E-03
Iron	7439-89-6	mg/kg	11,000				NS	NS	908,000	N	NMED		1.21E-02
Lead	7439-92-1	mg/kg	13				NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	8,500				NS	NS	5,680,000	N	NMED		1.50E-03
Manganese	7439-96-5	mg/kg	240				NS	NS	160,000	N	NMED		1.50E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.024	J			NS	NS	112	N	NMED		2.14E-04
Nickel	7440-02-0	mg/kg	9.2				2,890,000	N	25,700	N	NMED	3.18E-11	3.58E-04
Potassium	7440-09-7	mg/kg	860				NS	NS	76,200,000	N	NMED		1.13E-05
Selenium	7782-49-2	mg/kg	1				NS	NS	6,490	N	NMED		1.54E-04
Silver	7440-22-4	mg/kg	0.098	J			NS	NS	6,490	N	NMED		1.51E-05
Sodium	7440-23-5	mg/kg	66				NS	NS	37,300,000	N	NMED		1.77E-06
Thallium	7440-28-0	mg/kg	0.13				NS	NS	13	N	NMED		1.00E-02
Vanadium	7440-62-2	mg/kg	18				NS	NS	6,530	N	NMED		2.76E-03
Zinc	7440-66-6	mg/kg	48				NS	NS	38,900	N	NMED		1.23E-03

TABLE D1-AJ23-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AJ23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.32	U			NS	NS	63	N	NMED		
Nitrate	14797-55-8	mg/kg	2.3	J			NS	NS	2,080,000	N	NMED		1.11E-06
Perchlorate	14797-73-0	mg/kg	0.0018	UJ			NS	NS	908	N	NMED		
										Cumulative Risk/Hazard		**5E-07**	**0.06**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of Quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper tolerance limit

TABLEL D1-AJ23-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AJ23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0019	U			659	N	10,600	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0019	U			NS	NS	13,600	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0019	U			197	N	7,080	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0019	U			4,300	N	2	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0019	U			1,820	N	70,800	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0019	U			NS	NS	424	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0019	U			781	N	130	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0019	U			NS	NS	283	N	NMED[C]			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0049	U			8	N	6	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0019	U			8,540	N	79	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0019	U			NS	NS	492	N	NMED[C]			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0049	U			6	N	8	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0019	U			16	N	140	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0019	U			NS	NS	2,500	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0019	U			195	N	54	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0019	U			415	N	25	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0019	U			NS	NS	422	N	NMED[C]			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0019	U			45,900	N	24,800	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0019	U			NS	NS	7,080	N	NMED[C]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0019	U			45,900	N	24,800	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0019	U			415	N	25	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.0029	U			NS	NS	90,700	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0019	U			NS	NS	7,080	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.0019	U			NS	NS	599	N	NMED[C]			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0019	U			NS	NS	7,080	N	NMED[C]			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0019	U			NS	NS	20,400	N	NMED[C]			
Acetone	67-64-1	mg/kg	0.34				NS	NS	242,000	N	NMED		1.40E-06	
Benzene	71-43-2	mg/kg	0.0019	U			423	N	142	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.0019	U			NS	NS	538	N	NMED[C]			
Bromochloromethane	74-97-5	mg/kg	0.0019	U			NS	NS	296	N	NMED[C]			
Bromodichloromethane	75-27-4	mg/kg	0.0019	U			143	N	7,080	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0019	U			23,700	N	5,380	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0019	U			NS	NS	18	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.0019	U			NS	NS	1,620	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0019	U			252	N	202	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0019	U			NS	NS	412	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0019	U			NS	NS	16,600	N	NMED			
Chloroform	67-66-3	mg/kg	0.0019	U			134	N	391	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0049	U			956	N	235	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0019	U			NS	NS	708	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0019	U			781	N	130	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0019	U			340	N	5,380	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0019	U			NS	NS	54	N	NMED			
Dichlorodifluoromethane	75-71-8	mg/kg	0.0019	U			NS	NS	161	N	NMED			

TABLEL D1-AJ23-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AJ23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Ethylbenzene	100-41-4	mg/kg	0.0019	U			1,770	N	5,800	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0019	U			2,400	N	269	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0019	U			NS	NS	2,740	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0049	U			NS	NS	696	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0019	U			24,200	N	33,100	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.0097	U			89,600	N	1,210	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0019	U			NS	NS	17,700	N	NMED[C]			
n-Propylbenzene	103-65-1	mg/kg	0.0019	U			NS	NS	6,730	N	NMED[C]			
Naphthalene	91-20-3	mg/kg	0.0019	U			633	N	159	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0024	U			NS	NS	736	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.0019	U			NS	NS	2,740	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.0019	U			NS	NS	35,400	N	NMED[C]			
Styrene	100-42-5	mg/kg	0.0019	U			NS	NS	10,200	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0019	U			NS	NS	35,400	N	NMED[C]			
Tetrachloroethene	127-18-4	mg/kg	0.0019	U			7,910	N	120	N	NMED			
Toluene	108-88-3	mg/kg	0.0041	J			NS	NS	14,000	N	NMED		2.93E-07	
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0019	U			NS	NS	206	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0019	U			781	N	130	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0019	U			5,370	N	7	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0019	U			NS	NS	1,130	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0019	U			161	N	162	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	UJ			8,540	N	79	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	UJ			NS	NS	2,500	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	UJ			45,900	N	24,800	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	UJ			45,900	N	24,800	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	UJ			NS	NS	26,900	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	UJ			17,000	N	269	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	UJ			NS	NS	807	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	UJ			NS	NS	5,380	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	UJ			NS	NS	538	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	UJ			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	UJ			165	N	81	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	UJ			NS	NS	28,300	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.17	UJ			NS	NS	1,770	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.17	UJ			NS	NS	1,000	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	UJ			NS	NS	13,500	N	NMED[C]			
2-Nitroaniline	88-74-4	mg/kg	0.17	UJ			NS	NS	2,690	N	NMED[C]			
2-Nitrophenol	88-75-5	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	UJ			410	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.17	UJ			135	N	1,080	N	NMED[SC]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	UJ			NS	NS	22	N	NMED			
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	UJ			NS	NS	26,900	N	NMED[C]			
4-Chloroaniline	106-47-8	mg/kg	0.17	UJ			14	N	135	N	NMED[C]			

TABLEL D1-AJ23-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AJ23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.17	UJ			135	N	1,080	N	NMED[C]			
4-Nitrophenol	100-02-7	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.17	UJ			NS	NS	15,100	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.17	UJ			NS	NS	7,530	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.17	UJ			NS	NS	75,300	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.17	UJ			240	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.13	UJ			173	N	15	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	UJ			240	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	UJ			NS	NS	7,530	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	UJ			2,310	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.17	UJ			NS	NS	1,080,000	N	NMED[C]			
Benzyl Alcohol	100-51-6	mg/kg	0.17	UJ			NS	NS	26,900	N	NMED[C]			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	UJ			NS	NS	807	N	NMED[C]			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	UJ			2	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	UJ			3,540	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	UJ			13,400	N	5,380	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.17	UJ			1,420	N	53,800	N	NMED[C]			
Carbazole	86-74-8	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.17	UJ			23,100	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.17	UJ			NS	NS	26,900	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.17	UJ			NS	NS	2,690	N	NMED[C]			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	UJ			24	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.17	UJ			NS	NS	269	N	NMED[C]			
Diethylphthalate	84-66-2	mg/kg	0.17	UJ			NS	NS	215,000	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.17	UJ			NS	NS	269,000	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.17	UJ			NS	NS	10,000	N	NMED			
Fluorene	86-73-7	mg/kg	0.17	UJ			NS	NS	10,000	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.17	UJ			117	N	215	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	UJ			2,400	N	269	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.17	UJ			4,670	N	188	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	UJ			240	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.17	UJ			198,000	N	53,700	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	UJ			0.38	N	NA	N	NMED[C]			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.02	UJ			4	N	2	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	UJ			37,900	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.17	UJ			633	N	159	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.17	UJ			1,350	N	353	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.17	UJ			346	N	989	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.17	UJ			NS	NS	8,070	N	NMED			
Phenol	108-95-2	mg/kg	0.17	UJ			NS	NS	77,400	N	NMED			
Pyrene	129-00-0	mg/kg	0.17	UJ			NS	NS	7,530	N	NMED			

TABLEL D1-AJ23-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AJ23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	8,070	N	NMED[C]			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	27	N	NMED[C]			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			626	N	2,420	N	NMED[C]			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.02	U			2,440	N	17	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.02	U			55	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.01	U			58	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.01	U			85	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.01	U			85	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.01	U			85	N	5	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.01	U			85	N	NS	NS	NMED			
DIOXINS/FURANS (ηg/kg) (3)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000029	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000033	J	0.000011	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg	0.000000015	J	0.0000015	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.0000018	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.000000059	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg	0.0000000058	J	0.000000058	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000082	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000047	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000075	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		UJ	0.000000061	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.0000001	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg	0.0000000023	J	0.000000076	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000077	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.0000002	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000013	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.0000002	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000058	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.000000026				0.00172	N	0.000226	N	NMED	1.53E-10	1.17E-04	

TABLEL D1-AJ23-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AJ23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	19,000				NS	NS	41,400	N	NMED		4.59E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	U			NS	NS	142	N	NMED			
Arsenic	7440-38-2	mg/kg	1				216	N	41	N	NMED	4.63E-08	2.43E-02	
Barium	7440-39-3	mg/kg	140				NS	NS	4,390	N	NMED		3.19E-02	
Beryllium	7440-41-7	mg/kg	0.46	J			2,710	N	148	N	NMED	1.70E-09	3.11E-03	
Cadmium	7440-43-9	mg/kg	0.74				3,610	N	72	N	NMED	2.05E-09	1.03E-02	
Calcium	7440-70-2	mg/kg	2,900				NS	NS	8,850,000	N	NMED		3.28E-04	
Chromium (Total) (4)	7440-47-3	mg/kg	13				468	N	134	N	NMED	2.78E-07	9.70E-02	
Cobalt	7440-48-4	mg/kg	4.7				722	N	37	N	NMED	6.51E-08	1.28E-01	Endocrine
Copper	7440-50-8	mg/kg	92				NS	NS	14,200	N	NMED		6.48E-03	
Iron	7439-89-6	mg/kg	11,000				NS	NS	248,000	N	NMED		4.44E-02	
Lead	7439-92-1	mg/kg	13				NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	8,500				NS	NS	1,550,000	N	NMED		5.48E-03	
Manganese	7439-96-5	mg/kg	240				NS	NS	464	N	NMED		5.17E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.024	J			NS	NS	21	N	NMED		1.16E-03	
Nickel	7440-02-0	mg/kg	9.2				20,500	N	753	N	NMED	4.49E-09	1.22E-02	
Potassium	7440-09-7	mg/kg	860				NS	NS	20,800,000	N	NMED		4.13E-05	
Selenium	7782-49-2	mg/kg	1				NS	NS	1,750	N	NMED		5.71E-04	
Silver	7440-22-4	mg/kg	0.098	J			NS	NS	1,770	N	NMED		5.54E-05	
Sodium	7440-23-5	mg/kg	66				NS	NS	10,200,000	N	NMED		6.47E-06	
Thallium	7440-28-0	mg/kg	0.13				NS	NS	4	N	NMED		3.67E-02	
Vanadium	7440-62-2	mg/kg	18				NS	NS	614	N	NMED		2.93E-02	
Zinc	7440-66-6	mg/kg	48				NS	NS	106,000	N	NMED		4.53E-04	

TABLEL D1-AJ23-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AJ23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.32	U			NS	NS	12	N	NMED			
Nitrate	14797-55-8	mg/kg	2.3	J			NS	NS	566,000	N	NMED		4.06E-06	
Perchlorate	14797-73-0	mg/kg	0.0018	UJ			NS	NS	248	N	NMED			
										Cumulative Risk/Hazard		**4E-07**	**1.4**	
										Exceeds Target Level		**N**	Y	

System	Hazard Quotient
Nervous	0.98
Endocrine	0.13
All Others	0.30

Notes:

[s] = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update).

2) NMED[C] = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

3) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

4) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of qauntitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper tolerance limit

TABLE D1-AK23-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AK23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0022	U			28.1	N	2,350	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0022	U			NS	NS	14,400	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0022	U			7.98	N	1,560	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0022	U			18.8	N	2.61	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0022	U			78.6	N	15,600	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0022	U			NS	NS	440	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0022	U			29.3	N	141	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0022	U			NS	NS	63	N	RSL			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0054	U			0.051	N	7.09	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0022	U			240	N	82.9	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0022	U			NS	NS	300	N	RSL			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0054	U			0.0858	N	5.88	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0022	U			0.672	N	135	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0022	U			NS	NS	2,150	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0022	U			8.32	N	55.6	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0022	U			17.8	N	29	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0022	U			NS	NS	270	N	RSL			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0022	U			1,290	N	5,480	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0022	U			NS	NS	1,600	N	RSL			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0022	U			1,290	N	5,480	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0022	U			17.8	N	29	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.0032	U			NS	NS	37,400	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0022	U			NS	NS	1,560	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.0022	U			NS	NS	200	N	RSL			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0022	U			NS	NS	1,600	N	RSL			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0022	U			NS	NS	5,810	N	RSL			
Acetone	67-64-1	mg/kg	0.24				NS	NS	66,300	N	NMED		3.62E-06	
Benzene	71-43-2	mg/kg	0.0022	U			17.8	N	114	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.0022	U			NS	NS	290	N	RSL			
Bromochloromethane	74-97-5	mg/kg	0.0022	U			NS	NS	150	N	RSL			
Bromodichloromethane	75-27-4	mg/kg	0.0022	U			6.19	N	1,560	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0022	U			674	N	1,230	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0022	U			NS	NS	17.7	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.0022	U			NS	NS	1,550	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0022	U			10.7	N	144	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0022	U			NS	NS	378	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0022	U			NS	NS	19,000	N	NMED			
Chloroform	67-66-3	mg/kg	0.0022	U			5.9	N	306	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0054	U			41.1	N	268	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0022	U			NS	NS	156	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0022	U			29.3	N	141	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0022	U			13.9	N	1,230	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0022	U			NS	NS	57.9	N	NMED			
Dichlorodifluoromethane	75-71-8	mg/kg	0.0022	U			NS	NS	182	N	NMED			

TABLE D1-AK23-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AK23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Ethylbenzene	100-41-4	mg/kg	0.0022	U			75.1	N	3,930	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0022	U			68.3	N	61.6	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0022	U			NS	NS	2,360	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0054	U			NS	NS	764	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0022	U			975	N	37,800	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.011	U			766	N	409	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0022	U			NS	NS	3,900	N	RSL			
n-Propylbenzene	103-65-1	mg/kg	0.0022	U			NS	NS	3,800	N	RSL			
Naphthalene	91-20-3	mg/kg	0.0022	U			22.6	N	162	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0027	U			NS	NS	805	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.0022	U			NS	NS	2,360	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.0022	U			NS	NS	7,800	N	RSL			
Styrene	100-42-5	mg/kg	0.0022	U			NS	NS	7,260	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0022	U			NS	NS	7,800	N	RSL			
Tetrachloroethene	127-18-4	mg/kg	0.0022	U			337	N	111	N	NMED			
Toluene	108-88-3	mg/kg	0.0022	U			NS	NS	5,230	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0022	U			NS	NS	210	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0022	U			29.3	N	141	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0022	U			15.5	N	6.77	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0022	U			NS	NS	1,230	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0022	U			0.742	N	113	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	UJ			240	N	82.9	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	UJ			NS	NS	2,150	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	UJ			1,290	N	5,480	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	UJ			1,290	N	5,480	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	UJ			NS	NS	6,160	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	UJ			484	N	61.6	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	UJ			NS	NS	185	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	UJ			NS	NS	1,230	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	UJ			NS	NS	123	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	UJ			17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	UJ			3.56	N	18.5	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	UJ			NS	NS	6,260	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.17	UJ			NS	NS	391	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.17	UJ			NS	NS	232	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	UJ			NS	NS	3,200	N	RSL			
2-Nitroaniline	88-74-4	mg/kg	0.17	UJ			NS	NS	630	N	RSL			
2-Nitrophenol	88-75-5	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	UJ			11.8	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.17	UJ			270	N	250	N	RSL[S]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	UJ			NS	NS	4.93	N	NMED			
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	UJ			NS	NS	6,300	N	RSL			
4-Chloroaniline	106-47-8	mg/kg	0.17	UJ			27	N	32	N	RSL			

TABLE D1-AK23-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AK23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.17	UJ			270	N	250	N	RSL			
4-Nitrophenol	100-02-7	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.17	UJ			NS	NS	3,480	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.17	UJ			NS	NS	1,740	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.17	UJ			NS	NS	17,400	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.17	UJ			1.53	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.13	UJ			1.12	N	17.4	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	UJ			1.53	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	UJ			NS	NS	1,740	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	UJ			15.3	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.17	UJ			NS	NS	250,000	N	RSL			
Benzyl Alcohol	100-51-6	mg/kg	0.17	UJ			NS	NS	6,300	N	RSL			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	UJ			NS	NS	190	N	RSL			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	UJ			3.11	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	UJ			99.3	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	UJ			380	N	1,230	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.17	UJ			2,900	N	13,000	N	RSL			
Carbazole	86-74-8	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.17	UJ			153	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.17	UJ			NS	NS	6,160	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.17	UJ			NS	NS	630	N	RSL			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	UJ			0.153	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.17	UJ			NS	NS	78	N	RSL			
Diethylphthalate	84-66-2	mg/kg	0.17	UJ			NS	NS	49,300	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.17	UJ			NS	NS	61,600	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.17	UJ			NS	NS	2,320	N	NMED			
Fluorene	86-73-7	mg/kg	0.17	UJ			NS	NS	2,320	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.17	UJ			3.33	N	49.3	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	UJ			68.3	N	61.6	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.17	UJ			133	N	43.1	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	UJ			1.53	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.17	UJ			5,610	N	12,300	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	UJ			0.78	N	NS	NS	RSL			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	UJ			0.0234	N	0.493	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	UJ			1,090	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.17	UJ			22.6	N	162	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.17	UJ			60.4	N	131	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.17	UJ			9.85	N	234	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.17	UJ			NS	NS	1,740	N	NMED			
Phenol	108-95-2	mg/kg	0.17	UJ			NS	NS	18,500	N	NMED			
Pyrene	129-00-0	mg/kg	0.17	UJ			NS	NS	1,740	N	NMED			

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FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	2,200	N	RSL			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	6.3	N	RSL			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			211	N	36	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			3.56	N	18.5	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	7.7	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			31.6	N	70.4	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	6.16	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	7.64	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			333	N	247	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			83.1	N	301	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	156	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			60.4	N	131	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			313	N	6.16	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	3,850	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			1,300	N	570	N	RSL			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.02	U			69.6	N	3.98	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.02	U			1.81	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.0098	U			1.86	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.0098	U			2.43	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.0098	U			2.43	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.0098	U			2.43	N	1.14	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.0098	U			2.43	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (2)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000039	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000036	J	0.000012	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000039	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.000000023	J	0.0000023	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.0000001	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.00000011	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.00000011	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.00000014	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000016	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000015	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg	0.00000017	J	0.00000017	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000016	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000017	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000068	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.0000002				0.000049	N	0.0000506	N	NMED	4.01E-08	3.89E-03	

TABLE D1-AK23-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AK23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	24,000	J			NS	NS	78,000	N	NMED		3.08E-01	Nervous
Antimony	7440-36-0	mg/kg	0.077	J			NS	NS	31.3	N	NMED		2.46E-03	
Arsenic	7440-38-2	mg/kg	1.2	J			7.07	N	13	N	NMED	1.70E-06	9.23E-02	
Barium	7440-39-3	mg/kg	210				NS	NS	15,600	N	NMED		1.35E-02	
Beryllium	7440-41-7	mg/kg	0.7	J			64,400	N	156	N	NMED	1.09E-10	4.49E-03	
Cadmium	7440-43-9	mg/kg	0.8	J			85,900	N	70.5	N	NMED	9.31E-11	1.13E-02	
Calcium	7440-70-2	mg/kg	3,800				NS	NS	13,000,000	N	NMED		2.92E-04	
Chromium (Total) (3)	7440-47-3	mg/kg	18	J			96.6	N	45,200	N	NMED	1.86E-06	3.98E-04	
Cobalt	7440-48-4	mg/kg	6.3	J			17,200	N	23.4	N	NMED	3.66E-09	2.69E-01	Endocrine
Copper	7440-50-8	mg/kg	120	J			NS	NS	3,130	N	NMED		3.83E-02	
Iron	7439-89-6	mg/kg	13,000	J			NS	NS	54,800	N	NMED		2.37E-01	GI
Lead	7439-92-1	mg/kg	17	J			NS	NS	200	N	RSL			
Magnesium	7439-95-4	mg/kg	10,000	J			NS	NS	15,600,000	N	NMED		6.41E-04	
Manganese	7439-96-5	mg/kg	380	J			NS	NS	10,500	N	NMED		3.62E-02	
Mercury (Elemental)	7439-97-6	mg/kg	0.032	J			NS	NS	23.8	N	NMED		1.34E-03	
Nickel	7440-02-0	mg/kg	12	J			595,000	N	1,560	N	NMED	2.02E-10	7.69E-03	
Potassium	7440-09-7	mg/kg	1,300	J			NS	NS	15,600,000	N	NMED		8.33E-05	
Selenium	7782-49-2	mg/kg	1.1				NS	NS	391	N	NMED		2.81E-03	
Silver	7440-22-4	mg/kg	0.16				NS	NS	391	N	NMED		4.09E-04	
Sodium	7440-23-5	mg/kg	75				NS	NS	7,820,000	N	NMED		9.59E-06	
Thallium	7440-28-0	mg/kg	0.051	J			NS	NS	0.782	N	NMED		6.52E-02	
Vanadium	7440-62-2	mg/kg	24	J			NS	NS	394	N	NMED		6.09E-02	
Zinc	7440-66-6	mg/kg	49	J			NS	NS	23,500	N	NMED		2.09E-03	

TABLE D1-AK23-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AK23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.31	U			NS	NS	11.2	N	NMED			
Nitrate	14797-55-8	mg/kg	6.1	J			NS	NS	125,000	N	NMED		4.88E-05	
Perchlorate	14797-73-0	mg/kg	0.002	UJ			NS	NS	54.8	N	NMED			
										Cumulative Risk/Hazard		**4E-06**	**1.2**	
										Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	0.3
Endocrine	0.27
GI	0.24
All Others	0.34

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of Quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper Tolerance Limit

TABLE D1-AK23-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AK23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0022	U			137	N	39,400	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0022	U			NS	NS	72,500	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0022	U			39	N	26,000	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0022	U			92	N	12	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0022	U			383	N	260,000	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0022	U			NS	NS	2,260	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0022	U			146	N	695	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0022	U			NS	NS	930	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0054	U			1	N	34	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0022	U			1,250	N	423	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0022	U			NS	NS	1,800	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0054	U			1	N	41	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0022	U			3	N	738	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0022	U			NS	NS	13,000	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0022	U			41	N	286	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0022	U			87	N	137	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0022	U			NS	NS	1,500	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0022	U			6,730	N	90,800	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0022	U			NS	NS	23,000	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0022	U			6,730	N	90,800	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0022	U			87	N	137	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0032	U			NS	NS	411,000	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0022	U			NS	NS	26,000	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0022	U			NS	NS	1,300	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0022	U			NS	NS	23,000	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0022	U			NS	NS	81,600	N	RSL		
Acetone	67-64-1	mg/kg	0.24				NS	NS	960,000	N	NMED		2.50E-07
Benzene	71-43-2	mg/kg	0.0022	U			87	N	729	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0022	U			NS	NS	1,800	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0022	U			NS	NS	630	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0022	U			30	N	26,000	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0022	U			1,760	N	18,300	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0022	U			NS	NS	95	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0022	U			NS	NS	8,540	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0022	U			53	N	1,020	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0022	U			NS	NS	2,160	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0022	U			NS	NS	89,500	N	NMED		
Chloroform	67-66-3	mg/kg	0.0022	U			29	N	2,000	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0054	U			201	N	1,260	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0022	U			NS	NS	2,600	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0022	U			146	N	695	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0022	U			67	N	18,300	N	NMED		
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0022	U			NS	NS	288	N	NMED		
Dichlorodifluoromethane	75-71-8	mg/kg	0.0022	U			NS	NS	865	N	NMED		

TABLE D1-AK23-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AK23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Ethylbenzene	100-41-4	mg/kg	0.0022	U			29,000	N	368	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0022	U			52	N	916	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0022	U			NS	NS	14,200	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0054	U			NS	NS	3,730	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0022	U			4,820	N	178,000	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.011	U			14,400	N	5,130	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0022	U			NS	NS	58,000	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0022	U			NS	NS	24,000	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0022	U			108	N	843	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0027	U			NS	NS	3,940	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0022	U			NS	NS	14,200	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0022	U			NS	NS	120,000	N	RSL		
Styrene	100-42-5	mg/kg	0.0022	U			NS	NS	51,300	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0022	U			NS	NS	120,000	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0022	U			1,650	N	629	N	NMED		
Toluene	108-88-3	mg/kg	0.0022	U			NS	NS	61,300	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0022	U			NS	NS	1,100	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0022	U			146	N	695	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0022	U			112	N	37	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0022	U			NS	NS	6,030	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0022	U			28	N	46	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	UJ			1,250	N	423	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	UJ			NS	NS	13,000	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	UJ			6,730	N	90,800	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	UJ			6,730	N	90,800	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	UJ			NS	NS	91,600	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	UJ			2,330	N	916	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	UJ			NS	NS	2,750	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	UJ			NS	NS	18,300	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	UJ			NS	NS	1,830	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	UJ			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	UJ			17	N	276	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	UJ			NS	NS	104,000	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.17	UJ			NS	NS	6,490	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.17	UJ			NS	NS	3,370	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	UJ			NS	NS	41,000	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.17	UJ			NS	NS	8,000	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	UJ			NS	NS	410	N	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.17	UJ			1,100	N	3,300	N	RSL[S]		
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	UJ			NS	NS	73	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	UJ			NS	NS	82,000	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.17	UJ			110	N	410	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		

TABLE D1-AK23-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AK23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4-Nitroaniline	100-01-6	mg/kg	0.17	UJ			1,100	N	3,300	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.17	UJ			NS	NS	50,500	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.17	UJ			NS	NS	25,300	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.17	UJ			NS	NS	253,000	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.17	UJ			32	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.13	UJ			24	N	251	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	UJ			32	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	UJ			NS	NS	25,300	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	UJ			323	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.17	UJ			NS	NS	3,300,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.17	UJ			NS	NS	82,000	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	UJ			NS	NS	2,500	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	UJ			16	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	UJ			519	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	UJ			1,830	N	18,300	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.17	UJ			12,000	N	160,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.17	UJ			3,230	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.17	UJ			NS	NS	91,600	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.17	UJ			NS	NS	8,200	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	UJ			3	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.17	UJ			NS	NS	1,200	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.17	UJ			NS	NS	733,000	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.17	UJ			NS	NS	916,000	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.17	UJ			NS	NS	33,700	N	NMED		
Fluorene	86-73-7	mg/kg	0.17	UJ			NS	NS	33,700	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.17	UJ			16	N	733	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	UJ			52	N	916	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.17	UJ			641	N	641	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	UJ			32	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.17	UJ			27,000	N	183,000	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	UJ			3	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	UJ			1	N	7	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	UJ			5,240	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.17	UJ			108	N	843	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.17	UJ			293	N	1,540	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.17	UJ			45	N	3,180	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.17	UJ			NS	NS	27,500	N	NMED		
Phenol	108-95-2	mg/kg	0.17	UJ			NS	NS	275,000	N	NMED		
Pyrene	129-00-0	mg/kg	0.17	UJ			NS	NS	25,300	N	NMED		

TABLE D1-AK23-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AK23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			5,300	N	7,400	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.02	U			304	N	57	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.02	U			9	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.0098	U			9	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.0098	U			11	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.0098	U			11	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.0098	U			11	N	16	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.0098	U			11	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000039	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000036	J	0.000012	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000039	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.000000023	J	0.0000023	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.0000001	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.00000011	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.00000011	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.00000014	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000016	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000015	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg	0.00000017	J	0.00000017	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000016	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000017	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000068	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.0000002				0.000238	N	0.000808	N	NMED	8.26E-09	2.43E-04

TABLE D1-AK23-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AK23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	24,000	J			NS	NS	1,290,000	N	NMED		1.86E-02
Antimony	7440-36-0	mg/kg	0.077	J			NS	NS	519	N	NMED		1.48E-04
Arsenic	7440-38-2	mg/kg	1.2	J			36	N	208	N	NMED	3.34E-07	5.77E-03
Barium	7440-39-3	mg/kg	210				NS	NS	255,000	N	NMED		8.24E-04
Beryllium	7440-41-7	mg/kg	0.7	J			313,000	N	2,580	N	NMED	2.24E-11	2.71E-04
Cadmium	7440-43-9	mg/kg	0.8	J			417,000	N	1,110	N	NMED	1.92E-11	7.21E-04
Calcium	7440-70-2	mg/kg	3,800				NS	NS	32,400,000	N	NMED		1.17E-04
Chromium (Total) (3)	7440-47-3	mg/kg	18	J			505	N	314,000	N	NMED	3.56E-07	5.73E-05
Cobalt	7440-48-4	mg/kg	6.3	J			83,400	N	388	N	NMED	7.55E-10	1.62E-02
Copper	7440-50-8	mg/kg	120	J			NS	NS	51,900	N	NMED		2.31E-03
Iron	7439-89-6	mg/kg	13,000	J			NS	NS	908,000	N	NMED		1.43E-02
Lead	7439-92-1	mg/kg	17	J			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	10,000	J			NS	NS	5,680,000	N	NMED		1.76E-03
Manganese	7439-96-5	mg/kg	380	J			NS	NS	160,000	N	NMED		2.38E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.032	J			NS	NS	112	N	NMED		2.86E-04
Nickel	7440-02-0	mg/kg	12	J			2,890,000	N	25,700	N	NMED	4.15E-11	4.67E-04
Potassium	7440-09-7	mg/kg	1,300	J			NS	NS	76,200,000	N	NMED		1.71E-05
Selenium	7782-49-2	mg/kg	1.1				NS	NS	6,490	N	NMED		1.69E-04
Silver	7440-22-4	mg/kg	0.16				NS	NS	6,490	N	NMED		2.47E-05
Sodium	7440-23-5	mg/kg	75				NS	NS	37,300,000	N	NMED		2.01E-06
Thallium	7440-28-0	mg/kg	0.051	J			NS	NS	13	N	NMED		3.92E-03
Vanadium	7440-62-2	mg/kg	24	J			NS	NS	6,530	N	NMED		3.68E-03
Zinc	7440-66-6	mg/kg	49	J			NS	NS	38,900	N	NMED		1.26E-03

TABLE D1-AK23-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AK23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.31	U			NS	NS	63	N	NMED		
Nitrate	14797-55-8	mg/kg	6.1	J			NS	NS	2,080,000	N	NMED		2.93E-06
Perchlorate	14797-73-0	mg/kg	0.002	UJ			NS	NS	908	N	NMED		
										Cumulative Risk/Hazard		**7E-07**	**0.07**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den Berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update)

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper tolerance limit

TABLE D1-AK23-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AK23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0022	U			659	N	10,600	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0022	U			NS	NS	13,600	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0022	U			197	N	7,080	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0022	U			4,300	N	2	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0022	U			1,820	N	70,800	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0022	U			NS	NS	424	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0022	U			781	N	130	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0022	U			NS	NS	283	N	NMED[C]			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0054	U			8	N	6	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0022	U			8,540	N	79	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0022	U			NS	NS	492	N	NMED[C]			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0054	U			6	N	8	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0022	U			16	N	140	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0022	U			NS	NS	2,500	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0022	U			195	N	54	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0022	U			415	N	25	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0022	U			NS	NS	422	N	NMED[C]			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0022	U			45,900	N	24,800	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0022	U			NS	NS	7,080	N	NMED[C]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0022	U			45,900	N	24,800	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0022	U			415	N	25	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.0032	U			NS	NS	90,700	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0022	U			NS	NS	7,080	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.0022	U			NS	NS	599	N	NMED[C]			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0022	U			NS	NS	7,080	N	NMED[C]			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0022	U			NS	NS	20,400	N	NMED[C]			
Acetone	67-64-1	mg/kg	0.24				NS	NS	242,000	N	NMED		9.92E-07	
Benzene	71-43-2	mg/kg	0.0022	U			423	N	142	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.0022	U			NS	NS	538	N	NMED[C]			
Bromochloromethane	74-97-5	mg/kg	0.0022	U			NS	NS	296	N	NMED[C]			
Bromodichloromethane	75-27-4	mg/kg	0.0022	U			143	N	7,080	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0022	U			23,700	N	5,380	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0022	U			NS	NS	18	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.0022	U			NS	NS	1,620	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0022	U			252	N	202	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0022	U			NS	NS	412	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0022	U			NS	NS	16,600	N	NMED			
Chloroform	67-66-3	mg/kg	0.0022	U			134	N	391	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0054	U			956	N	235	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0022	U			NS	NS	708	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0022	U			781	N	130	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0022	U			340	N	5,380	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0022	U			NS	NS	54	N	NMED			
Dichlorodifluoromethane	75-71-8	mg/kg	0.0022	U			NS	NS	161	N	NMED			

TABLE D1-AK23-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AK23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Ethylbenzene	100-41-4	mg/kg	0.0022	U			1,770	N	5,800	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0022	U			2,400	N	269	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0022	U			NS	NS	2,740	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0054	U			NS	NS	696	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0022	U			24,200	N	33,100	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.011	U			89,600	N	1,210	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0022	U			NS	NS	17,700	N	NMED[C]			
n-Propylbenzene	103-65-1	mg/kg	0.0022	U			NS	NS	6,730	N	NMED[C]			
Naphthalene	91-20-3	mg/kg	0.0022	U			633	N	159	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0027	U			NS	NS	736	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.0022	U			NS	NS	2,740	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.0022	U			NS	NS	35,400	N	NMED[C]			
Styrene	100-42-5	mg/kg	0.0022	U			NS	NS	10,200	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0022	U			NS	NS	35,400	N	NMED[C]			
Tetrachloroethene	127-18-4	mg/kg	0.0022	U			7,910	N	120	N	NMED			
Toluene	108-88-3	mg/kg	0.0022	U			NS	NS	14,000	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0022	U			NS	NS	206	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0022	U			781	N	130	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0022	U			5,370	N	7	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0022	U			NS	NS	1,130	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0022	U			161	N	162	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	UJ			8,540	N	79	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	UJ			NS	NS	2,500	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	UJ			45,900	N	24,800	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	UJ			45,900	N	24,800	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	UJ			NS	NS	26,900	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	UJ			17,000	N	269	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	UJ			NS	NS	807	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	UJ			NS	NS	5,380	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	UJ			NS	NS	538	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	UJ			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	UJ			165	N	81	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	UJ			NS	NS	28,300	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.17	UJ			NS	NS	1,770	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.17	UJ			NS	NS	1,000	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	UJ			NS	NS	13,500	N	NMED[C]			
2-Nitroaniline	88-74-4	mg/kg	0.17	UJ			NS	NS	2,690	N	NMED[C]			
2-Nitrophenol	88-75-5	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	UJ			410	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.17	UJ			135	N	1,080	N	NMED[SC]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	UJ			NS	NS	22	N	NMED			
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	UJ			NS	NS	26,900	N	NMED[C]			
4-Chloroaniline	106-47-8	mg/kg	0.17	UJ			14	N	135	N	NMED[C]			

TABLE D1-AK23-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AK23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg). Continued														
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.17	UJ			135	N	1,080	N	NMED[C]			
4-Nitrophenol	100-02-7	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.17	UJ			NS	NS	15,100	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.17	UJ			NS	NS	7,530	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.17	UJ			NS	NS	75,300	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.17	UJ			240	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.13	UJ			173	N	15	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	UJ			240	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	UJ			NS	NS	7,530	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	UJ			2,310	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.17	UJ			NS	NS	1,080,000	N	NMED[C]			
Benzyl Alcohol	100-51-6	mg/kg	0.17	UJ			NS	NS	26,900	N	NMED[C]			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	UJ			NS	NS	807	N	NMED[C]			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	UJ			2	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	UJ			3,540	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	UJ			13,400	N	5,380	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.17	UJ			1,420	N	53,800	N	NMED[C]			
Carbazole	86-74-8	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.17	UJ			23,100	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.17	UJ			NS	NS	26,900	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.17	UJ			NS	NS	2,690	N	NMED[C]			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	UJ			24	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.17	UJ			NS	NS	269	N	NMED[C]			
Diethylphthalate	84-66-2	mg/kg	0.17	UJ			NS	NS	215,000	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.17	UJ			NS	NS	269,000	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.17	UJ			NS	NS	10,000	N	NMED			
Fluorene	86-73-7	mg/kg	0.17	UJ			NS	NS	10,000	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.17	UJ			117	N	215	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	UJ			2,400	N	269	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.17	UJ			4,670	N	188	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	UJ			240	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.17	UJ			198,000	N	53,700	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	UJ			0.38	N	NA	N	NMED[C]			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	UJ			4	N	2	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	UJ			37,900	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.17	UJ			633	N	159	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.17	UJ			1,350	N	353	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.17	UJ			346	N	989	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.17	UJ			NS	NS	8,070	N	NMED			
Phenol	108-95-2	mg/kg	0.17	UJ			NS	NS	77,400	N	NMED			
Pyrene	129-00-0	mg/kg	0.17	UJ			NS	NS	7,530	N	NMED			

TABLE D1-AK23-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AK23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	8,070	N	NMED[C]			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	27	N	NMED[C]			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			626	N	2,420	N	NMED[C]			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.02	U			2,440	N	17	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.02	U			55	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.0098	U			58	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.0098	U			85	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.0098	U			85	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.0098	U			85	N	5	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.0098	U			85	N	NS	NS	NMED			
DIOXINS/FURANS (ηg/kg) (3)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000039	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000036	J	0.000012	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000039	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.000000023	J	0.0000023	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.0000001	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.00000011	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.00000011	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.00000014	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000016	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000015	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg	0.00000017	J	0.00000017	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000016	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000017	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000068	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.0000002				0.00172	N	0.000226	N	NMED	1.14E-09	8.70E-04	

TABLE D1-AK23-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AK23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	24,000	J			NS	NS	41,400	N	NMED		5.80E-01	Nervous
Antimony	7440-36-0	mg/kg	0.077	J			NS	NS	142	N	NMED		5.42E-04	
Arsenic	7440-38-2	mg/kg	1.2	J			216	N	41	N	NMED	5.56E-08	2.91E-02	
Barium	7440-39-3	mg/kg	210				NS	NS	4,390	N	NMED		4.78E-02	
Beryllium	7440-41-7	mg/kg	0.7	J			2,710	N	148	N	NMED	2.58E-09	4.73E-03	
Cadmium	7440-43-9	mg/kg	0.8	J			3,610	N	72	N	NMED	2.22E-09	1.11E-02	
Calcium	7440-70-2	mg/kg	3,800				NS	NS	8,850,000	N	NMED			
Chromium (Total) (4)	7440-47-3	mg/kg	18	J			468	N	134	N	NMED	3.85E-07	1.34E-01	GI, Blood
Cobalt	7440-48-4	mg/kg	6.3	J			722	N	37	N	NMED	8.73E-08	1.72E-01	Endocrine
Copper	7440-50-8	mg/kg	120	J			NS	NS	14,200	N	NMED		8.45E-03	
Iron	7439-89-6	mg/kg	13,000	J			NS	NS	248,000	N	NMED		5.24E-02	
Lead	7439-92-1	mg/kg	17	J			NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	10,000	J			NS	NS	1,550,000	N	NMED			
Manganese	7439-96-5	mg/kg	380	J			NS	NS	464	N	NMED		8.19E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.032	J			NS	NS	21	N	NMED		1.55E-03	
Nickel	7440-02-0	mg/kg	12	J			20,500	N	753	N	NMED	5.85E-09	1.59E-02	
Potassium	7440-09-7	mg/kg	1,300	J			NS	NS	20,800,000	N	NMED			
Selenium	7782-49-2	mg/kg	1.1				NS	NS	1,750	N	NMED		6.29E-04	
Silver	7440-22-4	mg/kg	0.16				NS	NS	1,770	N	NMED		9.04E-05	
Sodium	7440-23-5	mg/kg	75				NS	NS	10,200,000	N	NMED		7.35E-06	
Thallium	7440-28-0	mg/kg	0.051	J			NS	NS	4	N	NMED		1.44E-02	
Vanadium	7440-62-2	mg/kg	24	J			NS	NS	614	N	NMED		3.91E-02	
Zinc	7440-66-6	mg/kg	49	J			NS	NS	106,000	N	NMED		4.62E-04	

TABLE D1-AK23-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AK23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.31	U			NS	NS	12	N	NMED			
Nitrate	14797-55-8	mg/kg	6.1	J			NS	NS	566,000	N	NMED		1.08E-05	
Perchlorate	14797-73-0	mg/kg	0.002	UJ			NS	NS	248	N	NMED			
										Cumulative Risk/Hazard		**5E-07**	**1.9**	
										Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	1.4
Endocrine	0.17
GI	0.13
Blood	0.13
All Others	0.23

Notes:

[s] = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update).

2) NMED[C] = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

3) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

4) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper tolerance limit

TABLE D1-AL23-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AL23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.001	U			28.1	N	2,350	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.001	U			NS	NS	14,400	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.001	U			7.98	N	1,560	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.001	U			18.8	N	2.61	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.001	U			78.6	N	15,600	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.001	U			NS	NS	440	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.001	U			29.3	N	141	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.001	U			NS	NS	63	N	RSL			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0025	U			0.051	N	7.09	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.001	U			240	N	82.9	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.001	U			NS	NS	300	N	RSL			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0025	U			0.0858	N	5.88	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.001	U			0.672	N	135	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.001	U			NS	NS	2,150	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.001	U			8.32	N	55.6	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.001	U			17.8	N	29	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.001	U			NS	NS	270	N	RSL			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.001	U			1,290	N	5,480	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.001	U			NS	NS	1,600	N	RSL			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.001	U			1,290	N	5,480	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.001	U			17.8	N	29	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.0015	U			NS	NS	37,400	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.001	U			NS	NS	1,560	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.001	U			NS	NS	200	N	RSL			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.001	U			NS	NS	1,600	N	RSL			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.001	U			NS	NS	5,810	N	RSL			
Acetone	67-64-1	mg/kg	0.095				NS	NS	66,300	N	NMED		1.43E-06	
Benzene	71-43-2	mg/kg	0.001	U			17.8	N	114	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.001	U			NS	NS	290	N	RSL			
Bromochloromethane	74-97-5	mg/kg	0.001	U			NS	NS	150	N	RSL			
Bromodichloromethane	75-27-4	mg/kg	0.001	U			6.19	N	1,560	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.001	U			674	N	1,230	N	NMED			
Bromomethane	74-83-9	mg/kg	0.001	U			NS	NS	17.7	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.001	U			NS	NS	1,550	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.001	U			10.7	N	144	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.001	U			NS	NS	378	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.001	U			NS	NS	19,000	N	NMED			
Chloroform	67-66-3	mg/kg	0.001	U			5.9	N	306	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0025	U			41.1	N	268	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.001	U			NS	NS	156	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.001	U			29.3	N	141	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.001	U			13.9	N	1,230	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.001	U			NS	NS	57.9	N	NMED			
Dichlorodifluoromethane	75-71-8	mg/kg	0.001	U			NS	NS	182	N	NMED			

TABLE D1-AL23-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AL23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Ethylbenzene	100-41-4	mg/kg	0.001	U			75.1	N	3,930	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.001	U			68.3	N	61.6	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.001	U			NS	NS	2,360	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0025	U			NS	NS	764	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.001	U			975	N	37,800	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.0051	U			766	N	409	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.001	U			NS	NS	3,900	N	RSL			
n-Propylbenzene	103-65-1	mg/kg	0.001	U			NS	NS	3,800	N	RSL			
Naphthalene	91-20-3	mg/kg	0.001	U			22.6	N	162	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0013	U			NS	NS	805	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.001	U			NS	NS	2,360	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.001	U			NS	NS	7,800	N	RSL			
Styrene	100-42-5	mg/kg	0.001	U			NS	NS	7,260	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.001	U			NS	NS	7,800	N	RSL			
Tetrachloroethene	127-18-4	mg/kg	0.001	U			337	N	111	N	NMED			
Toluene	108-88-3	mg/kg	0.001	U			NS	NS	5,230	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.001	U			NS	NS	210	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.001	U			29.3	N	141	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.001	U			15.5	N	6.77	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.001	U			NS	NS	1,230	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.001	U			0.742	N	113	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	UJ			240	N	82.9	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	UJ			NS	NS	2,150	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	UJ			1,290	N	5,480	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	UJ			1,290	N	5,480	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	UJ			NS	NS	6,160	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	UJ			484	N	61.6	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	UJ			NS	NS	185	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	UJ			NS	NS	1,230	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	UJ			NS	NS	123	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	UJ			17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	UJ			3.56	N	18.5	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	UJ			NS	NS	6,260	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.17	UJ			NS	NS	391	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.17	UJ			NS	NS	232	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	UJ			NS	NS	3,200	N	RSL			
2-Nitroaniline	88-74-4	mg/kg	0.17	UJ			NS	NS	630	N	RSL			
2-Nitrophenol	88-75-5	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	UJ			11.8	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.17	UJ			270	N	250	N	RSL[S]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	UJ			NS	NS	4.93	N	NMED			
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	UJ			NS	NS	6,300	N	RSL			
4-Chloroaniline	106-47-8	mg/kg	0.17	UJ			27	N	32	N	RSL			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			

TABLE D1-AL23-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AL23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Nitroaniline	100-01-6	mg/kg	0.17	UJ			270	N	250	N	RSL			
4-Nitrophenol	100-02-7	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.17	UJ			NS	NS	3,480	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.17	UJ			NS	NS	1,740	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.17	UJ			NS	NS	17,400	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.17	UJ			1.53	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.13	UJ			1.12	N	17.4	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	UJ			1.53	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	UJ			NS	NS	1,740	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	UJ			15.3	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.17	UJ			NS	NS	250,000	N	RSL			
Benzyl Alcohol	100-51-6	mg/kg	0.17	UJ			NS	NS	6,300	N	RSL			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	UJ			NS	NS	190	N	RSL			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	UJ			3.11	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	UJ			99.3	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	UJ			380	N	1,230	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.17	UJ			2,900	N	13,000	N	RSL			
Carbazole	86-74-8	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.17	UJ			153	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.17	UJ			NS	NS	6,160	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.17	UJ			NS	NS	630	N	RSL			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	UJ			0.153	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.17	UJ			NS	NS	78	N	RSL			
Diethylphthalate	84-66-2	mg/kg	0.17	UJ			NS	NS	49,300	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.17	UJ			NS	NS	61,600	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.17	UJ			NS	NS	2,320	N	NMED			
Fluorene	86-73-7	mg/kg	0.17	UJ			NS	NS	2,320	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.17	UJ			3.33	N	49.3	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	UJ			68.3	N	61.6	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.17	UJ			133	N	43.1	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	UJ			1.53	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.17	UJ			5,610	N	12,300	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	UJ			0.78	N	NS	NS	RSL			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.02	UJ			0.0234	N	0.493	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	UJ			1,090	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.17	UJ			22.6	N	162	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.17	UJ			60.4	N	131	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.17	UJ			9.85	N	234	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.17	UJ			NS	NS	1,740	N	NMED			
Phenol	108-95-2	mg/kg	0.17	UJ			NS	NS	18,500	N	NMED			
Pyrene	129-00-0	mg/kg	0.17	UJ			NS	NS	1,740	N	NMED			

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HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AL23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	2,200	N	RSL			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	6.3	N	RSL			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			211	N	36	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			3.56	N	18.5	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	7.7	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			31.6	N	70.4	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	6.16	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	7.64	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			333	N	247	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			83.1	N	301	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	156	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			60.4	N	131	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			313	N	6.16	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	3,850	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			1,300	N	570	N	RSL			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.019	U			69.6	N	3.98	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.019	U			1.81	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.0096	U			1.86	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.0096	U			2.43	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.0096	U			2.43	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.0096	U			2.43	N	1.14	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.0096	U			2.43	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (2)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000036	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000017	J	0.0000055	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000028	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.000000013	J	0.0000013	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.000000095	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.00000005	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000044	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000049	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.00000004	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg	0.0000000059	J	0.000000059	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000007	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.0000001	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000063	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.000000055	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.0000001	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000021	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000062	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.000000021				0.000049	N	0.0000506	N	NMED	4.19E-09	4.06E-04	

TABLE D1-AL23-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AL23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	25,000				NS	NS	78,000	N	NMED		3.21E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	U			NS	NS	31.3	N	NMED			
Arsenic	7440-38-2	mg/kg	1.2				7.07	N	13	N	NMED	1.70E-06	9.23E-02	
Barium	7440-39-3	mg/kg	140				NS	NS	15,600	N	NMED		8.97E-03	
Beryllium	7440-41-7	mg/kg	0.6	J			64,400	N	156	N	NMED	9.32E-11	3.85E-03	
Cadmium	7440-43-9	mg/kg	0.66				85,900	N	70.5	N	NMED	7.68E-11	9.36E-03	
Calcium	7440-70-2	mg/kg	3,700				NS	NS	13,000,000	N	NMED		2.85E-04	
Chromium (Total) (3)	7440-47-3	mg/kg	17				96.6	N	45,200	N	NMED	1.76E-06	3.76E-04	
Cobalt	7440-48-4	mg/kg	6.3				17,200	N	23.4	N	NMED	3.66E-09	2.69E-01	Endocrine
Copper	7440-50-8	mg/kg	96				NS	NS	3,130	N	NMED		3.07E-02	
Iron	7439-89-6	mg/kg	13,000				NS	NS	54,800	N	NMED		2.37E-01	GI
Lead	7439-92-1	mg/kg	16				NS	NS	200	N	RSL			
Magnesium	7439-95-4	mg/kg	11,000				NS	NS	15,600,000	N	NMED		7.05E-04	
Manganese	7439-96-5	mg/kg	330				NS	NS	10,500	N	NMED		3.14E-02	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.029	J			NS	NS	23.8	N	NMED		1.22E-03	
Nickel	7440-02-0	mg/kg	11				595,000	N	1,560	N	NMED	1.85E-10	7.05E-03	
Potassium	7440-09-7	mg/kg	1,300				NS	NS	15,600,000	N	NMED		8.33E-05	
Selenium	7782-49-2	mg/kg	1.1				NS	NS	391	N	NMED		2.81E-03	
Silver	7440-22-4	mg/kg	0.15				NS	NS	391	N	NMED		3.84E-04	
Sodium	7440-23-5	mg/kg	82				NS	NS	7,820,000	N	NMED		1.05E-05	
Thallium	7440-28-0	mg/kg	0.051	J			NS	NS	0.782	N	NMED		6.52E-02	
Vanadium	7440-62-2	mg/kg	22				NS	NS	394	N	NMED		5.58E-02	
Zinc	7440-66-6	mg/kg	50				NS	NS	23,500	N	NMED		2.13E-03	

TABLE D1-AL23-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AL23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.31	U			NS	NS	11.2	N	NMED			
Nitrate	14797-55-8	mg/kg	2.1	U			NS	NS	125,000	N	NMED			
Perchlorate	14797-73-0	mg/kg	0.002	UJ			NS	NS	54.8	N	NMED			
										Cumulative Risk/Hazard		**3E-06**	**1.1**	
										Exceeds Target Level		**N**	**Y**	

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

System	Hazard Quotient
Nervous	0.4
Endocrine	0.27
GI	0.24
All Others	0.28

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of Quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper Tolerance Limit

TABLE D1-AL23-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AL23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.001	U			137	N	39,400	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.001	U			NS	NS	72,500	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.001	U			39	N	26,000	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.001	U			92	N	12	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.001	U			383	N	260,000	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.001	U			NS	NS	2,260	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.001	U			146	N	695	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.001	U			NS	NS	930	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0025	U			1	N	34	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.001	U			1,250	N	423	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.001	U			NS	NS	1,800	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0025	U			1	N	41	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.001	U			3	N	738	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.001	U			NS	NS	13,000	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.001	U			41	N	286	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.001	U			87	N	137	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.001	U			NS	NS	1,500	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.001	U			6,730	N	90,800	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.001	U			NS	NS	23,000	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.001	U			6,730	N	90,800	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.001	U			87	N	137	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0015	U			NS	NS	411,000	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.001	U			NS	NS	26,000	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.001	U			NS	NS	1,300	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.001	U			NS	NS	23,000	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.001	U			NS	NS	81,600	N	RSL		
Acetone	67-64-1	mg/kg	0.095				NS	NS	960,000	N	NMED		9.90E-08
Benzene	71-43-2	mg/kg	0.001	U			87	N	729	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.001	U			NS	NS	1,800	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.001	U			NS	NS	630	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.001	U			30	N	26,000	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.001	U			1,760	N	18,300	N	NMED		
Bromomethane	74-83-9	mg/kg	0.001	U			NS	NS	95	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.001	U			NS	NS	8,540	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.001	U			53	N	1,020	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.001	U			NS	NS	2,160	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.001	U			NS	NS	89,500	N	NMED		
Chloroform	67-66-3	mg/kg	0.001	U			29	N	2,000	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0025	U			201	N	1,260	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.001	U			NS	NS	2,600	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.001	U			146	N	695	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.001	U			67	N	18,300	N	NMED		
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.001	U			NS	NS	288	N	NMED		
Dichlorodifluoromethane	75-71-8	mg/kg	0.001	U			NS	NS	865	N	NMED		

TABLE D1-AL23-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AL23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Ethylbenzene	100-41-4	mg/kg	0.001	U			29,000	N	368	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.001	U			52	N	916	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.001	U			NS	NS	14,200	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0025	U			NS	NS	3,730	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.001	U			4,820	N	178,000	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.0051	U			14,400	N	5,130	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.001	U			NS	NS	58,000	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.001	U			NS	NS	24,000	N	RSL		
Naphthalene	91-20-3	mg/kg	0.001	U			108	N	843	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0013	U			NS	NS	3,940	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.001	U			NS	NS	14,200	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.001	U			NS	NS	120,000	N	RSL		
Styrene	100-42-5	mg/kg	0.001	U			NS	NS	51,300	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.001	U			NS	NS	120,000	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.001	U			1,650	N	629	N	NMED		
Toluene	108-88-3	mg/kg	0.001	U			NS	NS	61,300	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.001	U			NS	NS	1,100	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.001	U			146	N	695	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.001	U			112	N	37	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.001	U			NS	NS	6,030	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.001	U			28	N	46	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	UJ			1,250	N	423	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	UJ			NS	NS	13,000	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	UJ			6,730	N	90,800	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	UJ			6,730	N	90,800	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	UJ			NS	NS	91,600	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	UJ			2,330	N	916	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	UJ			NS	NS	2,750	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	UJ			NS	NS	18,300	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	UJ			NS	NS	1,830	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	UJ			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	UJ			17	N	276	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	UJ			NS	NS	104,000	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.17	UJ			NS	NS	6,490	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.17	UJ			NS	NS	3,370	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	UJ			NS	NS	41,000	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.17	UJ			NS	NS	8,000	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	UJ			NS	NS	410	N	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.17	UJ			1,100	N	3,300	N	RSL[S]		
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	UJ			NS	NS	73	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	UJ			NS	NS	82,000	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.17	UJ			110	N	410	N	RSL		

TABLE D1-AL23-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AL23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.17	UJ			1,100	N	3,300	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.17	UJ			NS	NS	50,500	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.17	UJ			NS	NS	25,300	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.17	UJ			NS	NS	253,000	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.17	UJ			32	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.13	UJ			24	N	251	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	UJ			32	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	UJ			NS	NS	25,300	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	UJ			323	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.17	UJ			NS	NS	3,300,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.17	UJ			NS	NS	82,000	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	UJ			NS	NS	2,500	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	UJ			16	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	UJ			519	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	UJ			1,830	N	18,300	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.17	UJ			12,000	N	160,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.17	UJ			3,230	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.17	UJ			NS	NS	91,600	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.17	UJ			NS	NS	8,200	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	UJ			3	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.17	UJ			NS	NS	1,200	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.17	UJ			NS	NS	733,000	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.17	UJ			NS	NS	916,000	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.17	UJ			NS	NS	33,700	N	NMED		
Fluorene	86-73-7	mg/kg	0.17	UJ			NS	NS	33,700	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.17	UJ			16	N	733	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	UJ			52	N	916	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.17	UJ			641	N	641	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	UJ			32	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.17	UJ			27,000	N	183,000	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	UJ			3	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.02	UJ			1	N	7	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	UJ			5,240	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.17	UJ			108	N	843	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.17	UJ			293	N	1,540	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.17	UJ			45	N	3,180	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.17	UJ			NS	NS	27,500	N	NMED		
Phenol	108-95-2	mg/kg	0.17	UJ			NS	NS	275,000	N	NMED		
Pyrene	129-00-0	mg/kg	0.17	UJ			NS	NS	25,300	N	NMED		

TABLE D1-AL23-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AL23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			5,300	N	7,400	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.019	U			304	N	57	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.019	U			9	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.0096	U			9	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.0096	U			11	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.0096	U			11	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.0096	U			11	N	16	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.0096	U			11	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000036	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000017	J	0.0000055	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000028	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.000000013	J	0.0000013	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.000000095	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.00000005	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000044	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000049	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.00000004	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg	0.0000000059	J	0.000000059	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000007	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.0000001	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000063	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.000000055	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.0000001	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000021	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000062	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.000000021				0.000238	N	0.000808	N	NMED	8.63E-10	2.54E-05

TABLE D1-AL23-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AL23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	25,000				NS	NS	1,290,000	N	NMED		1.94E-02
Antimony	7440-36-0	mg/kg	0.15	U			NS	NS	519	N	NMED		
Arsenic	7440-38-2	mg/kg	1.2				36	N	208	N	NMED	3.34E-07	5.77E-03
Barium	7440-39-3	mg/kg	140				NS	NS	255,000	N	NMED		5.49E-04
Beryllium	7440-41-7	mg/kg	0.6	J			313,000	N	2,580	N	NMED	1.92E-11	2.33E-04
Cadmium	7440-43-9	mg/kg	0.66				417,000	N	1,110	N	NMED	1.58E-11	5.95E-04
Calcium	7440-70-2	mg/kg	3,700				NS	NS	32,400,000	N	NMED		
Chromium (Total) (3)	7440-47-3	mg/kg	17				505	N	314,000	N	NMED	3.37E-07	5.41E-05
Cobalt	7440-48-4	mg/kg	6.3				83,400	N	388	N	NMED	7.55E-10	1.62E-02
Copper	7440-50-8	mg/kg	96				NS	NS	51,900	N	NMED		1.85E-03
Iron	7439-89-6	mg/kg	13,000				NS	NS	908,000	N	NMED		1.43E-02
Lead	7439-92-1	mg/kg	16				NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	11,000				NS	NS	5,680,000	N	NMED		1.94E-03
Manganese	7439-96-5	mg/kg	330				NS	NS	160,000	N	NMED		2.06E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.029	J			NS	NS	112	N	NMED		2.59E-04
Nickel	7440-02-0	mg/kg	11				2,890,000	N	25,700	N	NMED	3.81E-11	4.28E-04
Potassium	7440-09-7	mg/kg	1,300				NS	NS	76,200,000	N	NMED		
Selenium	7782-49-2	mg/kg	1.1				NS	NS	6,490	N	NMED		1.69E-04
Silver	7440-22-4	mg/kg	0.15				NS	NS	6,490	N	NMED		2.31E-05
Sodium	7440-23-5	mg/kg	82				NS	NS	37,300,000	N	NMED		2.20E-06
Thallium	7440-28-0	mg/kg	0.051	J			NS	NS	13	N	NMED		3.92E-03
Vanadium	7440-62-2	mg/kg	22				NS	NS	6,530	N	NMED		3.37E-03
Zinc	7440-66-6	mg/kg	50				NS	NS	38,900	N	NMED		1.29E-03

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CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AL23
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	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.31	U			NS	NS	63	N	NMED		
Nitrate	14797-55-8	mg/kg	2.1	U			NS	NS	2,080,000	N	NMED		
Perchlorate	14797-73-0	mg/kg	0.002	UJ			NS	NS	908	N	NMED		
										Cumulative Risk/Hazard		**7E-07**	**0.07**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper tolerance limit

TABLE D1-AL23-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AL23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2,3)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.001	U			659	N	10,600	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.001	U			NS	NS	13,600	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.001	U			197	N	7,080	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.001	U			4,300	N	2	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.001	U			1,820	N	70,800	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.001	U			NS	NS	424	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.001	U			781	N	130	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.001	U			NS	NS	283	N	NMED[C]			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0025	U			8	N	6	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.001	U			8,540	N	79	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.001	U			NS	NS	492	N	NMED[C]			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0025	U			6	N	8	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.001	U			16	N	140	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.001	U			NS	NS	2,500	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.001	U			195	N	54	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.001	U			415	N	25	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.001	U			NS	NS	422	N	NMED[C]			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.001	U			45,900	N	24,800	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.001	U			NS	NS	7,080	N	NMED[C]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.001	U			45,900	N	24,800	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.001	U			415	N	25	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.0015	U			NS	NS	90,700	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.001	U			NS	NS	7,080	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.001	U			NS	NS	599	N	NMED[C]			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.001	U			NS	NS	7,080	N	NMED[C]			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.001	U			NS	NS	20,400	N	NMED[C]			
Acetone	67-64-1	mg/kg	0.095				NS	NS	242,000	N	NMED		3.93E-07	
Benzene	71-43-2	mg/kg	0.001	U			423	N	142	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.001	U			NS	NS	538	N	NMED[C]			
Bromochloromethane	74-97-5	mg/kg	0.001	U			NS	NS	296	N	NMED[C]			
Bromodichloromethane	75-27-4	mg/kg	0.001	U			143	N	7,080	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.001	U			23,700	N	5,380	N	NMED			
Bromomethane	74-83-9	mg/kg	0.001	U			NS	NS	18	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.001	U			NS	NS	1,620	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.001	U			252	N	202	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.001	U			NS	NS	412	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.001	U			NS	NS	16,600	N	NMED			
Chloroform	67-66-3	mg/kg	0.001	U			134	N	391	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0025	U			956	N	235	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.001	U			NS	NS	708	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.001	U			781	N	130	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.001	U			340	N	5,380	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.001	U			NS	NS	54	N	NMED			
Dichlorodifluoromethane	75-71-8	mg/kg	0.001	U			NS	NS	161	N	NMED			

TABLE D1-AL23-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AL23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2,3)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Ethylbenzene	100-41-4	mg/kg	0.001	U			1,770	N	5,800	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.001	U			2,400	N	269	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.001	U			NS	NS	2,740	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0025	U			NS	NS	696	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.001	U			24,200	N	33,100	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.0051	U			89,600	N	1,210	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.001	U			NS	NS	17,700	N	NMED[C]			
n-Propylbenzene	103-65-1	mg/kg	0.001	U			NS	NS	6,730	N	NMED[C]			
Naphthalene	91-20-3	mg/kg	0.001	U			633	N	159	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0013	U			NS	NS	736	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.001	U			NS	NS	2,740	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.001	U			NS	NS	35,400	N	NMED[C]			
Styrene	100-42-5	mg/kg	0.001	U			NS	NS	10,200	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.001	U			NS	NS	35,400	N	NMED[C]			
Tetrachloroethene	127-18-4	mg/kg	0.001	U			7,910	N	120	N	NMED			
Toluene	108-88-3	mg/kg	0.001	U			NS	NS	14,000	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.001	U			NS	NS	206	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.001	U			781	N	130	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.001	U			5,370	N	7	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.001	U			NS	NS	1,130	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.001	U			161	N	162	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	UJ			8,540	N	79	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	UJ			NS	NS	2,500	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	UJ			45,900	N	24,800	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	UJ			45,900	N	24,800	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	UJ			NS	NS	26,900	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	UJ			17,000	N	269	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	UJ			NS	NS	807	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	UJ			NS	NS	5,380	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	UJ			NS	NS	538	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	UJ			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	UJ			165	N	81	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	UJ			NS	NS	28,300	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.17	UJ			NS	NS	1,770	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.17	UJ			NS	NS	1,000	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	UJ			NS	NS	13,500	N	NMED[C]			
2-Nitroaniline	88-74-4	mg/kg	0.17	UJ			NS	NS	2,690	N	NMED[C]			
2-Nitrophenol	88-75-5	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	UJ			410	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.17	UJ			135	N	1,080	N	NMED[SC]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	UJ			NS	NS	22	N	NMED			
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	UJ			NS	NS	26,900	N	NMED[C]			
4-Chloroaniline	106-47-8	mg/kg	0.17	UJ			14	N	135	N	NMED[C]			

TABLE D1-AL23-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AL23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2,3)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.17	UJ			135	N	1,080	N	NMED[C]			
4-Nitrophenol	100-02-7	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.17	UJ			NS	NS	15,100	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.17	UJ			NS	NS	7,530	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.17	UJ			NS	NS	75,300	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.17	UJ			240	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.13	UJ			173	N	15	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	UJ			240	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	UJ			NS	NS	7,530	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	UJ			2,310	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.17	UJ			NS	NS	1,080,000	N	NMED[C]			
Benzyl Alcohol	100-51-6	mg/kg	0.17	UJ			NS	NS	26,900	N	NMED[C]			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	UJ			NS	NS	807	N	NMED[C]			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	UJ			2	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	UJ			3,540	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	UJ			13,400	N	5,380	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.17	UJ			1,420	N	53,800	N	NMED[C]			
Carbazole	86-74-8	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.17	UJ			23,100	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.17	UJ			NS	NS	26,900	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.17	UJ			NS	NS	2,690	N	NMED[C]			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	UJ			24	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.17	UJ			NS	NS	269	N	NMED[C]			
Diethylphthalate	84-66-2	mg/kg	0.17	UJ			NS	NS	215,000	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.17	UJ			NS	NS	269,000	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.17	UJ			NS	NS	10,000	N	NMED			
Fluorene	86-73-7	mg/kg	0.17	UJ			NS	NS	10,000	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.17	UJ			117	N	215	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	UJ			2,400	N	269	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.17	UJ			4,670	N	188	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	UJ			240	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.17	UJ			198,000	N	53,700	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	UJ			0.38	N	NA	N	NMED[C]			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.02	UJ			4	N	2	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	UJ			37,900	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.17	UJ			633	N	159	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.17	UJ			1,350	N	353	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.17	UJ			346	N	989	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.17	UJ			NS	NS	8,070	N	NMED			
Phenol	108-95-2	mg/kg	0.17	UJ			NS	NS	77,400	N	NMED			
Pyrene	129-00-0	mg/kg	0.17	UJ			NS	NS	7,530	N	NMED			

TABLE D1-AL23-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AL23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2,3)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	8,070	N	NMED[C]			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	27	N	NMED[C]			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			626	N	2,420	N	NMED[C]			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.019	U			2,440	N	17	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.019	U			55	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.0096	U			58	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.0096	U			85	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.0096	U			85	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.0096	U			85	N	5	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.0096	U			85	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (4)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000036	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000017	J	0.0000055	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000028	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.000000013	J	0.0000013	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.000000095	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.00000005	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000044	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000049	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.00000004	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg	0.0000000059	J	0.000000059	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000007	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.0000001	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000063	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.000000055	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.0000001	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000021	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000062	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.000000021				0.00172	N	0.000226	N	NMED	1.19E-10	9.09E-05	

TABLE D1-AL23-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AL23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2,3)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	25,000				NS	NS	41,400	N	NMED		6.04E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	U			NS	NS	142	N	NMED			
Arsenic	7440-38-2	mg/kg	1.2				216	N	41	N	NMED	5.56E-08	2.91E-02	
Barium	7440-39-3	mg/kg	140				NS	NS	4,390	N	NMED		3.19E-02	
Beryllium	7440-41-7	mg/kg	0.6	J			2,710	N	148	N	NMED	2.21E-09	4.05E-03	
Cadmium	7440-43-9	mg/kg	0.66				3,610	N	72	N	NMED	1.83E-09	9.15E-03	
Calcium	7440-70-2	mg/kg	3,700				NS	NS	8,850,000	N	NMED		4.18E-04	
Chromium (Total) (5)	7440-47-3	mg/kg	17				468	N	134	N	NMED	3.63E-07	1.27E-01	GI, Blood
Cobalt	7440-48-4	mg/kg	6.3				722	N	37	N	NMED	8.73E-08	1.72E-01	Endocrine
Copper	7440-50-8	mg/kg	96				NS	NS	14,200	N	NMED		6.76E-03	
Iron	7439-89-6	mg/kg	13,000				NS	NS	248,000	N	NMED		5.24E-02	
Lead	7439-92-1	mg/kg	16				NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	11,000				NS	NS	1,550,000	N	NMED		7.10E-03	
Manganese	7439-96-5	mg/kg	330				NS	NS	464	N	NMED		7.11E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.029	J			NS	NS	21	N	NMED		1.40E-03	
Nickel	7440-02-0	mg/kg	11				20,500	N	753	N	NMED	5.37E-09	1.46E-02	
Potassium	7440-09-7	mg/kg	1,300				NS	NS	20,800,000	N	NMED		6.25E-05	
Selenium	7782-49-2	mg/kg	1.1				NS	NS	1,750	N	NMED		6.29E-04	
Silver	7440-22-4	mg/kg	0.15				NS	NS	1,770	N	NMED		8.47E-05	
Sodium	7440-23-5	mg/kg	82				NS	NS	10,200,000	N	NMED		8.04E-06	
Thallium	7440-28-0	mg/kg	0.051	J			NS	NS	4	N	NMED		1.44E-02	
Vanadium	7440-62-2	mg/kg	22				NS	NS	614	N	NMED		3.58E-02	
Zinc	7440-66-6	mg/kg	50				NS	NS	106,000	N	NMED		4.72E-04	

TABLE D1-AL23-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AL23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2,3)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.31	U			NS	NS	12	N	NMED			
Nitrate	14797-55-8	mg/kg	2.1	U			NS	NS	566,000	N	NMED			
Perchlorate	14797-73-0	mg/kg	0.002	UJ			NS	NS	248	N	NMED			
										Cumulative Risk/Hazard		**5E-07**	**1.8**	
										Exceeds Target Level		**N**	**Y**	

Notes:

[s] = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

System	Hazard Quotient
Nervous	1.3
Endocrine	0.17
GI	0.13
Blood	0.13
All Others	0.21

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update).

2) NMED[C] = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

3) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

4) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service

DL = Detection limit

J = Estimated

LOD = Limit of detection

LOQ = Limit of quantitation

mg/kg = milligrams per kilogram

NS = No Standard

U = Nondetect

UJ = Estimated Nondetect

UTL = Upper tolerance limit

TABLE D1-AL24-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AL24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.002	UJ			28.1	N	2,350	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.002	U			NS	NS	14,400	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.002	U			7.98	N	1,560	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.002	U			18.8	N	2.61	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.002	U			78.6	N	15,600	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.002	U			NS	NS	440	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.002	U			29.3	N	141	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.002	U			NS	NS	63	N	RSL			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.005	U			0.051	N	7.09	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.002	U			240	N	82.9	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.002	U			NS	NS	300	N	RSL			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.005	U			0.0858	N	5.88	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.002	UJ			0.672	N	135	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.002	U			NS	NS	2,150	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.002	U			8.32	N	55.6	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.002	U			17.8	N	29	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.002	U			NS	NS	270	N	RSL			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.002	U			1,290	N	5,480	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.002	U			NS	NS	1,600	N	RSL			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.002	U			1,290	N	5,480	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.002	U			17.8	N	29	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.003	U			NS	NS	37,400	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.002	U			NS	NS	1,560	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.002	U			NS	NS	200	N	RSL			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.002	U			NS	NS	1,600	N	RSL			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.002	U			NS	NS	5,810	N	RSL			
Acetone	67-64-1	mg/kg	0.1				NS	NS	66,300	N	NMED		1.51E-06	
Benzene	71-43-2	mg/kg	0.002	U			17.8	N	114	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.002	U			NS	NS	290	N	RSL			
Bromochloromethane	74-97-5	mg/kg	0.002	U			NS	NS	150	N	RSL			
Bromodichloromethane	75-27-4	mg/kg	0.002	U			6.19	N	1,560	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.002	UJ			674	N	1,230	N	NMED			
Bromomethane	74-83-9	mg/kg	0.002	U			NS	NS	17.7	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.002	U			NS	NS	1,550	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.002	U			10.7	N	144	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.002	UJ			NS	NS	378	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.002	U			NS	NS	19,000	N	NMED			
Chloroform	67-66-3	mg/kg	0.002	U			5.9	N	306	N	NMED			
Chloromethane	74-87-3	mg/kg	0.005	U			41.1	N	268	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.002	U			NS	NS	156	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.002	U			29.3	N	141	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.002	UJ			13.9	N	1,230	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.002	U			NS	NS	57.9	N	NMED			
Dichlorodifluoromethane	75-71-8	mg/kg	0.002	U			NS	NS	182	N	NMED			

TABLE D1-AL24-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AL24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Ethylbenzene	100-41-4	mg/kg	0.002	UJ			75.1	N	3,930	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.002	U			68.3	N	61.6	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.002	U			NS	NS	2,360	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.005	UJ			NS	NS	764	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.002	U			975	N	37,800	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.01	U			766	N	409	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.002	U			NS	NS	3,900	N	RSL			
n-Propylbenzene	103-65-1	mg/kg	0.002	U			NS	NS	3,800	N	RSL			
Naphthalene	91-20-3	mg/kg	0.002	U			22.6	N	162	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0025	UJ			NS	NS	805	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.002	U			NS	NS	2,360	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.002	U			NS	NS	7,800	N	RSL			
Styrene	100-42-5	mg/kg	0.002	UJ			NS	NS	7,260	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.002	U			NS	NS	7,800	N	RSL			
Tetrachloroethene	127-18-4	mg/kg	0.002	UJ			337	N	111	N	NMED			
Toluene	108-88-3	mg/kg	0.002	U			NS	NS	5,230	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.002	U			NS	NS	210	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.002	U			29.3	N	141	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.002	U			15.5	N	6.77	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.002	U			NS	NS	1,230	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.002	U			0.742	N	113	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	UJ			240	N	82.9	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	UJ			NS	NS	2,150	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	UJ			1,290	N	5,480	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	UJ			1,290	N	5,480	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	UJ			NS	NS	6,160	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	UJ			484	N	61.6	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	UJ			NS	NS	185	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	UJ			NS	NS	1,230	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	UJ			NS	NS	123	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	UJ			17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	UJ			3.56	N	18.5	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	UJ			NS	NS	6,260	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.17	UJ			NS	NS	391	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.17	UJ			NS	NS	232	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	UJ			NS	NS	3,200	N	RSL			
2-Nitroaniline	88-74-4	mg/kg	0.17	UJ			NS	NS	630	N	RSL			
2-Nitrophenol	88-75-5	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	UJ			11.8	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.17	UJ			270	N	250	N	RSL[S]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	UJ			NS	NS	4.93	N	NMED			
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	UJ			NS	NS	6,300	N	RSL			
4-Chloroaniline	106-47-8	mg/kg	0.17	UJ			27	N	32	N	RSL			

TABLE D1-AL24-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AL24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.17	UJ			270	N	250	N	RSL			
4-Nitrophenol	100-02-7	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.17	UJ			NS	NS	3,480	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.17	UJ			NS	NS	1,740	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.17	UJ			NS	NS	17,400	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.17	UJ			1.53	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.13	UJ			1.12	N	17.4	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	UJ			1.53	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	UJ			NS	NS	1,740	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	UJ			15.3	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.17	UJ			NS	NS	250,000	N	RSL			
Benzyl Alcohol	100-51-6	mg/kg	0.17	UJ			NS	NS	6,300	N	RSL			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	UJ			NS	NS	190	N	RSL			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	UJ			3.11	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	UJ			99.3	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	UJ			380	N	1,230	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.17	UJ			2,900	N	13,000	N	RSL			
Carbazole	86-74-8	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.17	UJ			153	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.17	UJ			NS	NS	6,160	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.17	UJ			NS	NS	630	N	RSL			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	UJ			0.153	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.17	UJ			NS	NS	78	N	RSL			
Diethylphthalate	84-66-2	mg/kg	0.17	UJ			NS	NS	49,300	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.17	UJ			NS	NS	61,600	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.17	UJ			NS	NS	2,320	N	NMED			
Fluorene	86-73-7	mg/kg	0.17	UJ			NS	NS	2,320	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.17	UJ			3.33	N	49.3	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	UJ			68.3	N	61.6	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.17	UJ			133	N	43.1	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	UJ			1.53	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.17	UJ			5,610	N	12,300	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	UJ			0.78	N	NS	NS	RSL			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.02	UJ			0.0234	N	0.493	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	UJ			1,090	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.17	UJ			22.6	N	162	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.17	UJ			60.4	N	131	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.17	UJ			9.85	N	234	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.17	UJ			NS	NS	1,740	N	NMED			
Phenol	108-95-2	mg/kg	0.17	UJ			NS	NS	18,500	N	NMED			
Pyrene	129-00-0	mg/kg	0.17	UJ			NS	NS	1,740	N	NMED			

TABLE D1-AL24-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AL24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	2,200	N	RSL			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	6.3	N	RSL			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			211	N	36	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			3.56	N	18.5	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	7.7	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			31.6	N	70.4	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	6.16	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	7.64	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			333	N	247	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			83.1	N	301	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	156	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			60.4	N	131	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			313	N	6.16	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	3,850	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			1,300	N	570	N	RSL			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.019	U			69.6	N	3.98	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.019	U			1.81	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.0094	U			1.86	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.0094	U			2.43	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.0094	U			2.43	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.0094	U			2.43	N	1.14	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.0094	U			2.43	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (2)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000017	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000012	J	0.000004	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.000000033	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.0000005	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000015	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000051	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000014	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000047	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.00000013	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.000000062	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000017	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000013	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000046	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.000000052	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000013	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000016	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000073	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.0000000012				0.000049	N	0.0000506	N	NMED	2.45E-10	2.37E-05	

TABLE D1-AL24-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AL24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	24,000	J			NS	NS	78,000	N	NMED		3.08E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	U			NS	NS	31.3	N	NMED			
Arsenic	7440-38-2	mg/kg	1.2				7.07	N	13	N	NMED	1.70E-06	9.23E-02	
Barium	7440-39-3	mg/kg	130				NS	NS	15,600	N	NMED		8.33E-03	
Beryllium	7440-41-7	mg/kg	0.43	J			64,400	N	156	N	NMED	6.68E-11	2.76E-03	
Cadmium	7440-43-9	mg/kg	0.55				85,900	N	70.5	N	NMED	6.40E-11	7.80E-03	
Calcium	7440-70-2	mg/kg	2,300				NS	NS	13,000,000	N	NMED		1.77E-04	
Chromium (Total) (3)	7440-47-3	mg/kg	15				96.6	N	45,200	N	NMED	1.55E-06	3.32E-04	
Cobalt	7440-48-4	mg/kg	5.7				17,200	N	23.4	N	NMED	3.31E-09	2.44E-01	Endocrine
Copper	7440-50-8	mg/kg	63				NS	NS	3,130	N	NMED		2.01E-02	
Iron	7439-89-6	mg/kg	11,000				NS	NS	54,800	N	NMED		2.01E-01	GI
Lead	7439-92-1	mg/kg	14				NS	NS	200	N	RSL			
Magnesium	7439-95-4	mg/kg	10,000				NS	NS	15,600,000	N	NMED		6.41E-04	
Manganese	7439-96-5	mg/kg	290				NS	NS	10,500	N	NMED		2.76E-02	
Mercury (Elemental)	7439-97-6	mg/kg	0.022	J			NS	NS	23.8	N	NMED		9.24E-04	
Nickel	7440-02-0	mg/kg	10				595,000	N	1,560	N	NMED	1.68E-10	6.41E-03	
Potassium	7440-09-7	mg/kg	950	J			NS	NS	15,600,000	N	NMED		6.09E-05	
Selenium	7782-49-2	mg/kg	1.1				NS	NS	391	N	NMED		2.81E-03	
Silver	7440-22-4	mg/kg	0.12				NS	NS	391	N	NMED		3.07E-04	
Sodium	7440-23-5	mg/kg	78				NS	NS	7,820,000	N	NMED		9.97E-06	
Thallium	7440-28-0	mg/kg	0.052	J			NS	NS	0.782	N	NMED		6.65E-02	
Vanadium	7440-62-2	mg/kg	22				NS	NS	394	N	NMED		5.58E-02	
Zinc	7440-66-6	mg/kg	40				NS	NS	23,500	N	NMED		1.70E-03	

TABLE D1-AL24-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AL24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.31	U			NS	NS	11.2	N	NMED			
Nitrate	14797-55-8	mg/kg	1.8	J			NS	NS	125,000	N	NMED		1.44E-05	
Perchlorate	14797-73-0	mg/kg	0.002	UJ			NS	NS	54.8	N	NMED			
										Cumulative Risk/Hazard		**3E-06**	**1.0**	
										Exceeds Target Level		**N**	**Y**	

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

System	Hazard Quotient
Nervous	0.3
Endocrine	0.24
GI	0.20
All Others	0.29

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection Limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of Quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper tolerance limit

TABLE D1-AL24-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AL24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.002	UJ			137	N	39,400	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.002	U			NS	NS	72,500	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.002	U			39	N	26,000	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.002	U			92	N	12	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.002	U			383	N	260,000	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.002	U			NS	NS	2,260	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.002	U			146	N	695	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.002	U			NS	NS	930	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.005	U			1	N	34	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.002	U			1,250	N	423	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.002	U			NS	NS	1,800	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.005	U			1	N	41	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.002	UJ			3	N	738	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.002	U			NS	NS	13,000	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.002	U			41	N	286	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.002	U			87	N	137	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.002	U			NS	NS	1,500	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.002	U			6,730	N	90,800	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.002	U			NS	NS	23,000	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.002	U			6,730	N	90,800	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.002	U			87	N	137	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.003	U			NS	NS	411,000	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.002	U			NS	NS	26,000	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.002	U			NS	NS	1,300	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.002	U			NS	NS	23,000	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.002	U			NS	NS	81,600	N	RSL		
Acetone	67-64-1	mg/kg	0.1				NS	NS	960,000	N	NMED		1.04E-07
Benzene	71-43-2	mg/kg	0.002	U			87	N	729	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.002	U			NS	NS	1,800	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.002	U			NS	NS	630	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.002	U			30	N	26,000	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.002	UJ			1,760	N	18,300	N	NMED		
Bromomethane	74-83-9	mg/kg	0.002	U			NS	NS	95	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.002	U			NS	NS	8,540	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.002	U			53	N	1,020	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.002	UJ			NS	NS	2,160	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.002	U			NS	NS	89,500	N	NMED		
Chloroform	67-66-3	mg/kg	0.002	U			29	N	2,000	N	NMED		
Chloromethane	74-87-3	mg/kg	0.005	U			201	N	1,260	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.002	U			NS	NS	2,600	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.002	U			146	N	695	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.002	UJ			67	N	18,300	N	NMED		
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.002	U			NS	NS	288	N	NMED		
Dichlorodifluoromethane	75-71-8	mg/kg	0.002	U			NS	NS	865	N	NMED		

TABLE D1-AL24-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AL24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Ethylbenzene	100-41-4	mg/kg	0.002	UJ			29,000	N	368	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.002	U			52	N	916	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.002	U			NS	NS	14,200	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.005	UJ			NS	NS	3,730	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.002	U			4,820	N	178,000	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.01	U			14,400	N	5,130	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.002	U			NS	NS	58,000	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.002	U			NS	NS	24,000	N	RSL		
Naphthalene	91-20-3	mg/kg	0.002	U			108	N	843	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0025	UJ			NS	NS	3,940	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.002	U			NS	NS	14,200	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.002	U			NS	NS	120,000	N	RSL		
Styrene	100-42-5	mg/kg	0.002	UJ			NS	NS	51,300	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.002	U			NS	NS	120,000	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.002	UJ			1,650	N	629	N	NMED		
Toluene	108-88-3	mg/kg	0.002	U			NS	NS	61,300	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.002	U			NS	NS	1,100	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.002	U			146	N	695	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.002	U			112	N	37	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.002	U			NS	NS	6,030	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.002	U			28	N	46	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	UJ			1,250	N	423	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	UJ			NS	NS	13,000	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	UJ			6,730	N	90,800	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	UJ			6,730	N	90,800	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	UJ			NS	NS	91,600	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	UJ			2,330	N	916	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	UJ			NS	NS	2,750	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	UJ			NS	NS	18,300	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	UJ			NS	NS	1,830	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	UJ			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	UJ			17	N	276	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	UJ			NS	NS	104,000	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.17	UJ			NS	NS	6,490	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.17	UJ			NS	NS	3,370	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	UJ			NS	NS	41,000	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.17	UJ			NS	NS	8,000	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	UJ			NS	NS	410	N	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.17	UJ			1,100	N	3,300	N	RSL[S]		
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	UJ			NS	NS	73	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	UJ			NS	NS	82,000	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.17	UJ			110	N	410	N	RSL		

TABLE D1-AL24-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AL24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.17	UJ			1,100	N	3,300	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.17	UJ			NS	NS	50,500	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.17	UJ			NS	NS	25,300	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.17	UJ			NS	NS	253,000	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.17	UJ			32	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.13	UJ			24	N	251	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	UJ			32	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	UJ			NS	NS	25,300	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	UJ			323	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.17	UJ			NS	NS	3,300,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.17	UJ			NS	NS	82,000	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	UJ			NS	NS	2,500	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	UJ			16	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	UJ			519	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	UJ			1,830	N	18,300	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.17	UJ			12,000	N	160,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.17	UJ			3,230	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.17	UJ			NS	NS	91,600	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.17	UJ			NS	NS	8,200	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	UJ			3	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.17	UJ			NS	NS	1,200	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.17	UJ			NS	NS	733,000	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.17	UJ			NS	NS	916,000	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.17	UJ			NS	NS	33,700	N	NMED		
Fluorene	86-73-7	mg/kg	0.17	UJ			NS	NS	33,700	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.17	UJ			16	N	733	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	UJ			52	N	916	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.17	UJ			641	N	641	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	UJ			32	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.17	UJ			27,000	N	183,000	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	UJ			3	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.02	UJ			1	N	7	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	UJ			5,240	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.17	UJ			108	N	843	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.17	UJ			293	N	1,540	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.17	UJ			45	N	3,180	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.17	UJ			NS	NS	27,500	N	NMED		
Phenol	108-95-2	mg/kg	0.17	UJ			NS	NS	275,000	N	NMED		
Pyrene	129-00-0	mg/kg	0.17	UJ			NS	NS	25,300	N	NMED		

TABLE D1-AL24-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AL24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			5,300	N	7,400	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.019	U			304	N	57	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.019	U			9	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.0094	U			9	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.0094	U			11	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.0094	U			11	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.0094	U			11	N	16	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.0094	U			11	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000017	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000012	J	0.000004	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.000000033	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.0000005	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000015	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000051	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000014	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000047	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.00000013	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.000000062	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000017	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000013	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000046	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.000000052	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000013	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000016	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000073	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.0000000012				0.000238	N	0.000808	N	NMED	5.04E-11	1.49E-06

TABLE D1-AL24-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AL24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	24,000	J			NS	NS	1,290,000	N	NMED		1.86E-02
Antimony	7440-36-0	mg/kg	0.15	U			NS	NS	519	N	NMED		
Arsenic	7440-38-2	mg/kg	1.2				36	N	208	N	NMED	3.34E-07	5.77E-03
Barium	7440-39-3	mg/kg	130				NS	NS	255,000	N	NMED		5.10E-04
Beryllium	7440-41-7	mg/kg	0.43	J			313,000	N	2,580	N	NMED	1.37E-11	1.67E-04
Cadmium	7440-43-9	mg/kg	0.55				417,000	N	1,110	N	NMED	1.32E-11	4.95E-04
Calcium	7440-70-2	mg/kg	2,300				NS	NS	32,400,000	N	NMED		
Chromium (Total) (3)	7440-47-3	mg/kg	15				505	N	314,000	N	NMED	2.97E-07	4.78E-05
Cobalt	7440-48-4	mg/kg	5.7				83,400	N	388	N	NMED	6.83E-10	1.47E-02
Copper	7440-50-8	mg/kg	63				NS	NS	51,900	N	NMED		1.21E-03
Iron	7439-89-6	mg/kg	11,000				NS	NS	908,000	N	NMED		1.21E-02
Lead	7439-92-1	mg/kg	14				NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	10,000				NS	NS	5,680,000	N	NMED		
Manganese	7439-96-5	mg/kg	290				NS	NS	160,000	N	NMED		1.81E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.022	J			NS	NS	112	N	NMED		1.96E-04
Nickel	7440-02-0	mg/kg	10				2,890,000	N	25,700	N	NMED	3.46E-11	3.89E-04
Potassium	7440-09-7	mg/kg	950	J			NS	NS	76,200,000	N	NMED		
Selenium	7782-49-2	mg/kg	1.1				NS	NS	6,490	N	NMED		1.69E-04
Silver	7440-22-4	mg/kg	0.12				NS	NS	6,490	N	NMED		1.85E-05
Sodium	7440-23-5	mg/kg	78				NS	NS	37,300,000	N	NMED		2.09E-06
Thallium	7440-28-0	mg/kg	0.052	J			NS	NS	13	N	NMED		4.00E-03
Vanadium	7440-62-2	mg/kg	22				NS	NS	6,530	N	NMED		3.37E-03
Zinc	7440-66-6	mg/kg	40				NS	NS	38,900	N	NMED		1.03E-03

TABLE D1-AL24-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AL24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.31	U			NS	NS	63	N	NMED		
Nitrate	14797-55-8	mg/kg	1.8	J			NS	NS	2,080,000	N	NMED		8.65E-07
Perchlorate	14797-73-0	mg/kg	0.002	UJ			NS	NS	908	N	NMED		
										Cumulative Risk/Hazard		**6E-07**	**0.06**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den Berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update)

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper tolerance limit

TABLE D1-AL24-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AL24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.002	UJ			659	N	10,600	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.002	U			NS	NS	13,600	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.002	U			197	N	7,080	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.002	U			4,300	N	2	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.002	U			1,820	N	70,800	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.002	U			NS	NS	424	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.002	U			781	N	130	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.002	U			NS	NS	283	N	NMED[C]			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.005	U			8	N	6	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.002	U			8,540	N	79	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.002	U			NS	NS	492	N	NMED[C]			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.005	U			6	N	8	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.002	UJ			16	N	140	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.002	U			NS	NS	2,500	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.002	U			195	N	54	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.002	U			415	N	25	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.002	U			NS	NS	422	N	NMED[C]			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.002	U			45,900	N	24,800	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.002	U			NS	NS	7,080	N	NMED[C]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.002	U			45,900	N	24,800	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.002	U			415	N	25	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.003	U			NS	NS	90,700	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.002	U			NS	NS	7,080	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.002	U			NS	NS	599	N	NMED[C]			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.002	U			NS	NS	7,080	N	NMED[C]			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.002	U			NS	NS	20,400	N	NMED[C]			
Acetone	67-64-1	mg/kg	0.1				NS	NS	242,000	N	NMED		4.13E-07	
Benzene	71-43-2	mg/kg	0.002	U			423	N	142	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.002	U			NS	NS	538	N	NMED[C]			
Bromochloromethane	74-97-5	mg/kg	0.002	U			NS	NS	296	N	NMED[C]			
Bromodichloromethane	75-27-4	mg/kg	0.002	U			143	N	7,080	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.002	UJ			23,700	N	5,380	N	NMED			
Bromomethane	74-83-9	mg/kg	0.002	U			NS	NS	18	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.002	U			NS	NS	1,620	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.002	U			252	N	202	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.002	UJ			NS	NS	412	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.002	U			NS	NS	16,600	N	NMED			
Chloroform	67-66-3	mg/kg	0.002	U			134	N	391	N	NMED			
Chloromethane	74-87-3	mg/kg	0.005	U			956	N	235	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.002	U			NS	NS	708	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.002	U			781	N	130	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.002	UJ			340	N	5,380	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.002	U			NS	NS	54	N	NMED			
Dichlorodifluoromethane	75-71-8	mg/kg	0.002	U			NS	NS	161	N	NMED			

TABLE D1-AL24-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AL24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Ethylbenzene	100-41-4	mg/kg	0.002	UJ			1,770	N	5,800	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.002	U			2,400	N	269	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.002	U			NS	NS	2,740	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.005	UJ			NS	NS	696	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.002	U			24,200	N	33,100	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.01	U			89,600	N	1,210	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.002	U			NS	NS	17,700	N	NMED[C]			
n-Propylbenzene	103-65-1	mg/kg	0.002	U			NS	NS	6,730	N	NMED[C]			
Naphthalene	91-20-3	mg/kg	0.002	U			633	N	159	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0025	UJ			NS	NS	736	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.002	U			NS	NS	2,740	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.002	U			NS	NS	35,400	N	NMED[C]			
Styrene	100-42-5	mg/kg	0.002	UJ			NS	NS	10,200	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.002	U			NS	NS	35,400	N	NMED[C]			
Tetrachloroethene	127-18-4	mg/kg	0.002	UJ			7,910	N	120	N	NMED			
Toluene	108-88-3	mg/kg	0.002	U			NS	NS	14,000	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.002	U			NS	NS	206	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.002	U			781	N	130	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.002	U			5,370	N	7	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.002	U			NS	NS	1,130	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.002	U			161	N	162	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	UJ			8,540	N	79	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	UJ			NS	NS	2,500	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	UJ			45,900	N	24,800	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	UJ			45,900	N	24,800	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	UJ			NS	NS	26,900	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	UJ			17,000	N	269	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	UJ			NS	NS	807	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	UJ			NS	NS	5,380	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	UJ			NS	NS	538	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	UJ			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	UJ			165	N	81	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	UJ			NS	NS	28,300	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.17	UJ			NS	NS	1,770	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.17	UJ			NS	NS	1,000	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	UJ			NS	NS	13,500	N	NMED[C]			
2-Nitroaniline	88-74-4	mg/kg	0.17	UJ			NS	NS	2,690	N	NMED[C]			
2-Nitrophenol	88-75-5	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	UJ			410	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.17	UJ			135	N	1,080	N	NMED[SC]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	UJ			NS	NS	22	N	NMED			
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	UJ			NS	NS	26,900	N	NMED[C]			
4-Chloroaniline	106-47-8	mg/kg	0.17	UJ			14	N	135	N	NMED[C]			

TABLE D1-AL24-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AL24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.17	UJ			135	N	1,080	N	NMED[C]			
4-Nitrophenol	100-02-7	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.17	UJ			NS	NS	15,100	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.17	UJ			NS	NS	7,530	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.17	UJ			NS	NS	75,300	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.17	UJ			240	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.13	UJ			173	N	15	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	UJ			240	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	UJ			NS	NS	7,530	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	UJ			2,310	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.17	UJ			NS	NS	1,080,000	N	NMED[C]			
Benzyl Alcohol	100-51-6	mg/kg	0.17	UJ			NS	NS	26,900	N	NMED[C]			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	UJ			NS	NS	807	N	NMED[C]			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	UJ			2	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	UJ			3,540	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	UJ			13,400	N	5,380	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.17	UJ			1,420	N	53,800	N	NMED[C]			
Carbazole	86-74-8	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.17	UJ			23,100	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.17	UJ			NS	NS	26,900	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.17	UJ			NS	NS	2,690	N	NMED[C]			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	UJ			24	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.17	UJ			NS	NS	269	N	NMED[C]			
Diethylphthalate	84-66-2	mg/kg	0.17	UJ			NS	NS	215,000	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.17	UJ			NS	NS	269,000	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.17	UJ			NS	NS	10,000	N	NMED			
Fluorene	86-73-7	mg/kg	0.17	UJ			NS	NS	10,000	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.17	UJ			117	N	215	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	UJ			2,400	N	269	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.17	UJ			4,670	N	188	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	UJ			240	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.17	UJ			198,000	N	53,700	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	UJ			0.38	N	NA	N	NMED[C]			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.02	UJ			4	N	2	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	UJ			37,900	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.17	UJ			633	N	159	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.17	UJ			1,350	N	353	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.17	UJ			346	N	989	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.17	UJ			NS	NS	8,070	N	NMED			
Phenol	108-95-2	mg/kg	0.17	UJ			NS	NS	77,400	N	NMED			
Pyrene	129-00-0	mg/kg	0.17	UJ			NS	NS	7,530	N	NMED			

TABLE D1-AL24-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AL24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	8,070	N	NMED[C]			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	27	N	NMED[C]			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			626	N	2,420	N	NMED[C]			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.019	U			2,440	N	17	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.019	U			55	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.0094	U			58	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.0094	U			85	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.0094	U			85	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.0094	U			85	N	5	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.0094	U			85	N	NS	NS	NMED			
DIOXINS/FURANS (ηg/kg) (3)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000017	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000012	J	0.000004	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.000000033	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.0000005	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000015	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000051	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000014	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000047	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.00000013	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.000000062	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000017	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000013	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000046	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.000000052	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000013	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000016	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000073	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.0000000012				0.00172	N	0.000226	N	NMED	6.98E-12	5.31E-06	

TABLE D1-AL24-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AL24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	24,000	J			NS	NS	41,400	N	NMED		5.80E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	U			NS	NS	142	N	NMED			
Arsenic	7440-38-2	mg/kg	1.2				216	N	41	N	NMED	5.56E-08	2.91E-02	
Barium	7440-39-3	mg/kg	130				NS	NS	4,390	N	NMED		2.96E-02	
Beryllium	7440-41-7	mg/kg	0.43	J			2,710	N	148	N	NMED	1.59E-09	2.91E-03	
Cadmium	7440-43-9	mg/kg	0.55				3,610	N	72	N	NMED	1.52E-09	7.63E-03	
Calcium	7440-70-2	mg/kg	2,300				NS	NS	8,850,000	N	NMED		2.60E-04	
Chromium (Total) (4)	7440-47-3	mg/kg	15				468	N	134	N	NMED	3.21E-07	1.12E-01	GI, Blood
Cobalt	7440-48-4	mg/kg	5.7				722	N	37	N	NMED	7.89E-08	1.55E-01	Endocrine
Copper	7440-50-8	mg/kg	63				NS	NS	14,200	N	NMED		4.44E-03	
Iron	7439-89-6	mg/kg	11,000				NS	NS	248,000	N	NMED		4.44E-02	
Lead	7439-92-1	mg/kg	14				NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	10,000				NS	NS	1,550,000	N	NMED		6.45E-03	
Manganese	7439-96-5	mg/kg	290				NS	NS	464	N	NMED		6.25E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.022	J			NS	NS	21	N	NMED		1.06E-03	
Nickel	7440-02-0	mg/kg	10				20,500	N	753	N	NMED	4.88E-09	1.33E-02	
Potassium	7440-09-7	mg/kg	950	J			NS	NS	20,800,000	N	NMED		4.57E-05	
Selenium	7782-49-2	mg/kg	1.1				NS	NS	1,750	N	NMED		6.29E-04	
Silver	7440-22-4	mg/kg	0.12				NS	NS	1,770	N	NMED		6.78E-05	
Sodium	7440-23-5	mg/kg	78				NS	NS	10,200,000	N	NMED		7.65E-06	
Thallium	7440-28-0	mg/kg	0.052	J			NS	NS	4	N	NMED		1.47E-02	
Vanadium	7440-62-2	mg/kg	22				NS	NS	614	N	NMED		3.58E-02	
Zinc	7440-66-6	mg/kg	40				NS	NS	106,000	N	NMED		3.77E-04	

TABLE D1-AL24-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AL24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.31	U			NS	NS	12	N	NMED			
Nitrate	14797-55-8	mg/kg	1.8	J			NS	NS	566,000	N	NMED		3.18E-06	
Perchlorate	14797-73-0	mg/kg	0.002	UJ			NS	NS	248	N	NMED			
										Cumulative Risk/Hazard		**5E-07**	**1.7**	
										Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	1.2
Endocrine	0.16
GI	0.11
Blood	0.11
All Others	0.19

Notes:

[s] = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update).

2) NMED[C] = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

3) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

4) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service

DL = Detection limit

J = Estimated

LOD = Limit of detection

LOQ = Limit of quantitation

mg/kg = milligrams per kilogram

NS = No Standard

U = Nondetect

UJ = Estimated Nondetect

UTL = Upper tolerance limit

TABLE D1-AL25-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AL25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0023	U			28.1	N	2,350	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0023	U			NS	NS	14,400	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0023	U			7.98	N	1,560	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0023	U			18.8	N	2.61	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0023	U			78.6	N	15,600	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0023	U			NS	NS	440	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0023	U			29.3	N	141	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0023	U			NS	NS	63	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0058	U			0.051	N	7.09	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0023	U			240	N	82.9	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0023	U			NS	NS	300	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0058	U			0.0858	N	5.88	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0023	U			0.672	N	135	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0023	U			NS	NS	2,150	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0023	U			8.32	N	55.6	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0023	U			17.8	N	29	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0023	U			NS	NS	270	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0023	U			1,290	N	5,480	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0023	U			NS	NS	1,600	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0023	U			1,290	N	5,480	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0023	U			17.8	N	29	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0035	U			NS	NS	37,400	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0023	U			NS	NS	1,560	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0023	U			NS	NS	200	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0023	U			NS	NS	1,600	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0023	U			NS	NS	5,810	N	RSL		
Acetone	67-64-1	mg/kg	0.13				NS	NS	66,300	N	NMED		1.96E-06
Benzene	71-43-2	mg/kg	0.0023	U			17.8	N	114	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0023	U			NS	NS	290	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0023	U			NS	NS	150	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0023	U			6.19	N	1,560	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0023	U			674	N	1,230	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0023	U			NS	NS	17.7	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0023	U			NS	NS	1,550	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0023	U			10.7	N	144	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0023	U			NS	NS	378	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0023	U			NS	NS	19,000	N	NMED		
Chloroform	67-66-3	mg/kg	0.0023	U			5.9	N	306	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0058	U			41.1	N	268	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0023	U			NS	NS	156	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0023	U			29.3	N	141	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0023	U			13.9	N	1,230	N	NMED		
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0023	U			NS	NS	57.9	N	NMED		
Dichlorodifluoromethane	75-71-8	mg/kg	0.0023	U			NS	NS	182	N	NMED		

TABLE D1-AL25-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AL25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Ethylbenzene	100-41-4	mg/kg	0.0023	U			75.1	N	3,930	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0023	U			68.3	N	61.6	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0023	U			NS	NS	2,360	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0058	U			NS	NS	764	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0023	U			975	N	37,800	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.012	U			766	N	409	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0023	U			NS	NS	3,900	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0023	U			NS	NS	3,800	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0023	U			22.6	N	162	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0029	U			NS	NS	805	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0023	U			NS	NS	2,360	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0023	U			NS	NS	7,800	N	RSL		
Styrene	100-42-5	mg/kg	0.0023	U			NS	NS	7,260	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0023	U			NS	NS	7,800	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0023	U			337	N	111	N	NMED		
Toluene	108-88-3	mg/kg	0.0023	U			NS	NS	5,230	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0023	U			NS	NS	210	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0023	U			29.3	N	141	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0023	U			15.5	N	6.77	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0023	U			NS	NS	1,230	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0023	U			0.742	N	113	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	UJ			240	N	82.9	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	UJ			NS	NS	2,150	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	UJ			1,290	N	5,480	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	UJ			1,290	N	5,480	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	UJ			NS	NS	6,160	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	UJ			484	N	61.6	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	UJ			NS	NS	185	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	UJ			NS	NS	1,230	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	UJ			NS	NS	123	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	UJ			17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	UJ			3.56	N	18.5	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	UJ			NS	NS	6,260	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.17	UJ			NS	NS	391	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.17	UJ			NS	NS	232	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	UJ			NS	NS	3,200	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.17	UJ			NS	NS	630	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	UJ			11.8	N	NS	NS	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.17	UJ			270	N	250	N	RSL[S]		
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	UJ			NS	NS	4.93	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	UJ			NS	NS	6,300	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.17	UJ			27	N	32	N	RSL		

TABLE D1-AL25-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AL25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.17	UJ			270	N	250	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.17	UJ			NS	NS	3,480	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.17	UJ			NS	NS	1,740	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.17	UJ			NS	NS	17,400	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.17	UJ			1.53	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.13	UJ			1.12	N	17.4	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	UJ			1.53	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	UJ			NS	NS	1,740	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	UJ			15.3	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.17	UJ			NS	NS	250,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.17	UJ			NS	NS	6,300	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	UJ			NS	NS	190	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	UJ			3.11	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	UJ			99.3	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	UJ			380	N	1,230	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.17	UJ			2,900	N	13,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.17	UJ			153	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.17	UJ			NS	NS	6,160	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.17	UJ			NS	NS	630	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	UJ			0.153	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.17	UJ			NS	NS	78	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.17	UJ			NS	NS	49,300	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.17	UJ			NS	NS	61,600	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.17	UJ			NS	NS	2,320	N	NMED		
Fluorene	86-73-7	mg/kg	0.17	UJ			NS	NS	2,320	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.17	UJ			3.33	N	49.3	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	UJ			68.3	N	61.6	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.17	UJ			133	N	43.1	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	UJ			1.53	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.17	UJ			5,610	N	12,300	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	UJ			0.78	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.02	UJ			0.0234	N	0.493	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	UJ			1,090	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.17	UJ			22.6	N	162	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.17	UJ			60.4	N	131	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.17	UJ			9.85	N	234	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.17	UJ			NS	NS	1,740	N	NMED		
Phenol	108-95-2	mg/kg	0.17	UJ			NS	NS	18,500	N	NMED		
Pyrene	129-00-0	mg/kg	0.17	UJ			NS	NS	1,740	N	NMED		

TABLE D1-AL25-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AL25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			1,300	N	570	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.019	U			69.6	N	3.98	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.019	U			1.81	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.0095	U			1.86	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.0095	U			2.43	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.0095	U			2.43	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.0095	U			2.43	N	1.14	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.0095	U			2.43	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.0000003	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000042	J	0.000014	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg	0.0000000024	J	0.00000024	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.0000012	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.000000045	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000054	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000005	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000064	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000045	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.000000085	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000009	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000017	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.00000016	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.000000059	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000018	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000015	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000071	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.0000000066				0.000049	N	0.0000506	N	NMED	1.35E-09	1.30E-04

TABLE D1-AL25-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AL25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	22,000	J			NS	NS	78,000	N	NMED		2.82E-01
Antimony	7440-36-0	mg/kg	0.089	J			NS	NS	31.3	N	NMED		2.84E-03
Arsenic	7440-38-2	mg/kg	1.3				7.07	N	13	N	NMED	1.84E-06	1.00E-01
Barium	7440-39-3	mg/kg	140				NS	NS	15,600	N	NMED		8.97E-03
Beryllium	7440-41-7	mg/kg	0.43	J			64,400	N	156	N	NMED	6.68E-11	2.76E-03
Cadmium	7440-43-9	mg/kg	0.66				85,900	N	70.5	N	NMED	7.68E-11	9.36E-03
Calcium	7440-70-2	mg/kg	3,100				NS	NS	13,000,000	N	NMED		2.38E-04
Chromium (Total) (3)	7440-47-3	mg/kg	14				96.6	N	45,200	N	NMED	1.45E-06	3.10E-04
Cobalt	7440-48-4	mg/kg	5.4				17,200	N	23.4	N	NMED	3.14E-09	2.31E-01
Copper	7440-50-8	mg/kg	64				NS	NS	3,130	N	NMED		2.04E-02
Iron	7439-89-6	mg/kg	10,000				NS	NS	54,800	N	NMED		1.82E-01
Lead	7439-92-1	mg/kg	14				NS	NS	200	N	RSL		
Magnesium	7439-95-4	mg/kg	9,500				NS	NS	15,600,000	N	NMED		6.09E-04
Manganese	7439-96-5	mg/kg	240				NS	NS	10,500	N	NMED		2.29E-02
Mercury (Elemental)	7439-97-6	mg/kg	0.026	J			NS	NS	23.8	N	NMED		1.09E-03
Nickel	7440-02-0	mg/kg	10				595,000	N	1,560	N	NMED	1.68E-10	6.41E-03
Potassium	7440-09-7	mg/kg	1,100				NS	NS	15,600,000	N	NMED		7.05E-05
Selenium	7782-49-2	mg/kg	1				NS	NS	391	N	NMED		2.56E-03
Silver	7440-22-4	mg/kg	0.099	J			NS	NS	391	N	NMED		2.53E-04
Sodium	7440-23-5	mg/kg	77				NS	NS	7,820,000	N	NMED		9.85E-06
Thallium	7440-28-0	mg/kg	0.053	J			NS	NS	0.782	N	NMED		6.78E-02
Vanadium	7440-62-2	mg/kg	21				NS	NS	394	N	NMED		5.33E-02
Zinc	7440-66-6	mg/kg	40				NS	NS	23,500	N	NMED		1.70E-03

TABLE D1-AL25-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AL25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.32	U			NS	NS	11.2	N	NMED		
Nitrate	14797-55-8	mg/kg	8.1	J			NS	NS	125,000	N	NMED		6.48E-05
Perchlorate	14797-73-0	mg/kg	0.0019	UJ			NS	NS	54.8	N	NMED		
										Cumulative Risk/Hazard		**3E-06**	**1.0**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of Quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper Tolerance Limit

TABLE D1-AL25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AL25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0023	U			137	N	39,400	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0023	U			NS	NS	72,500	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0023	U			39	N	26,000	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0023	U			92	N	12	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0023	U			383	N	260,000	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0023	U			NS	NS	2,260	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0023	U			146	N	695	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0023	U			NS	NS	930	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0058	U			1	N	34	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0023	U			1,250	N	423	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0023	U			NS	NS	1,800	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0058	U			1	N	41	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0023	U			3	N	738	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0023	U			NS	NS	13,000	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0023	U			41	N	286	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0023	U			87	N	137	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0023	U			NS	NS	1,500	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0023	U			6,730	N	90,800	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0023	U			NS	NS	23,000	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0023	U			6,730	N	90,800	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0023	U			87	N	137	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0035	U			NS	NS	411,000	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0023	U			NS	NS	26,000	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0023	U			NS	NS	1,300	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0023	U			NS	NS	23,000	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0023	U			NS	NS	81,600	N	RSL		
Acetone	67-64-1	mg/kg	0.13				NS	NS	960,000	N	NMED		1.35E-07
Benzene	71-43-2	mg/kg	0.0023	U			87	N	729	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0023	U			NS	NS	1,800	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0023	U			NS	NS	630	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0023	U			30	N	26,000	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0023	U			1,760	N	18,300	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0023	U			NS	NS	95	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0023	U			NS	NS	8,540	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0023	U			53	N	1,020	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0023	U			NS	NS	2,160	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0023	U			NS	NS	89,500	N	NMED		
Chloroform	67-66-3	mg/kg	0.0023	U			29	N	2,000	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0058	U			201	N	1,260	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0023	U			NS	NS	2,600	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0023	U			146	N	695	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0023	U			67	N	18,300	N	NMED		
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0023	U			NS	NS	288	N	NMED		
Dichlorodifluoromethane	75-71-8	mg/kg	0.0023	U			NS	NS	865	N	NMED		

TABLE D1-AL25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AL25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Ethylbenzene	100-41-4	mg/kg	0.0023	U			29,000	N	368	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0023	U			52	N	916	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0023	U			NS	NS	14,200	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0058	U			NS	NS	3,730	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0023	U			4,820	N	178,000	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.012	U			14,400	N	5,130	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0023	U			NS	NS	58,000	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0023	U			NS	NS	24,000	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0023	U			108	N	843	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0029	U			NS	NS	3,940	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0023	U			NS	NS	14,200	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0023	U			NS	NS	120,000	N	RSL		
Styrene	100-42-5	mg/kg	0.0023	U			NS	NS	51,300	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0023	U			NS	NS	120,000	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0023	U			1,650	N	629	N	NMED		
Toluene	108-88-3	mg/kg	0.0023	U			NS	NS	61,300	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0023	U			NS	NS	1,100	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0023	U			146	N	695	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0023	U			112	N	37	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0023	U			NS	NS	6,030	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0023	U			28	N	46	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	UJ			1,250	N	423	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	UJ			NS	NS	13,000	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	UJ			6,730	N	90,800	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	UJ			6,730	N	90,800	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	UJ			NS	NS	91,600	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	UJ			2,330	N	916	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	UJ			NS	NS	2,750	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	UJ			NS	NS	18,300	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	UJ			NS	NS	1,830	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	UJ			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	UJ			17	N	276	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	UJ			NS	NS	104,000	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.17	UJ			NS	NS	6,490	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.17	UJ			NS	NS	3,370	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	UJ			NS	NS	41,000	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.17	UJ			NS	NS	8,000	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	UJ			NS	NS	410	N	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.17	UJ			1,100	N	3,300	N	RSL[S]		
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	UJ			NS	NS	73	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	UJ			NS	NS	82,000	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.17	UJ			110	N	410	N	RSL		

TABLE D1-AL25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AL25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.17	UJ			1,100	N	3,300	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.17	UJ			NS	NS	50,500	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.17	UJ			NS	NS	25,300	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.17	UJ			NS	NS	253,000	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.17	UJ			32	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.13	UJ			24	N	251	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	UJ			32	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	UJ			NS	NS	25,300	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	UJ			323	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.17	UJ			NS	NS	3,300,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.17	UJ			NS	NS	82,000	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	UJ			NS	NS	2,500	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	UJ			16	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	UJ			519	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	UJ			1,830	N	18,300	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.17	UJ			12,000	N	160,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.17	UJ			3,230	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.17	UJ			NS	NS	91,600	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.17	UJ			NS	NS	8,200	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	UJ			3	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.17	UJ			NS	NS	1,200	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.17	UJ			NS	NS	733,000	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.17	UJ			NS	NS	916,000	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.17	UJ			NS	NS	33,700	N	NMED		
Fluorene	86-73-7	mg/kg	0.17	UJ			NS	NS	33,700	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.17	UJ			16	N	733	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	UJ			52	N	916	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.17	UJ			641	N	641	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	UJ			32	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.17	UJ			27,000	N	183,000	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	UJ			3	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.02	UJ			1	N	7	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	UJ			5,240	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.17	UJ			108	N	843	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.17	UJ			293	N	1,540	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.17	UJ			45	N	3,180	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.17	UJ			NS	NS	27,500	N	NMED		
Phenol	108-95-2	mg/kg	0.17	UJ			NS	NS	275,000	N	NMED		
Pyrene	129-00-0	mg/kg	0.17	UJ			NS	NS	25,300	N	NMED		

TABLE D1-AL25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AL25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			5,300	N	7,400	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.019	U			304	N	57	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.019	U			9	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.0095	U			9	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.0095	U			11	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.0095	U			11	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.0095	U			11	N	16	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.0095	U			11	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.0000003	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000042	J	0.000014	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg	0.0000000024	J	0.00000024	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.0000012	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.000000045	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000054	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000005	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000064	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000045	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.000000085	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000009	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000017	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.00000016	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.000000059	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000018	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000015	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000071	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.0000000066				0.000238	N	0.000808	N	NMED	2.77E-10	8.17E-06

TABLE D1-AL25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AL25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	22,000	J			NS	NS	1,290,000	N	NMED		1.71E-02
Antimony	7440-36-0	mg/kg	0.089	J			NS	NS	519	N	NMED		1.71E-04
Arsenic	7440-38-2	mg/kg	1.3				36	N	208	N	NMED	3.62E-07	6.25E-03
Barium	7440-39-3	mg/kg	140				NS	NS	255,000	N	NMED		5.49E-04
Beryllium	7440-41-7	mg/kg	0.43	J			313,000	N	2,580	N	NMED	1.37E-11	1.67E-04
Cadmium	7440-43-9	mg/kg	0.66				417,000	N	1,110	N	NMED	1.58E-11	5.95E-04
Calcium	7440-70-2	mg/kg	3,100				NS	NS	32,400,000	N	NMED		9.57E-05
Chromium (Total) (3)	7440-47-3	mg/kg	14				505	N	314,000	N	NMED	2.77E-07	4.46E-05
Cobalt	7440-48-4	mg/kg	5.4				83,400	N	388	N	NMED	6.47E-10	1.39E-02
Copper	7440-50-8	mg/kg	64				NS	NS	51,900	N	NMED		1.23E-03
Iron	7439-89-6	mg/kg	10,000				NS	NS	908,000	N	NMED		1.10E-02
Lead	7439-92-1	mg/kg	14				NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	9,500				NS	NS	5,680,000	N	NMED		1.67E-03
Manganese	7439-96-5	mg/kg	240				NS	NS	160,000	N	NMED		1.50E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.026	J			NS	NS	112	N	NMED		2.32E-04
Nickel	7440-02-0	mg/kg	10				2,890,000	N	25,700	N	NMED	3.46E-11	3.89E-04
Potassium	7440-09-7	mg/kg	1,100				NS	NS	76,200,000	N	NMED		1.44E-05
Selenium	7782-49-2	mg/kg	1				NS	NS	6,490	N	NMED		1.54E-04
Silver	7440-22-4	mg/kg	0.099	J			NS	NS	6,490	N	NMED		1.53E-05
Sodium	7440-23-5	mg/kg	77				NS	NS	37,300,000	N	NMED		2.06E-06
Thallium	7440-28-0	mg/kg	0.053	J			NS	NS	13	N	NMED		4.08E-03
Vanadium	7440-62-2	mg/kg	21				NS	NS	6,530	N	NMED		3.22E-03
Zinc	7440-66-6	mg/kg	40				NS	NS	38,900	N	NMED		1.03E-03

TABLE D1-AL25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AL25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.32	U			NS	NS	63	N	NMED		
Nitrate	14797-55-8	mg/kg	8.1	J			NS	NS	2,080,000	N	NMED		3.89E-06
Perchlorate	14797-73-0	mg/kg	0.0019	UJ			NS	NS	908	N	NMED		
										Cumulative Risk/Hazard		**6E-07**	**0.06**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper tolerance limit

TABLE D1-AL25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AL25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0023	U			659	N	10,600	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0023	U			NS	NS	13,600	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0023	U			197	N	7,080	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0023	U			4,300	N	2	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0023	U			1,820	N	70,800	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0023	U			NS	NS	424	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0023	U			781	N	130	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0023	U			NS	NS	283	N	NMED[C]			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0058	U			8	N	6	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0023	U			8,540	N	79	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0023	U			NS	NS	492	N	NMED[C]			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0058	U			6	N	8	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0023	U			16	N	140	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0023	U			NS	NS	2,500	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0023	U			195	N	54	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0023	U			415	N	25	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0023	U			NS	NS	422	N	NMED[C]			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0023	U			45,900	N	24,800	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0023	U			NS	NS	7,080	N	NMED[C]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0023	U			45,900	N	24,800	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0023	U			415	N	25	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.0035	U			NS	NS	90,700	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0023	U			NS	NS	7,080	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.0023	U			NS	NS	599	N	NMED[C]			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0023	U			NS	NS	7,080	N	NMED[C]			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0023	U			NS	NS	20,400	N	NMED[C]			
Acetone	67-64-1	mg/kg	0.13				NS	NS	242,000	N	NMED		5.37E-07	
Benzene	71-43-2	mg/kg	0.0023	U			423	N	142	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.0023	U			NS	NS	538	N	NMED[C]			
Bromochloromethane	74-97-5	mg/kg	0.0023	U			NS	NS	296	N	NMED[C]			
Bromodichloromethane	75-27-4	mg/kg	0.0023	U			143	N	7,080	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0023	U			23,700	N	5,380	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0023	U			NS	NS	18	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.0023	U			NS	NS	1,620	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0023	U			252	N	202	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0023	U			NS	NS	412	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0023	U			NS	NS	16,600	N	NMED			
Chloroform	67-66-3	mg/kg	0.0023	U			134	N	391	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0058	U			956	N	235	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0023	U			NS	NS	708	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0023	U			781	N	130	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0023	U			340	N	5,380	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0023	U			NS	NS	54	N	NMED			
Dichlorodifluoromethane	75-71-8	mg/kg	0.0023	U			NS	NS	161	N	NMED			

TABLE D1-AL25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AL25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Ethylbenzene	100-41-4	mg/kg	0.0023	U			1,770	N	5,800	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0023	U			2,400	N	269	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0023	U			NS	NS	2,740	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0058	U			NS	NS	696	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0023	U			24,200	N	33,100	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.012	U			89,600	N	1,210	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0023	U			NS	NS	17,700	N	NMED[C]			
n-Propylbenzene	103-65-1	mg/kg	0.0023	U			NS	NS	6,730	N	NMED[C]			
Naphthalene	91-20-3	mg/kg	0.0023	U			633	N	159	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0029	U			NS	NS	736	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.0023	U			NS	NS	2,740	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.0023	U			NS	NS	35,400	N	NMED[C]			
Styrene	100-42-5	mg/kg	0.0023	U			NS	NS	10,200	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0023	U			NS	NS	35,400	N	NMED[C]			
Tetrachloroethene	127-18-4	mg/kg	0.0023	U			7,910	N	120	N	NMED			
Toluene	108-88-3	mg/kg	0.0023	U			NS	NS	14,000	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0023	U			NS	NS	206	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0023	U			781	N	130	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0023	U			5,370	N	7	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0023	U			NS	NS	1,130	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0023	U			161	N	162	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	UJ			8,540	N	79	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	UJ			NS	NS	2,500	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	UJ			45,900	N	24,800	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	UJ			45,900	N	24,800	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	UJ			NS	NS	26,900	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	UJ			17,000	N	269	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	UJ			NS	NS	807	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	UJ			NS	NS	5,380	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	UJ			NS	NS	538	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	UJ			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	UJ			165	N	81	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	UJ			NS	NS	28,300	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.17	UJ			NS	NS	1,770	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.17	UJ			NS	NS	1,000	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	UJ			NS	NS	13,500	N	NMED[C]			
2-Nitroaniline	88-74-4	mg/kg	0.17	UJ			NS	NS	2,690	N	NMED[C]			
2-Nitrophenol	88-75-5	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	UJ			410	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.17	UJ			135	N	1,080	N	NMED[SC]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	UJ			NS	NS	22	N	NMED			
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	UJ			NS	NS	26,900	N	NMED[C]			

TABLE D1-AL25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AL25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Chloroaniline	106-47-8	mg/kg	0.17	UJ			14	N	135	N	NMED[C]			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.17	UJ			135	N	1,080	N	NMED[C]			
4-Nitrophenol	100-02-7	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.17	UJ			NS	NS	15,100	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.17	UJ			NS	NS	7,530	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.17	UJ			NS	NS	75,300	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.17	UJ			240	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.13	UJ			173	N	15	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	UJ			240	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	UJ			NS	NS	7,530	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	UJ			2,310	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.17	UJ			NS	NS	1,080,000	N	NMED[C]			
Benzyl Alcohol	100-51-6	mg/kg	0.17	UJ			NS	NS	26,900	N	NMED[C]			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	UJ			NS	NS	807	N	NMED[C]			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	UJ			2	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	UJ			3,540	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	UJ			13,400	N	5,380	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.17	UJ			1,420	N	53,800	N	NMED[C]			
Carbazole	86-74-8	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.17	UJ			23,100	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.17	UJ			NS	NS	26,900	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.17	UJ			NS	NS	2,690	N	NMED[C]			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	UJ			24	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.17	UJ			NS	NS	269	N	NMED[C]			
Diethylphthalate	84-66-2	mg/kg	0.17	UJ			NS	NS	215,000	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.17	UJ			NS	NS	269,000	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.17	UJ			NS	NS	10,000	N	NMED			
Fluorene	86-73-7	mg/kg	0.17	UJ			NS	NS	10,000	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.17	UJ			117	N	215	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	UJ			2,400	N	269	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.17	UJ			4,670	N	188	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	UJ			240	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.17	UJ			198,000	N	53,700	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	UJ			0.38	N	NA	N	NMED[C]			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.02	UJ			4	N	2	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	UJ			37,900	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.17	UJ			633	N	159	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.17	UJ			1,350	N	353	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.17	UJ			346	N	989	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.17	UJ			NS	NS	8,070	N	NMED			
Phenol	108-95-2	mg/kg	0.17	UJ			NS	NS	77,400	N	NMED			
Pyrene	129-00-0	mg/kg	0.17	UJ			NS	NS	7,530	N	NMED			

TABLE D1-AL25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AL25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	8,070	N	NMED[C]			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	27	N	NMED[C]			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			626	N	2,420	N	NMED[C]			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.019	U			2,440	N	17	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.019	U			55	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.0095	U			58	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.0095	U			85	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.0095	U			85	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.0095	U			85	N	5	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.0095	U			85	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (3)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.0000003	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000042	J	0.000014	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg	0.0000000024	J	0.00000024	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.0000012	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.000000045	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000054	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000005	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000064	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000045	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.000000085	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000009	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000017	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.00000016	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.000000059	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000018	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000015	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000071	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.0000000066				0.00172	N	0.000226	N	NMED	3.84E-11	2.92E-05	

TABLE D1-AL25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AL25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	22,000	J			NS	NS	41,400	N	NMED		5.31E-01	Nervous
Antimony	7440-36-0	mg/kg	0.089	J			NS	NS	142	N	NMED		6.27E-04	
Arsenic	7440-38-2	mg/kg	1.3				216	N	41	N	NMED	6.02E-08	3.16E-02	
Barium	7440-39-3	mg/kg	140				NS	NS	4,390	N	NMED		3.19E-02	
Beryllium	7440-41-7	mg/kg	0.43	J			2,710	N	148	N	NMED	1.59E-09	2.91E-03	
Cadmium	7440-43-9	mg/kg	0.66				3,610	N	72	N	NMED	1.83E-09	9.15E-03	
Calcium	7440-70-2	mg/kg	3,100				NS	NS	8,850,000	N	NMED		3.50E-04	
Chromium (Total) (4)	7440-47-3	mg/kg	14				468	N	134	N	NMED	2.99E-07	1.04E-01	GI, Blood
Cobalt	7440-48-4	mg/kg	5.4				722	N	37	N	NMED	7.48E-08	1.47E-01	Endocrine
Copper	7440-50-8	mg/kg	64				NS	NS	14,200	N	NMED		4.51E-03	
Iron	7439-89-6	mg/kg	10,000				NS	NS	248,000	N	NMED		4.03E-02	
Lead	7439-92-1	mg/kg	14				NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	9,500				NS	NS	1,550,000	N	NMED		6.13E-03	
Manganese	7439-96-5	mg/kg	240				NS	NS	464	N	NMED		5.17E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.026	J			NS	NS	21	N	NMED		1.26E-03	
Nickel	7440-02-0	mg/kg	10				20,500	N	753	N	NMED	4.88E-09	1.33E-02	
Potassium	7440-09-7	mg/kg	1,100				NS	NS	20,800,000	N	NMED		5.29E-05	
Selenium	7782-49-2	mg/kg	1				NS	NS	1,750	N	NMED		5.71E-04	
Silver	7440-22-4	mg/kg	0.099	J			NS	NS	1,770	N	NMED		5.59E-05	
Sodium	7440-23-5	mg/kg	77				NS	NS	10,200,000	N	NMED		7.55E-06	
Thallium	7440-28-0	mg/kg	0.053	J			NS	NS	4	N	NMED		1.50E-02	
Vanadium	7440-62-2	mg/kg	21				NS	NS	614	N	NMED		3.42E-02	
Zinc	7440-66-6	mg/kg	40				NS	NS	106,000	N	NMED		3.77E-04	

TABLE D1-AL25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AL25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.32	U			NS	NS	12	N	NMED			
Nitrate	14797-55-8	mg/kg	8.1	J			NS	NS	566,000	N	NMED		1.43E-05	
Perchlorate	14797-73-0	mg/kg	0.0019	UJ			NS	NS	248	N	NMED			
										Cumulative Risk/Hazard		**4E-07**	**1.5**	
										Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	1.0
Endocrine	0.15
GI	0.10
Blood	0.10
All Others	0.19

Notes:

[s] = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update).

2) NMED[C] = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

3) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

4) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service

DL = Detection limit

J = Estimated

LOD = Limit of detection

LOQ = Limit of quantitation

mg/kg = milligrams per kilogram

NS = No Standard

U = Nondetect

UJ = Estimated Nondetect

UTL = Upper tolerance limit

Table D1-AM25-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AM25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0018	U			28.1	N	2,350	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0018	U			NS	NS	14,400	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0018	U			7.98	N	1,560	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0018	U			18.8	N	2.61	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0018	U			78.6	N	15,600	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0018	U			NS	NS	440	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0018	U			29.3	N	141	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0018	U			NS	NS	63	N	RSL			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0044	U			0.051	N	7.09	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0018	U			240	N	82.9	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0018	U			NS	NS	300	N	RSL			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0044	U			0.0858	N	5.88	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0018	U			0.672	N	135	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0018	U			NS	NS	2,150	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0018	U			8.32	N	55.6	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0018	U			17.8	N	29	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0018	U			NS	NS	270	N	RSL			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0018	U			1,290	N	5,480	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0018	U			NS	NS	1,600	N	RSL			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0018	U			1,290	N	5,480	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0018	U			17.8	N	29	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.0027	U			NS	NS	37,400	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0018	U			NS	NS	1,560	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.0018	U			NS	NS	200	N	RSL			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0018	U			NS	NS	1,600	N	RSL			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0018	U			NS	NS	5,810	N	RSL			
Acetone	67-64-1	mg/kg	0.28				NS	NS	66,300	N	NMED		4.22E-06	
Benzene	71-43-2	mg/kg	0.0018	U			17.8	N	114	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.0018	U			NS	NS	290	N	RSL			
Bromochloromethane	74-97-5	mg/kg	0.0018	U			NS	NS	150	N	RSL			
Bromodichloromethane	75-27-4	mg/kg	0.0018	U			6.19	N	1,560	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0018	U			674	N	1,230	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0018	U			NS	NS	17.7	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.0018	U			NS	NS	1,550	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0018	U			10.7	N	144	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0018	U			NS	NS	378	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0018	U			NS	NS	19,000	N	NMED			
Chloroform	67-66-3	mg/kg	0.0018	U			5.9	N	306	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0044	U			41.1	N	268	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0018	U			NS	NS	156	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0018	U			29.3	N	141	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0018	U			13.9	N	1,230	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0018	U			NS	NS	57.9	N	NMED			

Table D1-AM25-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AM25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Dichlorodifluoromethane	75-71-8	mg/kg	0.0018	U			NS	NS	182	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.0018	U			75.1	N	3,930	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0018	U			68.3	N	61.6	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0018	U			NS	NS	2,360	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0044	U			NS	NS	764	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0018	U			975	N	37,800	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.0088	U			766	N	409	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0018	U			NS	NS	3,900	N	RSL			
n-Propylbenzene	103-65-1	mg/kg	0.0018	U			NS	NS	3,800	N	RSL			
Naphthalene	91-20-3	mg/kg	0.0018	U			22.6	N	162	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0022	U			NS	NS	805	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.0018	U			NS	NS	2,360	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.0018	U			NS	NS	7,800	N	RSL			
Styrene	100-42-5	mg/kg	0.0018	U			NS	NS	7,260	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0018	U			NS	NS	7,800	N	RSL			
Tetrachloroethene	127-18-4	mg/kg	0.0018	U			337	N	111	N	NMED			
Toluene	108-88-3	mg/kg	0.0018	U			NS	NS	5,230	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0018	U			NS	NS	210	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0018	U			29.3	N	141	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0018	U			15.5	N	6.77	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0018	U			NS	NS	1,230	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0018	U			0.742	N	113	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	UJ			240	N	82.9	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	UJ			NS	NS	2,150	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	UJ			1,290	N	5,480	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	UJ			1,290	N	5,480	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	UJ			NS	NS	6,160	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	UJ			484	N	61.6	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	UJ			NS	NS	185	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	UJ			NS	NS	1,230	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	UJ			NS	NS	123	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	UJ			17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	UJ			3.56	N	18.5	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	UJ			NS	NS	6,260	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.17	UJ			NS	NS	391	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.17	UJ			NS	NS	232	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	UJ			NS	NS	3,200	N	RSL			
2-Nitroaniline	88-74-4	mg/kg	0.17	UJ			NS	NS	630	N	RSL			
2-Nitrophenol	88-75-5	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	UJ			11.8	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.17	UJ			270	N	250	N	RSL[S]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	UJ			NS	NS	4.93	N	NMED			
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			

Table D1-AM25-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AM25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	UJ			NS	NS	6,300	N	RSL			
4-Chloroaniline	106-47-8	mg/kg	0.17	UJ			27	N	32	N	RSL			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.17	UJ			270	N	250	N	RSL			
4-Nitrophenol	100-02-7	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.17	UJ			NS	NS	3,480	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.17	UJ			NS	NS	1,740	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.17	UJ			NS	NS	17,400	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.17	UJ			1.53	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.13	UJ			1.12	N	17.4	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	UJ			1.53	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	UJ			NS	NS	1,740	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	UJ			15.3	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.17	UJ			NS	NS	250,000	N	RSL			
Benzyl Alcohol	100-51-6	mg/kg	0.17	UJ			NS	NS	6,300	N	RSL			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	UJ			NS	NS	190	N	RSL			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	UJ			3.11	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	UJ			99.3	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	UJ			380	N	1,230	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.17	UJ			2,900	N	13,000	N	RSL			
Carbazole	86-74-8	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.17	UJ			153	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.17	UJ			NS	NS	6,160	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.17	UJ			NS	NS	630	N	RSL			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	UJ			0.153	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.17	UJ			NS	NS	78	N	RSL			
Diethylphthalate	84-66-2	mg/kg	0.17	UJ			NS	NS	49,300	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.17	UJ			NS	NS	61,600	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.17	UJ			NS	NS	2,320	N	NMED			
Fluorene	86-73-7	mg/kg	0.17	UJ			NS	NS	2,320	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.17	UJ			3.33	N	49.3	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	UJ			68.3	N	61.6	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.17	UJ			133	N	43.1	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	UJ			1.53	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.17	UJ			5,610	N	12,300	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	UJ			0.78	N	NS	NS	RSL			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.02	UJ			0.0234	N	0.493	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	UJ			1,090	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.17	UJ			22.6	N	162	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.17	UJ			60.4	N	131	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.17	UJ			9.85	N	234	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.17	UJ			NS	NS	1,740	N	NMED			
Phenol	108-95-2	mg/kg	0.17	UJ			NS	NS	18,500	N	NMED			
Pyrene	129-00-0	mg/kg	0.17	UJ			NS	NS	1,740	N	NMED			

Table D1-AM25-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AM25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	2,200	N	RSL			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	6.3	N	RSL			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			211	N	36	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			3.56	N	18.5	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	7.7	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			31.6	N	70.4	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	6.16	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	7.64	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			333	N	247	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			83.1	N	301	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	156	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			60.4	N	131	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			313	N	6.16	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	3,850	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			1,300	N	570	N	RSL			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.019	U			69.6	N	3.98	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.019	U			1.81	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.0097	U			1.86	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.0097	U			2.43	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.0097	U			2.43	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.0097	U			2.43	N	1.14	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.0097	U			2.43	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (2)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000024	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000018	J	0.0000061	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000014	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.000000012	J	0.0000012	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000018	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000043	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.0000001	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.00000004	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000092	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.000000053	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.000000097	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000016	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg	0.000000082	J	0.000000082	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.0000001	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000016	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.0000002	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000081	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.000000096				0.000049	N	0.0000506	N	NMED	1.96E-08	1.89E-03	

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HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AM25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	19,000				NS	NS	78,000	N	NMED		2.44E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	J			NS	NS	31.3	N	NMED		4.79E-03	
Arsenic	7440-38-2	mg/kg	1.5				7.07	N	13	N	NMED	2.12E-06	1.15E-01	Heart/Endocrine
Barium	7440-39-3	mg/kg	140				NS	NS	15,600	N	NMED		8.97E-03	
Beryllium	7440-41-7	mg/kg	0.39	J			64,400	N	156	N	NMED	6.06E-11	2.50E-03	
Cadmium	7440-43-9	mg/kg	0.66				85,900	N	70.5	N	NMED	7.68E-11	9.36E-03	
Calcium	7440-70-2	mg/kg	3,900				NS	NS	13,000,000	N	NMED		3.00E-04	
Chromium (Total) (3)	7440-47-3	mg/kg	14				96.6	N	45,200	N	NMED	1.45E-06	3.10E-04	
Cobalt	7440-48-4	mg/kg	5.3				17,200	N	23.4	N	NMED	3.08E-09	2.26E-01	Endocrine
Copper	7440-50-8	mg/kg	84				NS	NS	3,130	N	NMED		2.68E-02	
Iron	7439-89-6	mg/kg	12,000				NS	NS	54,800	N	NMED		2.19E-01	GI
Lead	7439-92-1	mg/kg	17				NS	NS	200	N	RSL			
Magnesium	7439-95-4	mg/kg	8,200				NS	NS	15,600,000	N	NMED		5.26E-04	
Manganese	7439-96-5	mg/kg	290				NS	NS	10,500	N	NMED		2.76E-02	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.036	J			NS	NS	23.8	N	NMED		1.51E-03	
Nickel	7440-02-0	mg/kg	9.5				595,000	N	1,560	N	NMED	1.60E-10	6.09E-03	
Potassium	7440-09-7	mg/kg	1,100				NS	NS	15,600,000	N	NMED		7.05E-05	
Selenium	7782-49-2	mg/kg	0.79				NS	NS	391	N	NMED		2.02E-03	
Silver	7440-22-4	mg/kg	0.17				NS	NS	391	N	NMED		4.35E-04	
Sodium	7440-23-5	mg/kg	70				NS	NS	7,820,000	N	NMED		8.95E-06	
Thallium	7440-28-0	mg/kg	0.052	J			NS	NS	0.782	N	NMED		6.65E-02	
Vanadium	7440-62-2	mg/kg	20				NS	NS	394	N	NMED		5.08E-02	
Zinc	7440-66-6	mg/kg	47				NS	NS	23,500	N	NMED		2.00E-03	

Table D1-AM25-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AM25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.31	UJ			NS	NS	11.2	N	NMED			
Nitrate	14797-55-8	mg/kg	7.9	J			NS	NS	125,000	N	NMED		6.32E-05	
Perchlorate	14797-73-0	mg/kg	0.0018	UJ			NS	NS	54.8	N	NMED			
										Cumulative Risk/Hazard		**4E-06**	**1.0**	
										Exceeds Target Level		**N**	**Y**	

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of Quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper Tolerance Limit

System	Hazard Quotient
Nervous	0.3
Endocrine	0.34
GI	0.22
Heart	0.12
All Others	0.18

TABLE D1 AM25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AM25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0018	U			137	N	39,400	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0018	U			NS	NS	72,500	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0018	U			39	N	26,000	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0018	U			92	N	12	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0018	U			383	N	260,000	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0018	U			NS	NS	2,260	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0018	U			146	N	695	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0018	U			NS	NS	930	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0044	U			1	N	34	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0018	U			1,250	N	423	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0018	U			NS	NS	1,800	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0044	U			1	N	41	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0018	U			3	N	738	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0018	U			NS	NS	13,000	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0018	U			41	N	286	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0018	U			87	N	137	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0018	U			NS	NS	1,500	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0018	U			6,730	N	90,800	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0018	U			NS	NS	23,000	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0018	U			6,730	N	90,800	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0018	U			87	N	137	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0027	U			NS	NS	411,000	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0018	U			NS	NS	26,000	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0018	U			NS	NS	1,300	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0018	U			NS	NS	23,000	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0018	U			NS	NS	81,600	N	RSL		
Acetone	67-64-1	mg/kg	0.28				NS	NS	960,000	N	NMED		2.92E-07
Benzene	71-43-2	mg/kg	0.0018	U			87	N	729	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0018	U			NS	NS	1,800	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0018	U			NS	NS	630	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0018	U			30	N	26,000	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0018	U			1,760	N	18,300	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0018	U			NS	NS	95	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0018	U			NS	NS	8,540	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0018	U			53	N	1,020	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0018	U			NS	NS	2,160	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0018	U			NS	NS	89,500	N	NMED		
Chloroform	67-66-3	mg/kg	0.0018	U			29	N	2,000	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0044	U			201	N	1,260	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0018	U			NS	NS	2,600	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0018	U			146	N	695	N	NMED[S]		

TABLE D1 AM25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AM25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dibromochloromethane	124-48-1	mg/kg	0.0018	U			67	N	18,300	N	NMED		
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0018	U			NS	NS	288	N	NMED		
Dichlorodifluoromethane	75-71-8	mg/kg	0.0018	U			NS	NS	865	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0018	U			29,000	N	368	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0018	U			52	N	916	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0018	U			NS	NS	14,200	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0044	U			NS	NS	3,730	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0018	U			4,820	N	178,000	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.0088	U			14,400	N	5,130	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0018	U			NS	NS	58,000	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0018	U			NS	NS	24,000	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0018	U			108	N	843	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0022	U			NS	NS	3,940	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0018	U			NS	NS	14,200	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0018	U			NS	NS	120,000	N	RSL		
Styrene	100-42-5	mg/kg	0.0018	U			NS	NS	51,300	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0018	U			NS	NS	120,000	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0018	U			1,650	N	629	N	NMED		
Toluene	108-88-3	mg/kg	0.0018	U			NS	NS	61,300	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0018	U			NS	NS	1,100	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0018	U			146	N	695	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0018	U			112	N	37	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0018	U			NS	NS	6,030	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0018	U			28	N	46	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	UJ			1,250	N	423	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	UJ			NS	NS	13,000	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	UJ			6,730	N	90,800	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	UJ			6,730	N	90,800	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	UJ			NS	NS	91,600	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	UJ			2,330	N	916	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	UJ			NS	NS	2,750	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	UJ			NS	NS	18,300	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	UJ			NS	NS	1,830	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	UJ			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	UJ			17	N	276	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	UJ			NS	NS	104,000	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.17	UJ			NS	NS	6,490	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.17	UJ			NS	NS	3,370	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	UJ			NS	NS	41,000	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.17	UJ			NS	NS	8,000	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	UJ			NS	NS	410	N	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.17	UJ			1,100	N	3,300	N	RSL[S]		

TABLE D1 AM25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AM25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	UJ			NS	NS	73	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	UJ			NS	NS	82,000	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.17	UJ			110	N	410	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.17	UJ			1,100	N	3,300	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.17	UJ			NS	NS	50,500	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.17	UJ			NS	NS	25,300	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.17	UJ			NS	NS	253,000	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.17	UJ			32	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.13	UJ			24	N	251	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	UJ			32	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	UJ			NS	NS	25,300	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	UJ			323	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.17	UJ			NS	NS	3,300,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.17	UJ			NS	NS	82,000	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	UJ			NS	NS	2,500	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	UJ			16	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	UJ			519	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	UJ			1,830	N	18,300	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.17	UJ			12,000	N	160,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.17	UJ			3,230	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.17	UJ			NS	NS	91,600	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.17	UJ			NS	NS	8,200	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	UJ			3	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.17	UJ			NS	NS	1,200	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.17	UJ			NS	NS	733,000	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.17	UJ			NS	NS	916,000	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.17	UJ			NS	NS	33,700	N	NMED		
Fluorene	86-73-7	mg/kg	0.17	UJ			NS	NS	33,700	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.17	UJ			16	N	733	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	UJ			52	N	916	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.17	UJ			641	N	641	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	UJ			32	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.17	UJ			27,000	N	183,000	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	UJ			3	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.02	UJ			1	N	7	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	UJ			5,240	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.17	UJ			108	N	843	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.17	UJ			293	N	1,540	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.17	UJ			45	N	3,180	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.17	UJ			NS	NS	27,500	N	NMED		
Phenol	108-95-2	mg/kg	0.17	UJ			NS	NS	275,000	N	NMED		
Pyrene	129-00-0	mg/kg	0.17	UJ			NS	NS	25,300	N	NMED		

TABLE D1 AM25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AM25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			5,300	N	7,400	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.019	U			304	N	57	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.019	U			9	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.0097	U			9	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.0097	U			11	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.0097	U			11	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.0097	U			11	N	16	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.0097	U			11	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000024	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000018	J	0.0000061	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000014	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.000000012	J	0.0000012	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000018	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000043	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.0000001	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.00000004	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000092	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.000000053	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.000000097	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000016	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg	0.000000082	J	0.000000082	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.0000001	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000016	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.0000002	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000081	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.000000096				0.000238	N	0.000808	N	NMED	4.03E-09	1.19E-04

TABLE D1 AM25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AM25
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MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	19,000				NS	NS	1,290,000	N	NMED		1.47E-02
Antimony	7440-36-0	mg/kg	0.15	J			NS	NS	519	N	NMED		2.89E-04
Arsenic	7440-38-2	mg/kg	1.5				36	N	208	N	NMED	4.18E-07	7.21E-03
Barium	7440-39-3	mg/kg	140				NS	NS	255,000	N	NMED		5.49E-04
Beryllium	7440-41-7	mg/kg	0.39	J			313,000	N	2,580	N	NMED	1.25E-11	1.51E-04
Cadmium	7440-43-9	mg/kg	0.66				417,000	N	1,110	N	NMED	1.58E-11	5.95E-04
Calcium	7440-70-2	mg/kg	3,900				NS	NS	32,400,000	N	NMED		1.20E-04
Chromium (Total) (3)	7440-47-3	mg/kg	14				505	N	314,000	N	NMED	2.77E-07	4.46E-05
Cobalt	7440-48-4	mg/kg	5.3				83,400	N	388	N	NMED	6.35E-10	1.37E-02
Copper	7440-50-8	mg/kg	84				NS	NS	51,900	N	NMED		1.62E-03
Iron	7439-89-6	mg/kg	12,000				NS	NS	908,000	N	NMED		1.32E-02
Lead	7439-92-1	mg/kg	17				NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	8,200				NS	NS	5,680,000	N	NMED		1.44E-03
Manganese	7439-96-5	mg/kg	290				NS	NS	160,000	N	NMED		1.81E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.036	J			NS	NS	112	N	NMED		3.21E-04
Nickel	7440-02-0	mg/kg	9.5				2,890,000	N	25,700	N	NMED	3.29E-11	3.70E-04
Potassium	7440-09-7	mg/kg	1,100				NS	NS	76,200,000	N	NMED		1.44E-05
Selenium	7782-49-2	mg/kg	0.79				NS	NS	6,490	N	NMED		1.22E-04
Silver	7440-22-4	mg/kg	0.17				NS	NS	6,490	N	NMED		2.62E-05
Sodium	7440-23-5	mg/kg	70				NS	NS	37,300,000	N	NMED		1.88E-06
Thallium	7440-28-0	mg/kg	0.052	J			NS	NS	13	N	NMED		4.00E-03
Vanadium	7440-62-2	mg/kg	20				NS	NS	6,530	N	NMED		3.06E-03
Zinc	7440-66-6	mg/kg	47				NS	NS	38,900	N	NMED		1.21E-03

TABLE D1 AM25-2
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FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.31	UJ			NS	NS	63	N	NMED		
Nitrate	14797-55-8	mg/kg	7.9	J			NS	NS	2,080,000	N	NMED		3.80E-06
Perchlorate	14797-73-0	mg/kg	0.0018	UJ			NS	NS	908	N	NMED		
										Cumulative Risk/Hazard		**7E-07**	**0.06**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den Berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update)

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper tolerance limit

TABLE D1-AM25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AM25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0018	U			659	N	10,600	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0018	U			NS	NS	13,600	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0018	U			197	N	7,080	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0018	U			4,300	N	2	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0018	U			1,820	N	70,800	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0018	U			NS	NS	424	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0018	U			781	N	130	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0018	U			NS	NS	283	N	NMED[C]			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0044	U			8	N	6	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0018	U			8,540	N	79	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0018	U			NS	NS	492	N	NMED[C]			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0044	U			6	N	8	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0018	U			16	N	140	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0018	U			NS	NS	2,500	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0018	U			195	N	54	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0018	U			415	N	25	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0018	U			NS	NS	422	N	NMED[C]			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0018	U			45,900	N	24,800	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0018	U			NS	NS	7,080	N	NMED[C]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0018	U			45,900	N	24,800	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0018	U			415	N	25	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.0027	U			NS	NS	90,700	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0018	U			NS	NS	7,080	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.0018	U			NS	NS	599	N	NMED[C]			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0018	U			NS	NS	7,080	N	NMED[C]			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0018	U			NS	NS	20,400	N	NMED[C]			
Acetone	67-64-1	mg/kg	0.28				NS	NS	242,000	N	NMED		1.16E-06	
Benzene	71-43-2	mg/kg	0.0018	U			423	N	142	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.0018	U			NS	NS	538	N	NMED[C]			
Bromochloromethane	74-97-5	mg/kg	0.0018	U			NS	NS	296	N	NMED[C]			
Bromodichloromethane	75-27-4	mg/kg	0.0018	U			143	N	7,080	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0018	U			23,700	N	5,380	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0018	U			NS	NS	18	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.0018	U			NS	NS	1,620	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0018	U			252	N	202	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0018	U			NS	NS	412	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0018	U			NS	NS	16,600	N	NMED			
Chloroform	67-66-3	mg/kg	0.0018	U			134	N	391	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0044	U			956	N	235	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0018	U			NS	NS	708	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0018	U			781	N	130	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0018	U			340	N	5,380	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0018	U			NS	NS	54	N	NMED			

TABLE D1-AM25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AM25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Dichlorodifluoromethane	75-71-8	mg/kg	0.0018	U			NS	NS	161	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.0018	U			1,770	N	5,800	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0018	U			2,400	N	269	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0018	U			NS	NS	2,740	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0044	U			NS	NS	696	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0018	U			24,200	N	33,100	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.0088	U			89,600	N	1,210	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0018	U			NS	NS	17,700	N	NMED[C]			
n-Propylbenzene	103-65-1	mg/kg	0.0018	U			NS	NS	6,730	N	NMED[C]			
Naphthalene	91-20-3	mg/kg	0.0018	U			633	N	159	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0022	U			NS	NS	736	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.0018	U			NS	NS	2,740	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.0018	U			NS	NS	35,400	N	NMED[C]			
Styrene	100-42-5	mg/kg	0.0018	U			NS	NS	10,200	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0018	U			NS	NS	35,400	N	NMED[C]			
Tetrachloroethene	127-18-4	mg/kg	0.0018	U			7,910	N	120	N	NMED			
Toluene	108-88-3	mg/kg	0.0018	U			NS	NS	14,000	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0018	U			NS	NS	206	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0018	U			781	N	130	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0018	U			5,370	N	7	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0018	U			NS	NS	1,130	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0018	U			161	N	162	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	UJ			8,540	N	79	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	UJ			NS	NS	2,500	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	UJ			45,900	N	24,800	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	UJ			45,900	N	24,800	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	UJ			NS	NS	26,900	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	UJ			17,000	N	269	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	UJ			NS	NS	807	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	UJ			NS	NS	5,380	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	UJ			NS	NS	538	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	UJ			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	UJ			165	N	81	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	UJ			NS	NS	28,300	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.17	UJ			NS	NS	1,770	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.17	UJ			NS	NS	1,000	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	UJ			NS	NS	13,500	N	NMED[C]			
2-Nitroaniline	88-74-4	mg/kg	0.17	UJ			NS	NS	2,690	N	NMED[C]			
2-Nitrophenol	88-75-5	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	UJ			410	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.17	UJ			135	N	1,080	N	NMED[SC]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	UJ			NS	NS	22	N	NMED			

TABLE D1-AM25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AM25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	UJ			NS	NS	26,900	N	NMED[C]			
4-Chloroaniline	106-47-8	mg/kg	0.17	UJ			14	N	135	N	NMED[C]			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.17	UJ			135	N	1,080	N	NMED[C]			
4-Nitrophenol	100-02-7	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.17	UJ			NS	NS	15,100	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.17	UJ			NS	NS	7,530	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.17	UJ			NS	NS	75,300	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.17	UJ			240	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.13	UJ			173	N	15	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	UJ			240	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	UJ			NS	NS	7,530	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	UJ			2,310	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.17	UJ			NS	NS	1,080,000	N	NMED[C]			
Benzyl Alcohol	100-51-6	mg/kg	0.17	UJ			NS	NS	26,900	N	NMED[C]			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	UJ			NS	NS	807	N	NMED[C]			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	UJ			2	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	UJ			3,540	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	UJ			13,400	N	5,380	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.17	UJ			1,420	N	53,800	N	NMED[C]			
Carbazole	86-74-8	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.17	UJ			23,100	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.17	UJ			NS	NS	26,900	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.17	UJ			NS	NS	2,690	N	NMED[C]			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	UJ			24	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.17	UJ			NS	NS	269	N	NMED[C]			
Diethylphthalate	84-66-2	mg/kg	0.17	UJ			NS	NS	215,000	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.17	UJ			NS	NS	269,000	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.17	UJ			NS	NS	10,000	N	NMED			
Fluorene	86-73-7	mg/kg	0.17	UJ			NS	NS	10,000	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.17	UJ			117	N	215	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	UJ			2,400	N	269	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.17	UJ			4,670	N	188	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	UJ			240	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.17	UJ			198,000	N	53,700	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	UJ			0.38	N	NA	N	NMED[C]			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.02	UJ			4	N	2	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	UJ			37,900	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.17	UJ			633	N	159	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.17	UJ			1,350	N	353	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.17	UJ			346	N	989	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.17	UJ			NS	NS	8,070	N	NMED			
Phenol	108-95-2	mg/kg	0.17	UJ			NS	NS	77,400	N	NMED			
Pyrene	129-00-0	mg/kg	0.17	UJ			NS	NS	7,530	N	NMED			

TABLE D1-AM25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AM25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	8,070	N	NMED[C]			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	27	N	NMED[C]			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			626	N	2,420	N	NMED[C]			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.019	U			2,440	N	17	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.019	U			55	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.0097	U			58	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.0097	U			85	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.0097	U			85	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.0097	U			85	N	5	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.0097	U			85	N	NS	NS	NMED			
DIOXINS/FURANS (ηg/kg) (3)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000024	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000018	J	0.0000061	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000014	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.000000012	J	0.0000012	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000018	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000043	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.0000001	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.00000004	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000092	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.000000053	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.000000097	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000016	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg	0.000000082	J	0.000000082	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.0000001	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000016	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.0000002	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000081	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.000000096				0.00172	N	0.000226	N	NMED	5.57E-10	4.24E-04	

TABLE D1-AM25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AM25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	19,000				NS	NS	41,400	N	NMED		4.59E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	J			NS	NS	142	N	NMED		1.06E-03	
Arsenic	7440-38-2	mg/kg	1.5				216	N	41	N	NMED	6.94E-08	3.64E-02	
Barium	7440-39-3	mg/kg	140				NS	NS	4,390	N	NMED		3.19E-02	
Beryllium	7440-41-7	mg/kg	0.39	J			2,710	N	148	N	NMED	1.44E-09	2.64E-03	
Cadmium	7440-43-9	mg/kg	0.66				3,610	N	72	N	NMED	1.83E-09	9.15E-03	
Calcium	7440-70-2	mg/kg	3,900				NS	NS	8,850,000	N	NMED		4.41E-04	
Chromium (Total) (4)	7440-47-3	mg/kg	14				468	N	134	N	NMED	2.99E-07	1.04E-01	GI, Blood
Cobalt	7440-48-4	mg/kg	5.3				722	N	37	N	NMED	7.34E-08	1.44E-01	Endocrine
Copper	7440-50-8	mg/kg	84				NS	NS	14,200	N	NMED		5.92E-03	
Iron	7439-89-6	mg/kg	12,000				NS	NS	248,000	N	NMED		4.84E-02	
Lead	7439-92-1	mg/kg	17				NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	8,200				NS	NS	1,550,000	N	NMED		5.29E-03	
Manganese	7439-96-5	mg/kg	290				NS	NS	464	N	NMED		6.25E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.036	J			NS	NS	21	N	NMED		1.74E-03	
Nickel	7440-02-0	mg/kg	9.5				20,500	N	753	N	NMED	4.63E-09	1.26E-02	
Potassium	7440-09-7	mg/kg	1,100				NS	NS	20,800,000	N	NMED		5.29E-05	
Selenium	7782-49-2	mg/kg	0.79				NS	NS	1,750	N	NMED		4.51E-04	
Silver	7440-22-4	mg/kg	0.17				NS	NS	1,770	N	NMED		9.60E-05	
Sodium	7440-23-5	mg/kg	70				NS	NS	10,200,000	N	NMED		6.86E-06	
Thallium	7440-28-0	mg/kg	0.052	J			NS	NS	4	N	NMED		1.47E-02	
Vanadium	7440-62-2	mg/kg	20				NS	NS	614	N	NMED		3.26E-02	
Zinc	7440-66-6	mg/kg	47				NS	NS	106,000	N	NMED		4.43E-04	

TABLE D1-AM25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AM25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.31	UJ			NS	NS	12	N	NMED			
Nitrate	14797-55-8	mg/kg	7.9	J			NS	NS	566,000	N	NMED		1.40E-05	
Perchlorate	14797-73-0	mg/kg	0.0018	UJ			NS	NS	248	N	NMED			
										Cumulative Risk/Hazard		**5E-07**	**1.5**	
										Exceeds Target Level		**N**	**Y**	

Notes:

[s] = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

System	Hazard Quotient
Nervous	1.1
Endocrine	0.14
GI	0.10
Blood	0.10
All Others	0.20

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update).

2) NMED[C] = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

3) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

4) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper tolerance limit

TABLE D1-AN25-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AN25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.002	UJ			28.1	N	2,350	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.002	UJ			NS	NS	14,400	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.002	U			7.98	N	1,560	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.002	UJ			18.8	N	2.61	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.002	UJ			78.6	N	15,600	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.002	UJ			NS	NS	440	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.002	UJ			29.3	N	141	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.002	U			NS	NS	63	N	RSL			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0051	U			0.051	N	7.09	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.002	U			240	N	82.9	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.002	U			NS	NS	300	N	RSL			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0051	U			0.0858	N	5.88	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.002	UJ			0.672	N	135	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.002	U			NS	NS	2,150	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.002	UJ			8.32	N	55.6	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.002	UJ			17.8	N	29	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.002	U			NS	NS	270	N	RSL			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.002	UJ			1,290	N	5,480	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.002	UJ			NS	NS	1,600	N	RSL			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.002	U			1,290	N	5,480	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.002	UJ			17.8	N	29	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.003	UJ			NS	NS	37,400	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.002	U			NS	NS	1,560	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.002	UJ			NS	NS	200	N	RSL			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.002	U			NS	NS	1,600	N	RSL			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.002	UJ			NS	NS	5,810	N	RSL			
Acetone	67-64-1	mg/kg	0.15	J			NS	NS	66,300	N	NMED		2.26E-06	
Benzene	71-43-2	mg/kg	0.002	UJ			17.8	N	114	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.002	U			NS	NS	290	N	RSL			
Bromochloromethane	74-97-5	mg/kg	0.002	UJ			NS	NS	150	N	RSL			
Bromodichloromethane	75-27-4	mg/kg	0.002	UJ			6.19	N	1,560	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.002	UJ			674	N	1,230	N	NMED			
Bromomethane	74-83-9	mg/kg	0.002	UJ			NS	NS	17.7	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.002	UJ			NS	NS	1,550	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.002	UJ			10.7	N	144	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.002	UJ			NS	NS	378	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.002	UJ			NS	NS	19,000	N	NMED			
Chloroform	67-66-3	mg/kg	0.002	UJ			5.9	N	306	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0051	UJ			41.1	N	268	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.002	UJ			NS	NS	156	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.002	UJ			29.3	N	141	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.002	UJ			13.9	N	1,230	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.002	UJ			NS	NS	57.9	N	NMED			

TABLE D1-AN25-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AN25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Dichlorodifluoromethane	75-71-8	mg/kg	0.002	UJ			NS	NS	182	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.002	UJ			75.1	N	3,930	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.002	U			68.3	N	61.6	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.002	U			NS	NS	2,360	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0051	UJ			NS	NS	764	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.002	UJ			975	N	37,800	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.01	UJ			766	N	409	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.002	U			NS	NS	3,900	N	RSL			
n-Propylbenzene	103-65-1	mg/kg	0.002	U			NS	NS	3,800	N	RSL			
Naphthalene	91-20-3	mg/kg	0.002	U			22.6	N	162	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0025	UJ			NS	NS	805	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.002	U			NS	NS	2,360	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.002	U			NS	NS	7,800	N	RSL			
Styrene	100-42-5	mg/kg	0.002	UJ			NS	NS	7,260	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.002	U			NS	NS	7,800	N	RSL			
Tetrachloroethene	127-18-4	mg/kg	0.002	UJ			337	N	111	N	NMED			
Toluene	108-88-3	mg/kg	0.002	UJ			NS	NS	5,230	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.002	UJ			NS	NS	210	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.002	UJ			29.3	N	141	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.002	UJ			15.5	N	6.77	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.002	UJ			NS	NS	1,230	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.002	UJ			0.742	N	113	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	UJ			240	N	82.9	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	UJ			NS	NS	2,150	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	UJ			1,290	N	5,480	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	UJ			1,290	N	5,480	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	UJ			NS	NS	6,160	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	UJ			484	N	61.6	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	UJ			NS	NS	185	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	UJ			NS	NS	1,230	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	UJ			NS	NS	123	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	UJ			17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	UJ			3.56	N	18.5	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	UJ			NS	NS	6,260	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.17	UJ			NS	NS	391	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.17	UJ			NS	NS	232	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	UJ			NS	NS	3,200	N	RSL			
2-Nitroaniline	88-74-4	mg/kg	0.17	UJ			NS	NS	630	N	RSL			
2-Nitrophenol	88-75-5	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	UJ			11.8	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.17	UJ			270	N	250	N	RSL[S]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	UJ			NS	NS	4.93	N	NMED			
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			

TABLE D1-AN25-1
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FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	UJ			NS	NS	6,300	N	RSL			
4-Chloroaniline	106-47-8	mg/kg	0.17	UJ			27	N	32	N	RSL			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.17	UJ			270	N	250	N	RSL			
4-Nitrophenol	100-02-7	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.17	UJ			NS	NS	3,480	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.17	UJ			NS	NS	1,740	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.17	UJ			NS	NS	17,400	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.17	UJ			1.53	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.13	UJ			1.12	N	17.4	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	UJ			1.53	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	UJ			NS	NS	1,740	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	UJ			15.3	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.17	UJ			NS	NS	250,000	N	RSL			
Benzyl Alcohol	100-51-6	mg/kg	0.17	UJ			NS	NS	6,300	N	RSL			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	UJ			NS	NS	190	N	RSL			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	UJ			3.11	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	UJ			99.3	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	UJ			380	N	1,230	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.17	UJ			2,900	N	13,000	N	RSL			
Carbazole	86-74-8	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.17	UJ			153	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.17	UJ			NS	NS	6,160	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.17	UJ			NS	NS	630	N	RSL			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	UJ			0.153	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.17	UJ			NS	NS	78	N	RSL			
Diethylphthalate	84-66-2	mg/kg	0.17	UJ			NS	NS	49,300	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.17	UJ			NS	NS	61,600	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.17	UJ			NS	NS	2,320	N	NMED			
Fluorene	86-73-7	mg/kg	0.17	UJ			NS	NS	2,320	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.17	UJ			3.33	N	49.3	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	UJ			68.3	N	61.6	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.17	UJ			133	N	43.1	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	UJ			1.53	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.17	UJ			5,610	N	12,300	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	UJ			0.78	N	NS	NS	RSL			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.02	UJ			0.0234	N	0.493	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	UJ			1,090	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.17	UJ			22.6	N	162	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.17	UJ			60.4	N	131	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.17	UJ			9.85	N	234	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.17	UJ			NS	NS	1,740	N	NMED			
Phenol	108-95-2	mg/kg	0.17	UJ			NS	NS	18,500	N	NMED			
Pyrene	129-00-0	mg/kg	0.17	UJ			NS	NS	1,740	N	NMED			

TABLE D1-AN25-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AN25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	2,200	N	RSL			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	6.3	N	RSL			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			211	N	36	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			3.56	N	18.5	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	7.7	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			31.6	N	70.4	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	6.16	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	7.64	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			333	N	247	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			83.1	N	301	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	156	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			60.4	N	131	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			313	N	6.16	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	3,850	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			1,300	N	570	N	RSL			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.019	U			69.6	N	3.98	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.019	U			1.81	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.0094	U			1.86	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.0094	U			2.43	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.0094	U			2.43	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.0094	U			2.43	N	1.14	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.0094	U			2.43	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (2)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg	0.00000000012	J	0.00000041	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000033	J	0.000011	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.000000069	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.0000016	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.000000089	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000045	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000015	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000042	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.00000014	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.000000055	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000011	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.0000001	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.00000008	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.00000017	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.0000001	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg	0.00000002	J	0.0000002	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000058	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.00000002				0.000049	N	0.0000506	N	NMED	4.78E-09	4.63E-04	

TABLE D1-AN25-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AN25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	21,000	J			NS	NS	78,000	N	NMED		2.69E-01	Nervous
Antimony	7440-36-0	mg/kg	0.13	J			NS	NS	31.3	N	NMED		4.15E-03	
Arsenic	7440-38-2	mg/kg	1.2				7.07	N	13	N	NMED	1.70E-06	9.23E-02	
Barium	7440-39-3	mg/kg	120				NS	NS	15,600	N	NMED		7.69E-03	
Beryllium	7440-41-7	mg/kg	0.4	J			64,400	N	156	N	NMED	6.21E-11	2.56E-03	
Cadmium	7440-43-9	mg/kg	0.78	J			85,900	N	70.5	N	NMED	9.08E-11	1.11E-02	
Calcium	7440-70-2	mg/kg	2,400				NS	NS	13,000,000	N	NMED		1.85E-04	
Chromium (Total) (3)	7440-47-3	mg/kg	15				96.6	N	45,200	N	NMED	1.55E-06	3.32E-04	
Cobalt	7440-48-4	mg/kg	5.6				17,200	N	23.4	N	NMED	3.26E-09	2.39E-01	Endocrine
Copper	7440-50-8	mg/kg	65				NS	NS	3,130	N	NMED		2.08E-02	
Iron	7439-89-6	mg/kg	11,000				NS	NS	54,800	N	NMED		2.01E-01	GI
Lead	7439-92-1	mg/kg	15				NS	NS	200	N	RSL			
Magnesium	7439-95-4	mg/kg	9,700				NS	NS	15,600,000	N	NMED		6.22E-04	
Manganese	7439-96-5	mg/kg	300				NS	NS	10,500	N	NMED		2.86E-02	
Mercury (Elemental)	7439-97-6	mg/kg	0.023	J			NS	NS	23.8	N	NMED		9.66E-04	
Nickel	7440-02-0	mg/kg	9.3				595,000	N	1,560	N	NMED	1.56E-10	5.96E-03	
Potassium	7440-09-7	mg/kg	960				NS	NS	15,600,000	N	NMED		6.15E-05	
Selenium	7782-49-2	mg/kg	0.97				NS	NS	391	N	NMED		2.48E-03	
Silver	7440-22-4	mg/kg	0.1				NS	NS	391	N	NMED		2.56E-04	
Sodium	7440-23-5	mg/kg	81				NS	NS	7,820,000	N	NMED		1.04E-05	
Thallium	7440-28-0	mg/kg	0.051	J			NS	NS	0.782	N	NMED		6.52E-02	
Vanadium	7440-62-2	mg/kg	22				NS	NS	394	N	NMED		5.58E-02	
Zinc	7440-66-6	mg/kg	44				NS	NS	23,500	N	NMED		1.87E-03	
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.31	U			NS	NS	11.2	N	NMED			
Nitrate	14797-55-8	mg/kg	4.9	J			NS	NS	125,000	N	NMED		3.92E-05	
Perchlorate	14797-73-0	mg/kg	0.0019	UJ			NS	NS	54.8	N	NMED			
										Cumulative Risk/Hazard		**3E-06**	**1.0**	
										Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	0.30
Endocrine	0.24
GI	0.20
All Others	0.57

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of Quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper Tolerance Limit

TABLE D1-AN25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AN25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.002	UJ			137	N	39,400	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.002	UJ			NS	NS	72,500	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.002	U			39	N	26,000	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.002	UJ			92	N	12	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.002	UJ			383	N	260,000	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.002	UJ			NS	NS	2,260	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.002	UJ			146	N	695	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.002	U			NS	NS	930	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0051	U			1	N	34	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.002	U			1,250	N	423	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.002	U			NS	NS	1,800	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0051	U			1	N	41	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.002	UJ			3	N	738	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.002	U			NS	NS	13,000	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.002	UJ			41	N	286	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.002	UJ			87	N	137	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.002	U			NS	NS	1,500	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.002	UJ			6,730	N	90,800	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.002	UJ			NS	NS	23,000	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.002	U			6,730	N	90,800	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.002	UJ			87	N	137	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.003	UJ			NS	NS	411,000	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.002	U			NS	NS	26,000	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.002	UJ			NS	NS	1,300	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.002	U			NS	NS	23,000	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.002	UJ			NS	NS	81,600	N	RSL		
Acetone	67-64-1	mg/kg	0.15	J			NS	NS	960,000	N	NMED		1.56E-07
Benzene	71-43-2	mg/kg	0.002	UJ			87	N	729	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.002	U			NS	NS	1,800	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.002	UJ			NS	NS	630	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.002	UJ			30	N	26,000	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.002	UJ			1,760	N	18,300	N	NMED		
Bromomethane	74-83-9	mg/kg	0.002	UJ			NS	NS	95	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.002	UJ			NS	NS	8,540	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.002	UJ			53	N	1,020	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.002	UJ			NS	NS	2,160	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.002	UJ			NS	NS	89,500	N	NMED		
Chloroform	67-66-3	mg/kg	0.002	UJ			29	N	2,000	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0051	UJ			201	N	1,260	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.002	UJ			NS	NS	2,600	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.002	UJ			146	N	695	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.002	UJ			67	N	18,300	N	NMED		

TABLE D1-AN25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AN25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.002	UJ			NS	NS	288	N	NMED		
Dichlorodifluoromethane	75-71-8	mg/kg	0.002	UJ			NS	NS	865	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.002	UJ			29,000	N	368	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.002	U			52	N	916	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.002	U			NS	NS	14,200	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0051	UJ			NS	NS	3,730	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.002	UJ			4,820	N	178,000	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.01	UJ			14,400	N	5,130	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.002	U			NS	NS	58,000	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.002	U			NS	NS	24,000	N	RSL		
Naphthalene	91-20-3	mg/kg	0.002	U			108	N	843	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0025	UJ			NS	NS	3,940	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.002	U			NS	NS	14,200	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.002	U			NS	NS	120,000	N	RSL		
Styrene	100-42-5	mg/kg	0.002	UJ			NS	NS	51,300	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.002	U			NS	NS	120,000	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.002	UJ			1,650	N	629	N	NMED		
Toluene	108-88-3	mg/kg	0.002	UJ			NS	NS	61,300	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.002	UJ			NS	NS	1,100	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.002	UJ			146	N	695	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.002	UJ			112	N	37	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.002	UJ			NS	NS	6,030	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.002	UJ			28	N	46	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	UJ			1,250	N	423	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	UJ			NS	NS	13,000	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	UJ			6,730	N	90,800	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	UJ			6,730	N	90,800	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	UJ			NS	NS	91,600	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	UJ			2,330	N	916	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	UJ			NS	NS	2,750	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	UJ			NS	NS	18,300	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	UJ			NS	NS	1,830	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	UJ			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	UJ			17	N	276	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	UJ			NS	NS	104,000	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.17	UJ			NS	NS	6,490	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.17	UJ			NS	NS	3,370	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	UJ			NS	NS	41,000	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.17	UJ			NS	NS	8,000	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	UJ			NS	NS	410	N	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.17	UJ			1,100	N	3,300	N	RSL[S]		

TABLE D1-AN25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AN25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	UJ			NS	NS	73	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	UJ			NS	NS	82,000	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.17	UJ			110	N	410	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.17	UJ			1,100	N	3,300	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.17	UJ			NS	NS	50,500	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.17	UJ			NS	NS	25,300	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.17	UJ			NS	NS	253,000	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.17	UJ			32	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.13	UJ			24	N	251	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	UJ			32	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	UJ			NS	NS	25,300	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	UJ			323	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.17	UJ			NS	NS	3,300,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.17	UJ			NS	NS	82,000	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	UJ			NS	NS	2,500	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	UJ			16	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	UJ			519	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	UJ			1,830	N	18,300	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.17	UJ			12,000	N	160,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.17	UJ			3,230	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.17	UJ			NS	NS	91,600	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.17	UJ			NS	NS	8,200	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	UJ			3	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.17	UJ			NS	NS	1,200	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.17	UJ			NS	NS	733,000	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.17	UJ			NS	NS	916,000	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.17	UJ			NS	NS	33,700	N	NMED		
Fluorene	86-73-7	mg/kg	0.17	UJ			NS	NS	33,700	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.17	UJ			16	N	733	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	UJ			52	N	916	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.17	UJ			641	N	641	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	UJ			32	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.17	UJ			27,000	N	183,000	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	UJ			3	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.02	UJ			1	N	7	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	UJ			5,240	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.17	UJ			108	N	843	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.17	UJ			293	N	1,540	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.17	UJ			45	N	3,180	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.17	UJ			NS	NS	27,500	N	NMED		
Phenol	108-95-2	mg/kg	0.17	UJ			NS	NS	275,000	N	NMED		
Pyrene	129-00-0	mg/kg	0.17	UJ			NS	NS	25,300	N	NMED		

TABLE D1-AN25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AN25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			5,300	N	7,400	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.019	U			304	N	57	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.019	U			9	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.0094	U			9	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.0094	U			11	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.0094	U			11	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.0094	U			11	N	16	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.0094	U			11	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg	0.00000000012	J	0.00000041	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000033	J	0.000011	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.000000069	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.0000016	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.000000089	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000045	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000015	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000042	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.00000014	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.000000055	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000011	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.0000001	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.00000008	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.00000017	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.0000001	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg	0.00000002	J	0.0000002	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000058	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.00000002				0.000238	N	0.000808	N	NMED	9.84E-10	2.90E-05

TABLE D1-AN25-2
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FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	21,000	J			NS	NS	1,290,000	N	NMED		1.63E-02
Antimony	7440-36-0	mg/kg	0.13	J			NS	NS	519	N	NMED		2.50E-04
Arsenic	7440-38-2	mg/kg	1.2				36	N	208	N	NMED		5.77E-03
Barium	7440-39-3	mg/kg	120				NS	NS	255,000	N	NMED		4.71E-04
Beryllium	7440-41-7	mg/kg	0.4	J			313,000	N	2,580	N	NMED		1.55E-04
Cadmium	7440-43-9	mg/kg	0.78	J			417,000	N	1,110	N	NMED		7.03E-04
Calcium	7440-70-2	mg/kg	2,400				NS	NS	32,400,000	N	NMED		7.41E-05
Chromium (Total) (3)	7440-47-3	mg/kg	15				505	N	314,000	N	NMED		4.78E-05
Cobalt	7440-48-4	mg/kg	5.6				83,400	N	388	N	NMED		1.44E-02
Copper	7440-50-8	mg/kg	65				NS	NS	51,900	N	NMED		1.25E-03
Iron	7439-89-6	mg/kg	11,000				NS	NS	908,000	N	NMED		1.21E-02
Lead	7439-92-1	mg/kg	15				NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	9,700				NS	NS	5,680,000	N	NMED		1.71E-03
Manganese	7439-96-5	mg/kg	300				NS	NS	160,000	N	NMED		1.88E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.023	J			NS	NS	112	N	NMED		2.05E-04
Nickel	7440-02-0	mg/kg	9.3				2,890,000	N	25,700	N	NMED		3.62E-04
Potassium	7440-09-7	mg/kg	960				NS	NS	76,200,000	N	NMED		1.26E-05
Selenium	7782-49-2	mg/kg	0.97				NS	NS	6,490	N	NMED		1.49E-04
Silver	7440-22-4	mg/kg	0.1				NS	NS	6,490	N	NMED		1.54E-05
Sodium	7440-23-5	mg/kg	81				NS	NS	37,300,000	N	NMED		2.17E-06
Thallium	7440-28-0	mg/kg	0.051	J			NS	NS	13	N	NMED		3.92E-03
Vanadium	7440-62-2	mg/kg	22				NS	NS	6,530	N	NMED		3.37E-03
Zinc	7440-66-6	mg/kg	44				NS	NS	38,900	N	NMED		1.13E-03

TABLE D1-AN25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AN25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.31	U			NS	NS	63	N	NMED		
Nitrate	14797-55-8	mg/kg	4.9	J			NS	NS	2,080,000	N	NMED		2.36E-06
Perchlorate	14797-73-0	mg/kg	0.0019	UJ			NS	NS	908	N	NMED		
										Cumulative Risk/Hazard		**1E-09**	**0.06**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of Quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper Tolerance Limit

TABLE D1-AN25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AN25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2,3)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.002	UJ			659	N	10,600	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.002	UJ			NS	NS	13,600	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.002	U			197	N	7,080	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.002	UJ			4,300	N	2	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.002	UJ			1,820	N	70,800	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.002	UJ			NS	NS	424	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.002	UJ			781	N	130	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.002	U			NS	NS	283	N	NMED[C]			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0051	U			8	N	6	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.002	U			8,540	N	79	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.002	U			NS	NS	492	N	NMED[C]			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0051	U			6	N	8	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.002	UJ			16	N	140	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.002	U			NS	NS	2,500	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.002	UJ			195	N	54	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.002	UJ			415	N	25	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.002	U			NS	NS	422	N	NMED[C]			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.002	UJ			45,900	N	24,800	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.002	UJ			NS	NS	7,080	N	NMED[C]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.002	U			45,900	N	24,800	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.002	UJ			415	N	25	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.003	UJ			NS	NS	90,700	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.002	U			NS	NS	7,080	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.002	UJ			NS	NS	599	N	NMED[C]			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.002	U			NS	NS	7,080	N	NMED[C]			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.002	UJ			NS	NS	20,400	N	NMED[C]			
Acetone	67-64-1	mg/kg	0.15	J			NS	NS	242,000	N	NMED		6.20E-07	
Benzene	71-43-2	mg/kg	0.002	UJ			423	N	142	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.002	U			NS	NS	538	N	NMED[C]			
Bromochloromethane	74-97-5	mg/kg	0.002	UJ			NS	NS	296	N	NMED[C]			
Bromodichloromethane	75-27-4	mg/kg	0.002	UJ			143	N	7,080	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.002	UJ			23,700	N	5,380	N	NMED			
Bromomethane	74-83-9	mg/kg	0.002	UJ			NS	NS	18	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.002	UJ			NS	NS	1,620	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.002	UJ			252	N	202	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.002	UJ			NS	NS	412	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.002	UJ			NS	NS	16,600	N	NMED			
Chloroform	67-66-3	mg/kg	0.002	UJ			134	N	391	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0051	UJ			956	N	235	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.002	UJ			NS	NS	708	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.002	UJ			781	N	130	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.002	UJ			340	N	5,380	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.002	UJ			NS	NS	54	N	NMED			

TABLE D1-AN25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AN25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2,3)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Dichlorodifluoromethane	75-71-8	mg/kg	0.002	UJ			NS	NS	161	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.002	UJ			1,770	N	5,800	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.002	U			2,400	N	269	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.002	U			NS	NS	2,740	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0051	UJ			NS	NS	696	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.002	UJ			24,200	N	33,100	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.01	UJ			89,600	N	1,210	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.002	U			NS	NS	17,700	N	NMED[C]			
n-Propylbenzene	103-65-1	mg/kg	0.002	U			NS	NS	6,730	N	NMED[C]			
Naphthalene	91-20-3	mg/kg	0.002	U			633	N	159	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0025	UJ			NS	NS	736	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.002	U			NS	NS	2,740	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.002	U			NS	NS	35,400	N	NMED[C]			
Styrene	100-42-5	mg/kg	0.002	UJ			NS	NS	10,200	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.002	U			NS	NS	35,400	N	NMED[C]			
Tetrachloroethene	127-18-4	mg/kg	0.002	UJ			7,910	N	120	N	NMED			
Toluene	108-88-3	mg/kg	0.002	UJ			NS	NS	14,000	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.002	UJ			NS	NS	206	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.002	UJ			781	N	130	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.002	UJ			5,370	N	7	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.002	UJ			NS	NS	1,130	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.002	UJ			161	N	162	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	UJ			8,540	N	79	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	UJ			NS	NS	2,500	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	UJ			45,900	N	24,800	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	UJ			45,900	N	24,800	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	UJ			NS	NS	26,900	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	UJ			17,000	N	269	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	UJ			NS	NS	807	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	UJ			NS	NS	5,380	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	UJ			NS	NS	538	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	UJ			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	UJ			165	N	81	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	UJ			NS	NS	28,300	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.17	UJ			NS	NS	1,770	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.17	UJ			NS	NS	1,000	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	UJ			NS	NS	13,500	N	NMED[C]			
2-Nitroaniline	88-74-4	mg/kg	0.17	UJ			NS	NS	2,690	N	NMED[C]			
2-Nitrophenol	88-75-5	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	UJ			410	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.17	UJ			135	N	1,080	N	NMED[SC]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	UJ			NS	NS	22	N	NMED			

TABLE D1-AN25-3
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FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2,3)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	UJ			NS	NS	26,900	N	NMED[C]			
4-Chloroaniline	106-47-8	mg/kg	0.17	UJ			14	N	135	N	NMED[C]			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.17	UJ			135	N	1,080	N	NMED[C]			
4-Nitrophenol	100-02-7	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.17	UJ			NS	NS	15,100	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.17	UJ			NS	NS	7,530	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.17	UJ			NS	NS	75,300	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.17	UJ			240	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.13	UJ			173	N	15	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	UJ			240	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	UJ			NS	NS	7,530	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	UJ			2,310	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.17	UJ			NS	NS	1,080,000	N	NMED[C]			
Benzyl Alcohol	100-51-6	mg/kg	0.17	UJ			NS	NS	26,900	N	NMED[C]			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	UJ			NS	NS	807	N	NMED[C]			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	UJ			2	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	UJ			3,540	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	UJ			13,400	N	5,380	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.17	UJ			1,420	N	53,800	N	NMED[C]			
Carbazole	86-74-8	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.17	UJ			23,100	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.17	UJ			NS	NS	26,900	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.17	UJ			NS	NS	2,690	N	NMED[C]			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	UJ			24	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.17	UJ			NS	NS	269	N	NMED[C]			
Diethylphthalate	84-66-2	mg/kg	0.17	UJ			NS	NS	215,000	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.17	UJ			NS	NS	269,000	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.17	UJ			NS	NS	10,000	N	NMED			
Fluorene	86-73-7	mg/kg	0.17	UJ			NS	NS	10,000	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.17	UJ			117	N	215	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	UJ			2,400	N	269	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.17	UJ			4,670	N	188	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	UJ			240	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.17	UJ			198,000	N	53,700	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	UJ			0.38	N	NA	N	NMED[C]			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.02	UJ			4	N	2	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	UJ			37,900	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.17	UJ			633	N	159	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.17	UJ			1,350	N	353	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.17	UJ			346	N	989	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.17	UJ			NS	NS	8,070	N	NMED			
Phenol	108-95-2	mg/kg	0.17	UJ			NS	NS	77,400	N	NMED			
Pyrene	129-00-0	mg/kg	0.17	UJ			NS	NS	7,530	N	NMED			

TABLE D1-AN25-3
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MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2,3)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	8,070	N	NMED[C]			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	27	N	NMED[C]			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			626	N	2,420	N	NMED[C]			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.019	U			2,440	N	17	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.019	U			55	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.0094	U			58	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.0094	U			85	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.0094	U			85	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.0094	U			85	N	5	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.0094	U			85	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (4)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg	0.00000000012	J	0.00000041	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000033	J	0.000011	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.000000069	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.0000016	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.000000089	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000045	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000015	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000042	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.00000014	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.000000055	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000011	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.0000001	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.00000008	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.00000017	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.0000001	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg	0.00000002	J	0.0000002	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000058	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.00000002				0.0172	N	0.000226	N	NMED	1.36E-11	1.04E-04	

TABLE D1-AN25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AN25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2,3)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	21,000	J			NS	NS	41,400	N	NMED		5.07E-01	Nervous
Antimony	7440-36-0	mg/kg	0.13	J			NS	NS	142	N	NMED		9.15E-04	
Arsenic	7440-38-2	mg/kg	1.2				216	N	41	N	NMED	5.56E-08	2.91E-02	
Barium	7440-39-3	mg/kg	120				NS	NS	4,390	N	NMED		2.73E-02	
Beryllium	7440-41-7	mg/kg	0.4	J			2,710	N	148	N	NMED	1.48E-09	2.70E-03	
Cadmium	7440-43-9	mg/kg	0.78	J			3,610	N	72	N	NMED	2.16E-09	1.08E-02	
Calcium	7440-70-2	mg/kg	2,400				NS	NS	8,850,000	N	NMED		2.71E-04	
Chromium (Total) (5)	7440-47-3	mg/kg	15				468	N	134	N	NMED	3.21E-07	1.12E-01	GI, Blood
Cobalt	7440-48-4	mg/kg	5.6				722	N	37	N	NMED	7.76E-08	1.53E-01	Endocrine
Copper	7440-50-8	mg/kg	65				NS	NS	14,200	N	NMED		4.58E-03	
Iron	7439-89-6	mg/kg	11,000				NS	NS	248,000	N	NMED		4.44E-02	
Lead	7439-92-1	mg/kg	15				NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	9,700				NS	NS	1,550,000	N	NMED		6.26E-03	
Manganese	7439-96-5	mg/kg	300				NS	NS	464	N	NMED		6.47E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.023	J			NS	NS	21	N	NMED		1.11E-03	
Nickel	7440-02-0	mg/kg	9.3				20,500	N	753	N	NMED	4.54E-09	1.24E-02	
Potassium	7440-09-7	mg/kg	960				NS	NS	20,800,000	N	NMED		4.62E-05	
Selenium	7782-49-2	mg/kg	0.97				NS	NS	1,750	N	NMED		5.54E-04	
Silver	7440-22-4	mg/kg	0.1				NS	NS	1,770	N	NMED		5.65E-05	
Sodium	7440-23-5	mg/kg	81				NS	NS	10,200,000	N	NMED		7.94E-06	
Thallium	7440-28-0	mg/kg	0.051	J			NS	NS	4	N	NMED		1.44E-02	
Vanadium	7440-62-2	mg/kg	22				NS	NS	614	N	NMED		3.58E-02	
Zinc	7440-66-6	mg/kg	44				NS	NS	106,000	N	NMED		4.15E-04	

TABLE D1-AN25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AN25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2,3)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.31	U			NS	NS	12	N	NMED			
Nitrate	14797-55-8	mg/kg	4.9	J			NS	NS	566,000	N	NMED		8.66E-06	
Perchlorate	14797-73-0	mg/kg	0.0019	UJ			NS	NS	248	N	NMED			
										Cumulative Risk/Hazard		**5E-07**	**1.6**	
										Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	1.2
Endocrine	0.15
GI	0.11
Blood	0.11
All Others	0.19

Notes:

[s] = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

2) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update).

3) NMED[C] = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

4) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

5) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper tolerance limit

TABLE D1-AO25-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AO25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.002	UJ			28.1	N	2,350	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.002	U			NS	NS	14,400	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.002	U			7.98	N	1,560	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.002	U			18.8	N	2.61	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.002	U			78.6	N	15,600	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.002	U			NS	NS	440	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.002	U			29.3	N	141	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.002	U			NS	NS	63	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0049	U			0.051	N	7.09	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.002	U			240	N	82.9	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.002	U			NS	NS	300	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0049	U			0.0858	N	5.88	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.002	UJ			0.672	N	135	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.002	U			NS	NS	2,150	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.002	U			8.32	N	55.6	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.002	U			17.8	N	29	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.002	U			NS	NS	270	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.002	U			1,290	N	5,480	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.002	UJ			NS	NS	1,600	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.002	U			1,290	N	5,480	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.002	U			17.8	N	29	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.003	U			NS	NS	37,400	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.002	U			NS	NS	1,560	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.002	U			NS	NS	200	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.002	U			NS	NS	1,600	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.002	U			NS	NS	5,810	N	RSL		
Acetone	67-64-1	mg/kg	0.15				NS	NS	66,300	N	NMED		2.26E-06
Benzene	71-43-2	mg/kg	0.002	U			17.8	N	114	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.002	U			NS	NS	290	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.002	U			NS	NS	150	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.002	U			6.19	N	1,560	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.002	UJ			674	N	1,230	N	NMED		
Bromomethane	74-83-9	mg/kg	0.002	U			NS	NS	17.7	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.002	U			NS	NS	1,550	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.002	U			10.7	N	144	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.002	UJ			NS	NS	378	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.002	U			NS	NS	19,000	N	NMED		
Chloroform	67-66-3	mg/kg	0.002	U			5.9	N	306	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0049	U			41.1	N	268	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.002	U			NS	NS	156	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.002	U			29.3	N	141	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.002	UJ			13.9	N	1,230	N	NMED		
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.002	U			NS	NS	57.9	N	NMED		

TABLE D1-AO25-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AO25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dichlorodifluoromethane	75-71-8	mg/kg	0.002	U			NS	NS	182	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.002	UJ			75.1	N	3,930	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.002	U			68.3	N	61.6	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.002	U			NS	NS	2,360	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0049	UJ			NS	NS	764	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.002	U			975	N	37,800	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.0099	U			766	N	409	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.002	U			NS	NS	3,900	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.002	U			NS	NS	3,800	N	RSL		
Naphthalene	91-20-3	mg/kg	0.002	U			22.6	N	162	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0025	UJ			NS	NS	805	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.002	U			NS	NS	2,360	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.002	U			NS	NS	7,800	N	RSL		
Styrene	100-42-5	mg/kg	0.002	UJ			NS	NS	7,260	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.002	U			NS	NS	7,800	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.002	UJ			337	N	111	N	NMED		
Toluene	108-88-3	mg/kg	0.002	U			NS	NS	5,230	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.002	U			NS	NS	210	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.002	U			29.3	N	141	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.002	U			15.5	N	6.77	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.002	U			NS	NS	1,230	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.002	U			0.742	N	113	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	U			240	N	82.9	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	U			NS	NS	2,150	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	U			1,290	N	5,480	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	U			1,290	N	5,480	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	U			NS	NS	6,160	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	UJ			484	N	61.6	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	UJ			NS	NS	185	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	UJ			NS	NS	1,230	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	UJ			NS	NS	123	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	UJ			17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	UJ			3.56	N	18.5	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	UJ			NS	NS	6,260	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.17	UJ			NS	NS	391	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.17	UJ			NS	NS	232	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	UJ			NS	NS	3,200	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.17	UJ			NS	NS	630	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	UJ			11.8	N	NS	NS	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.17	UJ			270	N	250	N	RSL[S]		
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	UJ			NS	NS	4.93	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		

TABLE D1-AO25-1
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FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	UJ			NS	NS	6,300	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.17	UJ			27	N	32	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.17	UJ			270	N	250	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.17	UJ			NS	NS	3,480	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.17	UJ			NS	NS	1,740	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.17	UJ			NS	NS	17,400	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.17	UJ			1.53	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.13	UJ			1.12	N	17.4	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	UJ			1.53	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	UJ			NS	NS	1,740	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	UJ			15.3	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.17	UJ			NS	NS	250,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.17	UJ			NS	NS	6,300	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	UJ			NS	NS	190	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	UJ			3.11	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	UJ			99.3	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	UJ			380	N	1,230	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.17	UJ			2,900	N	13,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.17	UJ			153	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.17	UJ			NS	NS	6,160	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.17	UJ			NS	NS	630	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	UJ			0.153	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.17	UJ			NS	NS	78	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.17	UJ			NS	NS	49,300	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.17	UJ			NS	NS	61,600	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.17	UJ			NS	NS	2,320	N	NMED		
Fluorene	86-73-7	mg/kg	0.17	UJ			NS	NS	2,320	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.17	UJ			3.33	N	49.3	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	UJ			68.3	N	61.6	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.17	UJ			133	N	43.1	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	UJ			1.53	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.17	UJ			5,610	N	12,300	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	UJ			0.78	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.02	UJ			0.0234	N	0.493	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	UJ			1,090	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.17	UJ			22.6	N	162	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.17	UJ			60.4	N	131	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.17	UJ			9.85	N	234	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.17	UJ			NS	NS	1,740	N	NMED		
Phenol	108-95-2	mg/kg	0.17	UJ			NS	NS	18,500	N	NMED		
Pyrene	129-00-0	mg/kg	0.17	UJ			NS	NS	1,740	N	NMED		

TABLE D1-AO25-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AO25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			1,300	N	570	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.019	U			69.6	N	3.98	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.019	U			1.81	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.0094	U			1.86	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.0094	U			2.43	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.0094	U			2.43	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.0094	U			2.43	N	1.14	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.0094	U			2.43	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.000000085	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000027	J	0.000009	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.000000089	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.0000011	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000012	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.0000001	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000098	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000093	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000089	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.000000099	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000013	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000093	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.0000001	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000013	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000018	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000077	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.0000000027				0.00049	N	0.000506	N	NMED	5.51E-11	5.34E-06

TABLE D1-AO25-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AO25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	20,000	J			NS	NS	78,000	N	NMED		2.56E-01
Antimony	7440-36-0	mg/kg	0.15	U			NS	NS	31.3	N	NMED		
Arsenic	7440-38-2	mg/kg	1.1				7.07	N	13	N	NMED	1.56E-06	8.46E-02
Barium	7440-39-3	mg/kg	140				NS	NS	15,600	N	NMED		8.97E-03
Beryllium	7440-41-7	mg/kg	0.33	J			64,400	N	156	N	NMED	5.12E-11	2.12E-03
Cadmium	7440-43-9	mg/kg	0.4				85,900	N	70.5	N	NMED	4.66E-11	5.67E-03
Calcium	7440-70-2	mg/kg	2,800				NS	NS	13,000,000	N	NMED		2.15E-04
Chromium (Total) (3)	7440-47-3	mg/kg	14				96.6	N	45,200	N	NMED	1.45E-06	3.10E-04
Cobalt	7440-48-4	mg/kg	5.2				17,200	N	23.4	N	NMED	3.02E-09	2.22E-01
Copper	7440-50-8	mg/kg	60				NS	NS	3,130	N	NMED		1.92E-02
Iron	7439-89-6	mg/kg	10,000				NS	NS	54,800	N	NMED		1.82E-01
Lead	7439-92-1	mg/kg	13				NS	NS	200	N	RSL		
Magnesium	7439-95-4	mg/kg	8,600				NS	NS	15,600,000	N	NMED		5.51E-04
Manganese	7439-96-5	mg/kg	340				NS	NS	10,500	N	NMED		3.24E-02
Mercury (Elemental)	7439-97-6	mg/kg	0.02	J			NS	NS	23.8	N	NMED		8.40E-04
Nickel	7440-02-0	mg/kg	8.6				595,000	N	1,560	N	NMED	1.45E-10	5.51E-03
Potassium	7440-09-7	mg/kg	940				NS	NS	15,600,000	N	NMED		6.03E-05
Selenium	7782-49-2	mg/kg	0.68				NS	NS	391	N	NMED		1.74E-03
Silver	7440-22-4	mg/kg	0.099	J			NS	NS	391	N	NMED		2.53E-04
Sodium	7440-23-5	mg/kg	190	J			NS	NS	7,820,000	N	NMED		2.43E-05
Thallium	7440-28-0	mg/kg	0.046	J			NS	NS	0.782	N	NMED		5.88E-02
Vanadium	7440-62-2	mg/kg	20				NS	NS	394	N	NMED		5.08E-02
Zinc	7440-66-6	mg/kg	36				NS	NS	23,500	N	NMED		1.53E-03

TABLE D1-AO25-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AO25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.32	U			NS	NS	11.2	N	NMED		
Nitrate	14797-55-8	mg/kg	4.3	J			NS	NS	125,000	N	NMED		3.44E-05
Perchlorate	14797-73-0	mg/kg	0.0018	UJ			NS	NS	54.8	N	NMED		
										Cumulative Risk/Hazard		**3E-06**	**0.93**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of Quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper Tolerance Limit

TABLE D1-AO25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AO25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.002	UJ			137	N	39,400	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.002	U			NS	NS	72,500	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.002	U			39	N	26,000	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.002	U			92	N	12	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.002	U			383	N	260,000	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.002	U			NS	NS	2,260	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.002	U			146	N	695	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.002	U			NS	NS	930	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0049	U			1	N	34	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.002	U			1,250	N	423	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.002	U			NS	NS	1,800	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0049	U			1	N	41	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.002	UJ			3	N	738	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.002	U			NS	NS	13,000	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.002	U			41	N	286	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.002	U			87	N	137	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.002	U			NS	NS	1,500	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.002	U			6,730	N	90,800	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.002	UJ			NS	NS	23,000	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.002	U			6,730	N	90,800	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.002	U			87	N	137	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.003	U			NS	NS	411,000	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.002	U			NS	NS	26,000	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.002	U			NS	NS	1,300	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.002	U			NS	NS	23,000	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.002	U			NS	NS	81,600	N	RSL		
Acetone	67-64-1	mg/kg	0.15				NS	NS	960,000	N	NMED		1.56E-07
Benzene	71-43-2	mg/kg	0.002	U			87	N	729	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.002	U			NS	NS	1,800	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.002	U			NS	NS	630	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.002	U			30	N	26,000	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.002	UJ			1,760	N	18,300	N	NMED		
Bromomethane	74-83-9	mg/kg	0.002	U			NS	NS	95	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.002	U			NS	NS	8,540	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.002	U			53	N	1,020	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.002	UJ			NS	NS	2,160	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.002	U			NS	NS	89,500	N	NMED		
Chloroform	67-66-3	mg/kg	0.002	U			29	N	2,000	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0049	U			201	N	1,260	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.002	U			NS	NS	2,600	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.002	U			146	N	695	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.002	UJ			67	N	18,300	N	NMED		

TABLE D1-AO25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AO25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.002	U			NS	NS	288	N	NMED		
Dichlorodifluoromethane	75-71-8	mg/kg	0.002	U			NS	NS	865	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.002	UJ			29,000	N	368	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.002	U			52	N	916	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.002	U			NS	NS	14,200	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0049	UJ			NS	NS	3,730	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.002	U			4,820	N	178,000	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.0099	U			14,400	N	5,130	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.002	U			NS	NS	58,000	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.002	U			NS	NS	24,000	N	RSL		
Naphthalene	91-20-3	mg/kg	0.002	U			108	N	843	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0025	UJ			NS	NS	3,940	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.002	U			NS	NS	14,200	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.002	U			NS	NS	120,000	N	RSL		
Styrene	100-42-5	mg/kg	0.002	UJ			NS	NS	51,300	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.002	U			NS	NS	120,000	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.002	UJ			1,650	N	629	N	NMED		
Toluene	108-88-3	mg/kg	0.002	U			NS	NS	61,300	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.002	U			NS	NS	1,100	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.002	U			146	N	695	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.002	U			112	N	37	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.002	U			NS	NS	6,030	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.002	U			28	N	46	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	U			1,250	N	423	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	U			NS	NS	13,000	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	U			6,730	N	90,800	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	U			6,730	N	90,800	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	U			NS	NS	91,600	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	UJ			2,330	N	916	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	UJ			NS	NS	2,750	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	UJ			NS	NS	18,300	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	UJ			NS	NS	1,830	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	UJ			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	UJ			17	N	276	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	UJ			NS	NS	104,000	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.17	UJ			NS	NS	6,490	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.17	UJ			NS	NS	3,370	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	UJ			NS	NS	41,000	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.17	UJ			NS	NS	8,000	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	UJ			NS	NS	410	N	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.17	UJ			1,100	N	3,300	N	RSL[S]		

TABLE D1-AO25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AO25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	UJ			NS	NS	73	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	UJ			NS	NS	82,000	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.17	UJ			110	N	410	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.17	UJ			1,100	N	3,300	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.17	UJ			NS	NS	50,500	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.17	UJ			NS	NS	25,300	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.17	UJ			NS	NS	253,000	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.17	UJ			32	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.13	UJ			24	N	251	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	UJ			32	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	UJ			NS	NS	25,300	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	UJ			323	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.17	UJ			NS	NS	3,300,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.17	UJ			NS	NS	82,000	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	UJ			NS	NS	2,500	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	UJ			16	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	UJ			519	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	UJ			1,830	N	18,300	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.17	UJ			12,000	N	160,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.17	UJ			3,230	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.17	UJ			NS	NS	91,600	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.17	UJ			NS	NS	8,200	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	UJ			3	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.17	UJ			NS	NS	1,200	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.17	UJ			NS	NS	733,000	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.17	UJ			NS	NS	916,000	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.17	UJ			NS	NS	33,700	N	NMED		
Fluorene	86-73-7	mg/kg	0.17	UJ			NS	NS	33,700	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.17	UJ			16	N	733	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	UJ			52	N	916	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.17	UJ			641	N	641	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	UJ			32	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.17	UJ			27,000	N	183,000	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	UJ			3	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.02	UJ			1	N	7	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	UJ			5,240	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.17	UJ			108	N	843	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.17	UJ			293	N	1,540	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.17	UJ			45	N	3,180	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.17	UJ			NS	NS	27,500	N	NMED		
Phenol	108-95-2	mg/kg	0.17	UJ			NS	NS	275,000	N	NMED		
Pyrene	129-00-0	mg/kg	0.17	UJ			NS	NS	25,300	N	NMED		

TABLE D1-AO25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AO25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			5,300	N	7,400	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.019	U			304	N	57	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.019	U			9	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.0094	U			9	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.0094	U			11	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.0094	U			11	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.0094	U			11	N	16	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.0094	U			11	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (3)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.000000085	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000027	J	0.000009	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.000000089	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.0000011	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000012	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.0000001	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000098	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000093	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000089	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.000000099	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000013	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000093	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.0000001	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000013	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000018	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000077	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.0000000027				0.000238	N	0.000808	N	NMED	1.13E-10	3.34E-06

TABLE D1-AO25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AO25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	20,000	J			NS	NS	1,290,000	N	NMED		1.55E-02
Antimony	7440-36-0	mg/kg	0.15	U			NS	NS	519	N	NMED		
Arsenic	7440-38-2	mg/kg	1.1				36	N	208	N	NMED	3.06E-07	5.29E-03
Barium	7440-39-3	mg/kg	140				NS	NS	255,000	N	NMED		5.49E-04
Beryllium	7440-41-7	mg/kg	0.33	J			313,000	N	2,580	N	NMED	1.05E-11	1.28E-04
Cadmium	7440-43-9	mg/kg	0.4				417,000	N	1,110	N	NMED	9.59E-12	3.60E-04
Calcium	7440-70-2	mg/kg	2,800				NS	NS	32,400,000	N	NMED		8.64E-05
Chromium (Total) (4)	7440-47-3	mg/kg	14				505	N	314,000	N	NMED	2.77E-07	4.46E-05
Cobalt	7440-48-4	mg/kg	5.2				83,400	N	388	N	NMED	6.24E-10	1.34E-02
Copper	7440-50-8	mg/kg	60				NS	NS	51,900	N	NMED		1.16E-03
Iron	7439-89-6	mg/kg	10,000				NS	NS	908,000	N	NMED		1.10E-02
Lead	7439-92-1	mg/kg	13				NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	8,600				NS	NS	5,680,000	N	NMED		1.51E-03
Manganese	7439-96-5	mg/kg	340				NS	NS	160,000	N	NMED		2.13E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.02	J			NS	NS	112	N	NMED		1.79E-04
Nickel	7440-02-0	mg/kg	8.6				2,890,000	N	25,700	N	NMED	2.98E-11	3.35E-04
Potassium	7440-09-7	mg/kg	940				NS	NS	76,200,000	N	NMED		1.23E-05
Selenium	7782-49-2	mg/kg	0.68				NS	NS	6,490	N	NMED		1.05E-04
Silver	7440-22-4	mg/kg	0.099	J			NS	NS	6,490	N	NMED		1.53E-05
Sodium	7440-23-5	mg/kg	190	J			NS	NS	37,300,000	N	NMED		5.09E-06
Thallium	7440-28-0	mg/kg	0.046	J			NS	NS	13	N	NMED		3.54E-03
Vanadium	7440-62-2	mg/kg	20				NS	NS	6,530	N	NMED		3.06E-03
Zinc	7440-66-6	mg/kg	36				NS	NS	38,900	N	NMED		9.25E-04

TABLE D1-AO25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AO25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.32	U			NS	NS	63	N	NMED		
Nitrate	14797-55-8	mg/kg	4.3	J			NS	NS	2,080,000	N	NMED		2.07E-06
Perchlorate	14797-73-0	mg/kg	0.0018	UJ			NS	NS	908	N	NMED		
										Cumulative Risk/Hazard		**6E-07**	**0.06**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of Quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper Tolerance Limit

TABLE D1-AO25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AO25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.002	UJ			659	N	10,600	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.002	U			NS	NS	13,600	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.002	U			197	N	7,080	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.002	U			4,300	N	2	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.002	U			1,820	N	70,800	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.002	U			NS	NS	424	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.002	U			781	N	130	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.002	U			NS	NS	283	N	NMED[C]			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0049	U			8	N	6	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.002	U			8,540	N	79	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.002	U			NS	NS	492	N	NMED[C]			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0049	U			6	N	8	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.002	UJ			16	N	140	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.002	U			NS	NS	2,500	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.002	U			195	N	54	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.002	U			415	N	25	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.002	U			NS	NS	422	N	NMED[C]			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.002	U			45,900	N	24,800	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.002	UJ			NS	NS	7,080	N	NMED[C]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.002	U			45,900	N	24,800	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.002	U			415	N	25	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.003	U			NS	NS	90,700	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.002	U			NS	NS	7,080	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.002	U			NS	NS	599	N	NMED[C]			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.002	U			NS	NS	7,080	N	NMED[C]			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.002	U			NS	NS	20,400	N	NMED[C]			
Acetone	67-64-1	mg/kg	0.15				NS	NS	242,000	N	NMED		6.20E-07	
Benzene	71-43-2	mg/kg	0.002	U			423	N	142	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.002	U			NS	NS	538	N	NMED[C]			
Bromochloromethane	74-97-5	mg/kg	0.002	U			NS	NS	296	N	NMED[C]			
Bromodichloromethane	75-27-4	mg/kg	0.002	U			143	N	7,080	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.002	UJ			23,700	N	5,380	N	NMED			
Bromomethane	74-83-9	mg/kg	0.002	U			NS	NS	18	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.002	U			NS	NS	1,620	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.002	U			252	N	202	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.002	UJ			NS	NS	412	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.002	U			NS	NS	16,600	N	NMED			
Chloroform	67-66-3	mg/kg	0.002	U			134	N	391	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0049	U			956	N	235	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.002	U			NS	NS	708	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.002	U			781	N	130	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.002	UJ			340	N	5,380	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.002	U			NS	NS	54	N	NMED			

TABLE D1-AO25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AO25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Dichlorodifluoromethane	75-71-8	mg/kg	0.002	U			NS	NS	161	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.002	UJ			1,770	N	5,800	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.002	U			2,400	N	269	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.002	U			NS	NS	2,740	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0049	UJ			NS	NS	696	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.002	U			24,200	N	33,100	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.0099	U			89,600	N	1,210	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.002	U			NS	NS	17,700	N	NMED[C]			
n-Propylbenzene	103-65-1	mg/kg	0.002	U			NS	NS	6,730	N	NMED[C]			
Naphthalene	91-20-3	mg/kg	0.002	U			633	N	159	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0025	UJ			NS	NS	736	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.002	U			NS	NS	2,740	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.002	U			NS	NS	35,400	N	NMED[C]			
Styrene	100-42-5	mg/kg	0.002	UJ			NS	NS	10,200	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.002	U			NS	NS	35,400	N	NMED[C]			
Tetrachloroethene	127-18-4	mg/kg	0.002	UJ			7,910	N	120	N	NMED			
Toluene	108-88-3	mg/kg	0.002	U			NS	NS	14,000	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.002	U			NS	NS	206	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.002	U			781	N	130	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.002	U			5,370	N	7	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.002	U			NS	NS	1,130	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.002	U			161	N	162	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	U			8,540	N	79	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	U			NS	NS	2,500	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	U			45,900	N	24,800	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	U			45,900	N	24,800	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	U			NS	NS	26,900	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	UJ			17,000	N	269	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	UJ			NS	NS	807	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	UJ			NS	NS	5,380	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	UJ			NS	NS	538	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	UJ			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	UJ			165	N	81	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	UJ			NS	NS	28,300	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.17	UJ			NS	NS	1,770	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.17	UJ			NS	NS	1,000	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	UJ			NS	NS	13,500	N	NMED[C]			
2-Nitroaniline	88-74-4	mg/kg	0.17	UJ			NS	NS	2,690	N	NMED[C]			
2-Nitrophenol	88-75-5	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	UJ			410	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.17	UJ			135	N	1,080	N	NMED[SC]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	UJ			NS	NS	22	N	NMED			

TABLE D1-AO25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AO25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	UJ			NS	NS	26,900	N	NMED[C]			
4-Chloroaniline	106-47-8	mg/kg	0.17	UJ			14	N	135	N	NMED[C]			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.17	UJ			135	N	1,080	N	NMED[C]			
4-Nitrophenol	100-02-7	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.17	UJ			NS	NS	15,100	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.17	UJ			NS	NS	7,530	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.17	UJ			NS	NS	75,300	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.17	UJ			240	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.13	UJ			173	N	15	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	UJ			240	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	UJ			NS	NS	7,530	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	UJ			2,310	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.17	UJ			NS	NS	1,080,000	N	NMED[C]			
Benzyl Alcohol	100-51-6	mg/kg	0.17	UJ			NS	NS	26,900	N	NMED[C]			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	UJ			NS	NS	807	N	NMED[C]			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	UJ			2	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	UJ			3,540	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	UJ			13,400	N	5,380	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.17	UJ			1,420	N	53,800	N	NMED[C]			
Carbazole	86-74-8	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.17	UJ			23,100	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.17	UJ			NS	NS	26,900	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.17	UJ			NS	NS	2,690	N	NMED[C]			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	UJ			24	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.17	UJ			NS	NS	269	N	NMED[C]			
Diethylphthalate	84-66-2	mg/kg	0.17	UJ			NS	NS	215,000	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.17	UJ			NS	NS	269,000	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.17	UJ			NS	NS	10,000	N	NMED			
Fluorene	86-73-7	mg/kg	0.17	UJ			NS	NS	10,000	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.17	UJ			117	N	215	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	UJ			2,400	N	269	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.17	UJ			4,670	N	188	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	UJ			240	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.17	UJ			198,000	N	53,700	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	UJ			0.38	N	NA	N	NMED[C]			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.02	UJ			4	N	2	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	UJ			37,900	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.17	UJ			633	N	159	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.17	UJ			1,350	N	353	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.17	UJ			346	N	989	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.17	UJ			NS	NS	8,070	N	NMED			
Phenol	108-95-2	mg/kg	0.17	UJ			NS	NS	77,400	N	NMED			
Pyrene	129-00-0	mg/kg	0.17	UJ			NS	NS	7,530	N	NMED			

TABLE D1-AO25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AO25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	8,070	N	NMED[C]			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	27	N	NMED[C]			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			626	N	2,420	N	NMED[C]			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.019	U			2,440	N	17	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.019	U			55	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.0094	U			58	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.0094	U			85	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.0094	U			85	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.0094	U			85	N	5	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.0094	U			85	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (3)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	8.5E-08	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000027	J	0.000009	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	8.9E-08	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.0000011	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000012	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.0000001	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	9.8E-08	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	9.3E-08	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	8.9E-08	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	9.9E-08	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000013	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	9.3E-08	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.0000001	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000013	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000018	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	7.7E-08	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.0000000027				0.00172	N	0.000226	N	NMED	1.57E-11	1.19E-05	

TABLE D1-AO25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AO25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	20,000	J			NS	NS	41,400	N	NMED		4.83E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	U			NS	NS	142	N	NMED			
Arsenic	7440-38-2	mg/kg	1.1				216	N	41	N	NMED	5.09E-08	2.67E-02	
Barium	7440-39-3	mg/kg	140				NS	NS	4,390	N	NMED		3.19E-02	
Beryllium	7440-41-7	mg/kg	0.33	J			2,710	N	148	N	NMED	1.22E-09	2.23E-03	
Cadmium	7440-43-9	mg/kg	0.4				3,610	N	72	N	NMED	1.11E-09	5.55E-03	
Calcium	7440-70-2	mg/kg	2,800				NS	NS	8,850,000	N	NMED		3.16E-04	
Chromium (Total) (4)	7440-47-3	mg/kg	14				468	N	134	N	NMED	2.99E-07	1.04E-01	GI, Blood
Cobalt	7440-48-4	mg/kg	5.2				722	N	37	N	NMED	7.20E-08	1.42E-01	Endocrine
Copper	7440-50-8	mg/kg	60				NS	NS	14,200	N	NMED		4.23E-03	
Iron	7439-89-6	mg/kg	10,000				NS	NS	248,000	N	NMED		4.03E-02	
Lead	7439-92-1	mg/kg	13				NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	8,600				NS	NS	1,550,000	N	NMED		5.55E-03	
Manganese	7439-96-5	mg/kg	340				NS	NS	464	N	NMED		7.33E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.02	J			NS	NS	21	N	NMED		9.66E-04	
Nickel	7440-02-0	mg/kg	8.6				20,500	N	753	N	NMED	4.20E-09	1.14E-02	
Potassium	7440-09-7	mg/kg	940				NS	NS	20,800,000	N	NMED		4.52E-05	
Selenium	7782-49-2	mg/kg	0.68				NS	NS	1,750	N	NMED		3.89E-04	
Silver	7440-22-4	mg/kg	0.099	J			NS	NS	1,770	N	NMED		5.59E-05	
Sodium	7440-23-5	mg/kg	190	J			NS	NS	10,200,000	N	NMED		1.86E-05	
Thallium	7440-28-0	mg/kg	0.046	J			NS	NS	4	N	NMED		1.30E-02	
Vanadium	7440-62-2	mg/kg	20				NS	NS	614	N	NMED		3.26E-02	
Zinc	7440-66-6	mg/kg	36				NS	NS	106,000	N	NMED		3.40E-04	

TABLE D1-AO25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AO25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.32	U			NS	NS	12	N	NMED			
Nitrate	14797-55-8	mg/kg	4.3	J			NS	NS	566,000	N	NMED		7.60E-06	
Perchlorate	14797-73-0	mg/kg	0.0018	UJ			NS	NS	248	N	NMED			
										Cumulative Risk/Hazard		**4E-07**	**1.6**	
										Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	1.2
Endocrine	0.14
GI	0.10
Blood	0.10
All Others	0.18

Notes:

[s] = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update).

2) NMED[C] = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

3) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

4) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper tolerance limit

TABLE D1-AP8-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AP8
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0025	U			28.1	N	2,350	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0025	U			NS	NS	14,400	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0025	U			7.98	N	1,560	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0025	U			18.8	N	2.61	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0025	U			78.6	N	15,600	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0025	U			NS	NS	440	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0025	U			29.3	N	141	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0025	U			NS	NS	63	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0063	U			0.051	N	7.09	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0025	U			240	N	82.9	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0025	U			NS	NS	300	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0063	U			0.0858	N	5.88	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0025	U			0.672	N	135	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0025	U			NS	NS	2,150	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0025	U			8.32	N	55.6	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0025	U			17.8	N	29	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0025	U			NS	NS	270	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0025	U			1,290	N	5,480	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0025	U			NS	NS	1,600	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0025	U			1,290	N	5,480	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0025	U			17.8	N	29	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0038	U			NS	NS	37,400	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0025	U			NS	NS	1,560	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0025	U			NS	NS	200	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0025	U			NS	NS	1,600	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0025	U			NS	NS	5,810	N	RSL		
Acetone	67-64-1	mg/kg	0.077				NS	NS	66,300	N	NMED		1.16E-06
Benzene	71-43-2	mg/kg	0.0025	U			17.8	N	114	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0025	U			NS	NS	290	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0025	U			NS	NS	150	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0025	U			6.19	N	1,560	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0025	U			674	N	1,230	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0025	U			NS	NS	17.7	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0025	U			NS	NS	1,550	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0025	U			10.7	N	144	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0025	U			NS	NS	378	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0025	U			NS	NS	19,000	N	NMED		
Chloroform	67-66-3	mg/kg	0.0025	U			5.9	N	306	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0063	U			41.1	N	268	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0025	U			NS	NS	156	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0025	U			29.3	N	141	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0025	U			13.9	N	1,230	N	NMED		
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0025	U			NS	NS	57.9	N	NMED		

TABLE D1-AP8-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AP8
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dichlorodifluoromethane	75-71-8	mg/kg	0.0025	U			NS	NS	182	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0025	U			75.1	N	3,930	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0025	U			68.3	N	61.6	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0025	U			NS	NS	2,360	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0063	U			NS	NS	764	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0025	U			975	N	37,800	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.013	U			766	N	409	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0025	U			NS	NS	3,900	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0025	U			NS	NS	3,800	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0025	U			22.6	N	162	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0031	U			NS	NS	805	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0025	U			NS	NS	2,360	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0025	U			NS	NS	7,800	N	RSL		
Styrene	100-42-5	mg/kg	0.0025	U			NS	NS	7,260	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0025	U			NS	NS	7,800	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0025	U			337	N	111	N	NMED		
Toluene	108-88-3	mg/kg	0.0025	U			NS	NS	5,230	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0025	U			NS	NS	210	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0025	U			29.3	N	141	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0025	U			15.5	N	6.77	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0025	U			NS	NS	1,230	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0025	U			0.742	N	113	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	U			240	N	82.9	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	U			NS	NS	2,150	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	U			1,290	N	5,480	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	U			1,290	N	5,480	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	U			NS	NS	6,160	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	U			484	N	61.6	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	U			NS	NS	185	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	U			NS	NS	1,230	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	U			NS	NS	123	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	U			17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	U			3.56	N	18.5	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	U			NS	NS	6,260	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.17	U			NS	NS	391	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.17	U			NS	NS	232	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	U			NS	NS	3,200	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.17	U			NS	NS	630	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.17	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	U			11.8	N	NS	NS	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.17	U			270	N	250	N	RSL[S]		
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	U			NS	NS	4.93	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	U			NS	NS	NS	NS	NS		

TABLE D1-AP8-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AP8
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	U			NS	NS	6,300	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.17	U			27	N	32	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.17	U			270	N	250	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.17	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.17	U			NS	NS	3,480	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.17	U			NS	NS	1,740	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.17	U			NS	NS	17,400	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.17	U			1.53	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.13	U			1.12	N	17.4	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	U			1.53	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	U			NS	NS	1,740	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	U			15.3	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.17	U			NS	NS	250,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.17	U			NS	NS	6,300	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	U			NS	NS	190	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	U			3.11	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	U			99.3	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	U			380	N	1,230	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.17	U			2,900	N	13,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.17	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.17	U			153	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.17	U			NS	NS	6,160	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.17	U			NS	NS	630	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	U			0.153	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.17	U			NS	NS	78	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.17	U			NS	NS	49,300	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.17	U			NS	NS	61,600	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.17	U			NS	NS	2,320	N	NMED		
Fluorene	86-73-7	mg/kg	0.17	U			NS	NS	2,320	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.17	U			3.33	N	49.3	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	U			68.3	N	61.6	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.17	U			133	N	43.1	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	U			1.53	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.17	U			5,610	N	12,300	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	U			0.78	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	U			0.0234	N	0.493	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	U			1,090	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.17	U			22.6	N	162	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.17	U			60.4	N	131	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.17	U			9.85	N	234	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.17	U			NS	NS	1,740	N	NMED		
Phenol	108-95-2	mg/kg	0.17	U			NS	NS	18,500	N	NMED		
Pyrene	129-00-0	mg/kg	0.17	U			NS	NS	1,740	N	NMED		

TABLE D1-AP8-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AP8
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U			NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U			83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U			NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U			60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U			313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			1,300	N	570	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.021	U			69.6	N	3.98	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.021	U			1.81	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.01	U			1.86	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.01	U			2.43	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.01	U			2.43	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.01	U			2.43	N	1.14	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.01	U			2.43	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.0000011	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000051	J	0.000017	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000043	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.0000024	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000022	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.00000015	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000091	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.00000015	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000095	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.00000018	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000016	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000012	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.00000011	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.00000036	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000011	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg	0.000000044	J	0.00000044	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.00000009	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.000000049				0.000049	N	0.0000506	N	NMED	1.00E-08	9.70E-04

TABLE D1-AP8-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AP8
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	7,700				NS	NS	78,000	N	NMED		9.87E-02
Antimony	7440-36-0	mg/kg	0.15	U			NS	NS	31.3	N	NMED		
Arsenic	7440-38-2	mg/kg	1.4				7.07	N	13	N	NMED	1.98E-06	1.08E-01
Barium	7440-39-3	mg/kg	120	J			NS	NS	15,600	N	NMED		7.69E-03
Beryllium	7440-41-7	mg/kg	0.39	J			64,400	N	156	N	NMED	6.06E-11	2.50E-03
Cadmium	7440-43-9	mg/kg	0.15				85,900	N	70.5	N	NMED	1.75E-11	2.13E-03
Calcium	7440-70-2	mg/kg	14,000				NS	NS	13,000,000	N	NMED		1.08E-03
Chromium (Total) (3)	7440-47-3	mg/kg	5.4				96.6	N	45,200	N	NMED	5.59E-07	1.19E-04
Cobalt	7440-48-4	mg/kg	2.8				17,200	N	23.4	N	NMED	1.63E-09	1.20E-01
Copper	7440-50-8	mg/kg	16				NS	NS	3,130	N	NMED		5.11E-03
Iron	7439-89-6	mg/kg	6,700				NS	NS	54,800	N	NMED		1.22E-01
Lead	7439-92-1	mg/kg	5.8				NS	NS	200	N	RSL		
Magnesium	7439-95-4	mg/kg	2,700				NS	NS	15,600,000	N	NMED		1.73E-04
Manganese	7439-96-5	mg/kg	220				NS	NS	10,500	N	NMED		2.10E-02
Mercury (Elemental)	7439-97-6	mg/kg	0.037	J			NS	NS	23.8	N	NMED		1.55E-03
Nickel	7440-02-0	mg/kg	5.2				595,000	N	1,560	N	NMED	8.74E-11	3.33E-03
Potassium	7440-09-7	mg/kg	1,300				NS	NS	15,600,000	N	NMED		8.33E-05
Selenium	7782-49-2	mg/kg	0.8				NS	NS	391	N	NMED		2.05E-03
Silver	7440-22-4	mg/kg	0.045	J			NS	NS	391	N	NMED		1.15E-04
Sodium	7440-23-5	mg/kg	54				NS	NS	7,820,000	N	NMED		6.91E-06
Thallium	7440-28-0	mg/kg	0.19				NS	NS	0.782	N	NMED		2.43E-01
Vanadium	7440-62-2	mg/kg	9.3				NS	NS	394	N	NMED		2.36E-02
Zinc	7440-66-6	mg/kg	21				NS	NS	23,500	N	NMED		8.94E-04

TABLE D1-AP8-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AP8
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.31	U			NS	NS	11.2	N	NMED		
Nitrate	14797-55-8	mg/kg	2.7	J			NS	NS	125,000	N	NMED		2.16E-05
Perchlorate	14797-73-0	mg/kg	0.002	U			NS	NS	54.8	N	NMED		
										Cumulative Risk/Hazard		**3E-06**	**0.8**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of Quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper Tolerance Limit

TABLE D1-AP8-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP8
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0025	U			137	N	39,400	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0025	U			NS	NS	72,500	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0025	U			39	N	26,000	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0025	U			92	N	12	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0025	U			383	N	260,000	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0025	U			NS	NS	2,260	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0025	U			146	N	695	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0025	U			NS	NS	930	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0063	U			1	N	34	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0025	U			1,250	N	423	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0025	U			NS	NS	1,800	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0063	U			1	N	41	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0025	U			3	N	738	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0025	U			NS	NS	13,000	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0025	U			41	N	286	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0025	U			87	N	137	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0025	U			NS	NS	1,500	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0025	U			6,730	N	90,800	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0025	U			NS	NS	23,000	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0025	U			6,730	N	90,800	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0025	U			87	N	137	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0038	U			NS	NS	411,000	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0025	U			NS	NS	26,000	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0025	U			NS	NS	1,300	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0025	U			NS	NS	23,000	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0025	U			NS	NS	81,600	N	RSL		
Acetone	67-64-1	mg/kg	0.077				NS	NS	960,000	N	NMED		8.02E-08
Benzene	71-43-2	mg/kg	0.0025	U			87	N	729	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0025	U			NS	NS	1,800	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0025	U			NS	NS	630	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0025	U			30	N	26,000	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0025	U			1,760	N	18,300	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0025	U			NS	NS	95	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0025	U			NS	NS	8,540	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0025	U			53	N	1,020	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0025	U			NS	NS	2,160	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0025	U			NS	NS	89,500	N	NMED		
Chloroform	67-66-3	mg/kg	0.0025	U			29	N	2,000	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0063	U			201	N	1,260	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0025	U			NS	NS	2,600	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0025	U			146	N	695	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0025	U			67	N	18,300	N	NMED		

TABLE D1-AP8-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP8
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0025	U			NS	NS	288	N	NMED		
Dichlorodifluoromethane	75-71-8	mg/kg	0.0025	U			NS	NS	865	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0025	U			29,000	N	368	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0025	U			52	N	916	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0025	U			NS	NS	14,200	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0063	U			NS	NS	3,730	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0025	U			4,820	N	178,000	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.013	U			14,400	N	5,130	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0025	U			NS	NS	58,000	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0025	U			NS	NS	24,000	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0025	U			108	N	843	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0031	U			NS	NS	3,940	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0025	U			NS	NS	14,200	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0025	U			NS	NS	120,000	N	RSL		
Styrene	100-42-5	mg/kg	0.0025	U			NS	NS	51,300	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0025	U			NS	NS	120,000	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0025	U			1,650	N	629	N	NMED		
Toluene	108-88-3	mg/kg	0.0025	U			NS	NS	61,300	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0025	U			NS	NS	1,100	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0025	U			146	N	695	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0025	U			112	N	37	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0025	U			NS	NS	6,030	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0025	U			28	N	46	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	U			1,250	N	423	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	U			NS	NS	13,000	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	U			6,730	N	90,800	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	U			6,730	N	90,800	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	U			NS	NS	91,600	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	U			2,330	N	916	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	U			NS	NS	2,750	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	U			NS	NS	18,300	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	U			NS	NS	1,830	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	U			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	U			17	N	276	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	U			NS	NS	104,000	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.17	U			NS	NS	6,490	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.17	U			NS	NS	3,370	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	U			NS	NS	41,000	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.17	U			NS	NS	8,000	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.17	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	U			NS	NS	410	N	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.17	U			1,100	N	3,300	N	RSL[S]		

TABLE D1-AP8-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP8
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	U			NS	NS	73	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	U			NS	NS	NS	NS	NS		
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	U			NS	NS	82,000	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.17	U			110	N	410	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.17	U			1,100	N	3,300	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.17	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.17	U			NS	NS	50,500	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.17	U			NS	NS	25,300	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.17	U			NS	NS	253,000	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.17	U			32	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.13	U			24	N	251	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	U			32	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	U			NS	NS	25,300	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	U			323	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.17	U			NS	NS	3,300,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.17	U			NS	NS	82,000	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	U			NS	NS	2,500	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	U			16	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	U			519	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	U			1,830	N	18,300	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.17	U			12,000	N	160,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.17	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.17	U			3,230	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.17	U			NS	NS	91,600	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.17	U			NS	NS	8,200	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	U			3	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.17	U			NS	NS	1,200	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.17	U			NS	NS	733,000	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.17	U			NS	NS	916,000	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.17	U			NS	NS	33,700	N	NMED		
Fluorene	86-73-7	mg/kg	0.17	U			NS	NS	33,700	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.17	U			16	N	733	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	U			52	N	916	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.17	U			641	N	641	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	U			32	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.17	U			27,000	N	183,000	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	U			3	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	U			1	N	7	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	U			5,240	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.17	U			108	N	843	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.17	U			293	N	1,540	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.17	U			45	N	3,180	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.17	U			NS	NS	27,500	N	NMED		
Phenol	108-95-2	mg/kg	0.17	U			NS	NS	275,000	N	NMED		
Pyrene	129-00-0	mg/kg	0.17	U			NS	NS	25,300	N	NMED		

TABLE D1-AP8-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP8
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U			NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U			428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U			NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U			293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U			1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			5,300	N	7,400	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.021	U			304	N	57	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.021	U			9	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.01	U			9	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.01	U			11	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.01	U			11	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.01	U			11	N	16	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.01	U			11	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.0000011	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000051	J	0.000017	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000043	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.0000024	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000022	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.00000015	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000091	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.00000015	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000095	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.00000018	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000016	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000012	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.00000011	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.00000036	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000011	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg	0.000000044	J	0.00000044	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.00000009	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.000000049				0.000238	N	0.000808	N	NMED	2.06E-09	6.08E-05

TABLE D1-AP8-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP8
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	7,700				NS	NS	1,290,000	N	NMED		5.97E-03
Antimony	7440-36-0	mg/kg	0.15	U			NS	NS	519	N	NMED		
Arsenic	7440-38-2	mg/kg	1.4				36	N	208	N	NMED		6.73E-03
Barium	7440-39-3	mg/kg	120	J			NS	NS	255,000	N	NMED		4.71E-04
Beryllium	7440-41-7	mg/kg	0.39	J			313,000	N	2,580	N	NMED		1.51E-04
Cadmium	7440-43-9	mg/kg	0.15				417,000	N	1,110	N	NMED		1.35E-04
Calcium	7440-70-2	mg/kg	14,000				NS	NS	32,400,000	N	NMED		4.32E-04
Chromium (Total) (3)	7440-47-3	mg/kg	5.4				505	N	314,000	N	NMED		1.72E-05
Cobalt	7440-48-4	mg/kg	2.8				83,400	N	388	N	NMED		7.22E-03
Copper	7440-50-8	mg/kg	16				NS	NS	51,900	N	NMED		3.08E-04
Iron	7439-89-6	mg/kg	6,700				NS	NS	908,000	N	NMED		7.38E-03
Lead	7439-92-1	mg/kg	5.8				NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	2,700				NS	NS	5,680,000	N	NMED		4.75E-04
Manganese	7439-96-5	mg/kg	220				NS	NS	160,000	N	NMED		1.38E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.037	J			NS	NS	112	N	NMED		3.30E-04
Nickel	7440-02-0	mg/kg	5.2				2,890,000	N	25,700	N	NMED		2.02E-04
Potassium	7440-09-7	mg/kg	1,300				NS	NS	76,200,000	N	NMED		1.71E-05
Selenium	7782-49-2	mg/kg	0.8				NS	NS	6,490	N	NMED		1.23E-04
Silver	7440-22-4	mg/kg	0.045	J			NS	NS	6,490	N	NMED		6.93E-06
Sodium	7440-23-5	mg/kg	54				NS	NS	37,300,000	N	NMED		1.45E-06
Thallium	7440-28-0	mg/kg	0.19				NS	NS	13	N	NMED		1.46E-02
Vanadium	7440-62-2	mg/kg	9.3				NS	NS	6,530	N	NMED		1.42E-03
Zinc	7440-66-6	mg/kg	21				NS	NS	38,900	N	NMED		5.40E-04
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.31	U			NS	NS	63	N	NMED		
Nitrate	14797-55-8	mg/kg	2.7	J			NS	NS	2,080,000	N	NMED		1.30E-06
Perchlorate	14797-73-0	mg/kg	0.002	U			NS	NS	908	N	NMED		
										Cumulative Risk/Hazard		**2E-09**	**0.05**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

ηg/kg = nanograms per kilogram
CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of Quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper Tolerance Limit

TABLE D1-AP8-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP8
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0025	U			659	N	10,600	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0025	U			NS	NS	13,600	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0025	U			197	N	7,080	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0025	U			4,300	N	2	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0025	U			1,820	N	70,800	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0025	U			NS	NS	424	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0025	U			781	N	130	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0025	U			NS	NS	283	N	NMED[C]		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0063	U			8	N	6	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0025	U			8,540	N	79	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0025	U			NS	NS	492	N	NMED[C]		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0063	U			6	N	8	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0025	U			16	N	140	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0025	U			NS	NS	2,500	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0025	U			195	N	54	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0025	U			415	N	25	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0025	U			NS	NS	422	N	NMED[C]		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0025	U			45,900	N	24,800	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0025	U			NS	NS	7,080	N	NMED[C]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0025	U			45,900	N	24,800	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0025	U			415	N	25	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0038	U			NS	NS	90,700	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0025	U			NS	NS	7,080	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0025	U			NS	NS	599	N	NMED[C]		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0025	U			NS	NS	7,080	N	NMED[C]		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0025	U			NS	NS	20,400	N	NMED[C]		
Acetone	67-64-1	mg/kg	0.077				NS	NS	242,000	N	NMED		3.18E-07
Benzene	71-43-2	mg/kg	0.0025	U			423	N	142	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0025	U			NS	NS	538	N	NMED[C]		
Bromochloromethane	74-97-5	mg/kg	0.0025	U			NS	NS	296	N	NMED[C]		
Bromodichloromethane	75-27-4	mg/kg	0.0025	U			143	N	7,080	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0025	U			23,700	N	5,380	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0025	U			NS	NS	18	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0025	U			NS	NS	1,620	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0025	U			252	N	202	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0025	U			NS	NS	412	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0025	U			NS	NS	16,600	N	NMED		
Chloroform	67-66-3	mg/kg	0.0025	U			134	N	391	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0063	U			956	N	235	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0025	U			NS	NS	708	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0025	U			781	N	130	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0025	U			340	N	5,380	N	NMED		
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0025	U			NS	NS	54	N	NMED		

TABLE D1-AP8-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP8
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dichlorodifluoromethane	75-71-8	mg/kg	0.0025	U			NS	NS	161	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0025	U			1,770	N	5,800	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0025	U			2,400	N	269	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0025	U			NS	NS	2,740	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0063	U			NS	NS	696	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0025	U			24,200	N	33,100	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.013	U			89,600	N	1,210	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0025	U			NS	NS	17,700	N	NMED[C]		
n-Propylbenzene	103-65-1	mg/kg	0.0025	U			NS	NS	6,730	N	NMED[C]		
Naphthalene	91-20-3	mg/kg	0.0025	U			633	N	159	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0031	U			NS	NS	736	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0025	U			NS	NS	2,740	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0025	U			NS	NS	35,400	N	NMED[C]		
Styrene	100-42-5	mg/kg	0.0025	U			NS	NS	10,200	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0025	U			NS	NS	35,400	N	NMED[C]		
Tetrachloroethene	127-18-4	mg/kg	0.0025	U			7,910	N	120	N	NMED		
Toluene	108-88-3	mg/kg	0.0025	U			NS	NS	14,000	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0025	U			NS	NS	206	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0025	U			781	N	130	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0025	U			5,370	N	7	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0025	U			NS	NS	1,130	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0025	U			161	N	162	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	U			8,540	N	79	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	U			NS	NS	2,500	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	U			45,900	N	24,800	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	U			45,900	N	24,800	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	U			NS	NS	26,900	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	U			17,000	N	269	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	U			NS	NS	807	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	U			NS	NS	5,380	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	U			NS	NS	538	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	U			600	N	536	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	U			165	N	81	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	U			NS	NS	28,300	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.17	U			NS	NS	1,770	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.17	U			NS	NS	1,000	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	U			NS	NS	13,500	N	NMED[C]		
2-Nitroaniline	88-74-4	mg/kg	0.17	U			NS	NS	2,690	N	NMED[C]		
2-Nitrophenol	88-75-5	mg/kg	0.17	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	U			410	N	NS	NS	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.17	U			135	N	1,080	N	NMED[SC]		
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	U			NS	NS	22	N	NMED		

TABLE D1-AP8-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP8
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	U			NS	NS	NS	NS	NS		
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	U			NS	NS	26,900	N	NMED[C]		
4-Chloroaniline	106-47-8	mg/kg	0.17	U			14	N	135	N	NMED[C]		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.17	U			135	N	1,080	N	NMED[C]		
4-Nitrophenol	100-02-7	mg/kg	0.17	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.17	U			NS	NS	15,100	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.17	U			NS	NS	7,530	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.17	U			NS	NS	75,300	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.17	U			240	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.13	U			173	N	15	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	U			240	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	U			NS	NS	7,530	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	U			2,310	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.17	U			NS	NS	1,080,000	N	NMED[C]		
Benzyl Alcohol	100-51-6	mg/kg	0.17	U			NS	NS	26,900	N	NMED[C]		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	U			NS	NS	807	N	NMED[C]		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	U			2	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	U			3,540	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	U			13,400	N	5,380	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.17	U			1,420	N	53,800	N	NMED[C]		
Carbazole	86-74-8	mg/kg	0.17	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.17	U			23,100	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.17	U			NS	NS	26,900	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.17	U			NS	NS	2,690	N	NMED[C]		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	U			24	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.17	U			NS	NS	269	N	NMED[C]		
Diethylphthalate	84-66-2	mg/kg	0.17	U			NS	NS	215,000	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.17	U			NS	NS	269,000	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.17	U			NS	NS	10,000	N	NMED		
Fluorene	86-73-7	mg/kg	0.17	U			NS	NS	10,000	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.17	U			117	N	215	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	U			2,400	N	269	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.17	U			4,670	N	188	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	U			240	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.17	U			198,000	N	53,700	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	U			0.38	N	NA	N	NMED[C]		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	U			4	N	2	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	U			37,900	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.17	U			633	N	159	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.17	U			1,350	N	353	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.17	U			346	N	989	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.17	U			NS	NS	8,070	N	NMED		
Phenol	108-95-2	mg/kg	0.17	U			NS	NS	77,400	N	NMED		
Pyrene	129-00-0	mg/kg	0.17	U			NS	NS	7,530	N	NMED		

TABLE D1-AP8-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP8
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	8,070	N	NMED[C]		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	27	N	NMED[C]		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			7,500	N	161	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			600	N	536	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			165	N	81	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	17	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			1,130	N	319	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	27	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U			NS	NS	17	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			11,800	N	1,080	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U			2,960	N	1,350	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U			NS	NS	706	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U			1,350	N	353	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U			11,100	N	27	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NS	NS	17,400	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			626	N	2,420	N	NMED[C]		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.021	U			2,440	N	17	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.021	U			55	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.01	U			58	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.01	U			85	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.01	U			85	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.01	U			85	N	5	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.01	U			85	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (3)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.0000011	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000051	J	0.000017	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000043	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.0000024	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000022	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.00000015	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000091	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.00000015	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000095	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.00000018	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000016	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000012	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.00000011	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.00000036	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000011	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg	0.000000044	J	0.00000044	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.00000009	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.000000049				0.00172	N	0.000226	N	NMED	2.85E-10	2.17E-04

TABLE D1-AP8-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP8
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	7,700				NS	NS	41,400	N	NMED		1.86E-01
Antimony	7440-36-0	mg/kg	0.15	U			NS	NS	142	N	NMED		
Arsenic	7440-38-2	mg/kg	1.4				216	N	41	N	NMED	6.48E-08	3.40E-02
Barium	7440-39-3	mg/kg	120	J			NS	NS	4,390	N	NMED		2.73E-02
Beryllium	7440-41-7	mg/kg	0.39	J			2,710	N	148	N	NMED	1.44E-09	2.64E-03
Cadmium	7440-43-9	mg/kg	0.15				3,610	N	72	N	NMED	4.16E-10	2.08E-03
Calcium	7440-70-2	mg/kg	14,000				NS	NS	8,850,000	N	NMED		1.58E-03
Chromium (Total) (4)	7440-47-3	mg/kg	5.4				468	N	134	N	NMED	1.15E-07	4.03E-02
Cobalt	7440-48-4	mg/kg	2.8				722	N	37	N	NMED	3.88E-08	7.63E-02
Copper	7440-50-8	mg/kg	16				NS	NS	14,200	N	NMED		1.13E-03
Iron	7439-89-6	mg/kg	6,700				NS	NS	248,000	N	NMED		2.70E-02
Lead	7439-92-1	mg/kg	5.8				NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	2,700				NS	NS	1,550,000	N	NMED		1.74E-03
Manganese	7439-96-5	mg/kg	220				NS	NS	464	N	NMED		4.74E-01
Mercury (Elemental)	7439-97-6	mg/kg	0.037	J			NS	NS	21	N	NMED		1.79E-03
Nickel	7440-02-0	mg/kg	5.2				20,500	N	753	N	NMED	2.54E-09	6.91E-03
Potassium	7440-09-7	mg/kg	1,300				NS	NS	20,800,000	N	NMED		6.25E-05
Selenium	7782-49-2	mg/kg	0.8				NS	NS	1,750	N	NMED		4.57E-04
Silver	7440-22-4	mg/kg	0.045	J			NS	NS	1,770	N	NMED		2.54E-05
Sodium	7440-23-5	mg/kg	54				NS	NS	10,200,000	N	NMED		5.29E-06
Thallium	7440-28-0	mg/kg	0.19				NS	NS	4	N	NMED		5.37E-02
Vanadium	7440-62-2	mg/kg	9.3				NS	NS	614	N	NMED		1.51E-02
Zinc	7440-66-6	mg/kg	21				NS	NS	106,000	N	NMED		1.98E-04
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.31	U			NS	NS	12	N	NMED		
Nitrate	14797-55-8	mg/kg	2.7	J			NS	NS	566,000	N	NMED		4.77E-06
Perchlorate	14797-73-0	mg/kg	0.002	U			NS	NS	248	N	NMED		
										Cumulative Risk/Hazard		**2E-07**	**0.95**
										Exceeds Target Level		**N**	**N**

Notes:

[s] = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update).

2) NMED[C] = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

3) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

4) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service

DL = Detection limit

J = Estimated

LOD = Limit of detection

LOQ = Limit of quantitation

mg/kg = milligrams per kilogram

NS = No Standard

U = Nondetect

UJ = Estimated Nondetect

UTL = Upper tolerance limit

TABLE D1-AP9-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AP9
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0022	U			28.1	N	2,350	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0022	U			NS	NS	14,400	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0022	U			7.98	N	1,560	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0022	U			18.8	N	2.61	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0022	U			78.6	N	15,600	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0022	U			NS	NS	440	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0022	U			29.3	N	141	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0022	U			NS	NS	63	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0056	U			0.051	N	7.09	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0022	U			240	N	82.9	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0022	U			NS	NS	300	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0056	U			0.0858	N	5.88	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0022	U			0.672	N	135	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0022	U			NS	NS	2,150	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0022	U			8.32	N	55.6	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0022	U			17.8	N	29	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0022	U			NS	NS	270	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0022	U			1,290	N	5,480	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0022	U			NS	NS	1,600	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0022	U			1,290	N	5,480	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0022	U			17.8	N	29	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0034	U			NS	NS	37,400	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0022	U			NS	NS	1,560	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0022	U			NS	NS	200	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0022	U			NS	NS	1,600	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0022	U			NS	NS	5,810	N	RSL		
Acetone	67-64-1	mg/kg	0.042				NS	NS	66,300	N	NMED		6.33E-07
Benzene	71-43-2	mg/kg	0.0022	U			17.8	N	114	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0022	U			NS	NS	290	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0022	U			NS	NS	150	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0022	U			6.19	N	1,560	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0022	U			674	N	1,230	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0022	U			NS	NS	17.7	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0022	U			NS	NS	1,550	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0022	U			10.7	N	144	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0022	U			NS	NS	378	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0022	U			NS	NS	19,000	N	NMED		
Chloroform	67-66-3	mg/kg	0.0022	U			5.9	N	306	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0056	U			41.1	N	268	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0022	U			NS	NS	156	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0022	U			29.3	N	141	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0022	U			13.9	N	1,230	N	NMED		
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0022	U			NS	NS	57.9	N	NMED		

TABLE D1-AP9-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AP9
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dichlorodifluoromethane	75-71-8	mg/kg	0.0022	U			NS	NS	182	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0022	U			75.1	N	3,930	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0022	U			68.3	N	61.6	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0022	U			NS	NS	2,360	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0056	U			NS	NS	764	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0022	U			975	N	37,800	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.011	U			766	N	409	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0022	U			NS	NS	3,900	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0022	U			NS	NS	3,800	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0022	U			22.6	N	162	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0028	U			NS	NS	805	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0022	U			NS	NS	2,360	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0022	U			NS	NS	7,800	N	RSL		
Styrene	100-42-5	mg/kg	0.0022	U			NS	NS	7,260	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0022	U			NS	NS	7,800	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0022	U			337	N	111	N	NMED		
Toluene	108-88-3	mg/kg	0.0022	U			NS	NS	5,230	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0022	U			NS	NS	210	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0022	U			29.3	N	141	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0022	U			15.5	N	6.77	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0022	U			NS	NS	1,230	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0022	U			0.742	N	113	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.35	U			240	N	82.9	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.35	U			NS	NS	2,150	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.35	U			1,290	N	5,480	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.35	U			1,290	N	5,480	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.35	U			NS	NS	6,160	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.35	U			484	N	61.6	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.35	U			NS	NS	185	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.35	U			NS	NS	1,230	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.35	U			NS	NS	123	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.35	U			17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.35	U			3.56	N	18.5	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.35	U			NS	NS	6,260	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.35	U			NS	NS	391	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.35	U			NS	NS	232	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.35	U			NS	NS	3,200	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.35	U			NS	NS	630	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.35	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.35	U			11.8	N	NS	NS	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.35	U			270	N	250	N	RSL[S]		
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.35	U			NS	NS	4.93	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.35	U			NS	NS	NS	NS	NS		

TABLE D1-AP9-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AP9
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.35	U			NS	NS	6,300	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.35	U			27	N	32	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.35	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.35	U			270	N	250	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.35	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.35	U			NS	NS	3,480	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.35	U			NS	NS	1,740	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.35	U			NS	NS	17,400	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.35	U			1.53	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.28	U			1.12	N	17.4	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.35	U			1.53	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.35	U			NS	NS	1,740	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.35	U			15.3	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.35	U			NS	NS	250,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.35	U			NS	NS	6,300	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.35	U			NS	NS	190	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.35	U			3.11	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.35	U			99.3	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.35	U			380	N	1,230	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.35	U			2,900	N	13,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.35	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.35	U			153	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.35	U			NS	NS	6,160	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.35	U			NS	NS	630	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.28	U			0.153	Y	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.35	U			NS	NS	78	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.35	U			NS	NS	49,300	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.35	U			NS	NS	61,600	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.35	U			NS	NS	2,320	N	NMED		
Fluorene	86-73-7	mg/kg	0.35	U			NS	NS	2,320	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.35	U			3.33	N	49.3	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.35	U			68.3	N	61.6	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.35	U			133	N	43.1	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.35	U			1.53	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.35	U			5,610	N	12,300	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.35	U			0.78	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.042	U			0.0234	Y	0.493	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.35	U			1,090	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.35	U			22.6	N	162	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.35	U			60.4	N	131	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.35	U			9.85	N	234	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.35	U			NS	NS	1,740	N	NMED		
Phenol	108-95-2	mg/kg	0.35	U			NS	NS	18,500	N	NMED		
Pyrene	129-00-0	mg/kg	0.35	U			NS	NS	1,740	N	NMED		

TABLE D1-AP9-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AP9
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U			NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U			83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U			NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U			60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U			313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			1,300	N	570	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.021	U			69.6	N	3.98	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.021	U			1.81	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.011	U			1.86	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.011	U			2.43	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.011	U			2.43	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.011	U			2.43	N	1.14	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.011	U			2.43	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg	0.00000000066	J	0.0000022	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000189		0.000063	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg	0.000000017	J	0.0000017	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.000000075	J	0.0000075	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000029	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.00000015	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.0000002	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.00000014	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		UJ	0.00000036	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		UJ	0.00000018	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000028	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000011	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000082	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		UJ	0.0000004	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000006	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000023	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000052	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.00000011				0.000049	N	0.0000506	N	NMED	2.28E-08	2.20E-03

TABLE D1-AP9-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AP9
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	15,000				NS	NS	78,000	N	NMED		1.92E-01
Antimony	7440-36-0	mg/kg	0.15	U			NS	NS	31.3	N	NMED		
Arsenic	7440-38-2	mg/kg	1.8				7.07	N	13	N	NMED	2.55E-06	1.38E-01
Barium	7440-39-3	mg/kg	280	J			NS	NS	15,600	N	NMED		1.79E-02
Beryllium	7440-41-7	mg/kg	0.7	J			64,400	N	156	N	NMED	1.09E-10	4.49E-03
Cadmium	7440-43-9	mg/kg	0.44				85,900	N	70.5	N	NMED	5.12E-11	6.24E-03
Calcium	7440-70-2	mg/kg	18,000				NS	NS	13,000,000	N	NMED		1.38E-03
Chromium (Total) (3)	7440-47-3	mg/kg	10				96.6	N	45,200	N	NMED	1.04E-06	2.21E-04
Cobalt	7440-48-4	mg/kg	4.1				17,200	N	23.4	N	NMED	2.38E-09	1.75E-01
Copper	7440-50-8	mg/kg	50				NS	NS	3,130	N	NMED		1.60E-02
Iron	7439-89-6	mg/kg	11,000				NS	NS	54,800	N	NMED		2.01E-01
Lead	7439-92-1	mg/kg	13				NS	NS	200	N	RSL		
Magnesium	7439-95-4	mg/kg	5,000				NS	NS	15,600,000	N	NMED		3.21E-04
Manganese	7439-96-5	mg/kg	470				NS	NS	10,500	N	NMED		4.48E-02
Mercury (Elemental)	7439-97-6	mg/kg	0.048	J			NS	NS	23.8	N	NMED		2.02E-03
Nickel	7440-02-0	mg/kg	8.5				595,000	N	1,560	N	NMED	1.43E-10	5.45E-03
Potassium	7440-09-7	mg/kg	2,500				NS	NS	15,600,000	N	NMED		1.60E-04
Selenium	7782-49-2	mg/kg	1.2				NS	NS	391	N	NMED		3.07E-03
Silver	7440-22-4	mg/kg	0.084	J			NS	NS	391	N	NMED		2.15E-04
Sodium	7440-23-5	mg/kg	56				NS	NS	7,820,000	N	NMED		7.16E-06
Thallium	7440-28-0	mg/kg	0.083	J			NS	NS	0.782	N	NMED		1.06E-01
Vanadium	7440-62-2	mg/kg	14				NS	NS	394	N	NMED		3.55E-02
Zinc	7440-66-6	mg/kg	43				NS	NS	23,500	N	NMED		1.83E-03
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.33	U			NS	NS	11.2	N	NMED		
Nitrate	14797-55-8	mg/kg	4.1	J			NS	NS	125,000	N	NMED		3.28E-05
Perchlorate	14797-73-0	mg/kg	0.0021	U			NS	NS	54.8	N	NMED		
										Cumulative Risk/Hazard		**4E-06**	**0.95**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of Quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper Tolerance Limit

TABLE D1-AP9-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP9
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0022	U			137	N	39,400	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0022	U			NS	NS	72,500	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0022	U			39	N	26,000	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0022	U			92	N	12	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0022	U			383	N	260,000	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0022	U			NS	NS	2,260	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0022	U			146	N	695	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0022	U			NS	NS	930	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0056	U			1	N	34	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0022	U			1,250	N	423	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0022	U			NS	NS	1,800	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0056	U			1	N	41	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0022	U			3	N	738	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0022	U			NS	NS	13,000	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0022	U			41	N	286	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0022	U			87	N	137	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0022	U			NS	NS	1,500	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0022	U			6,730	N	90,800	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0022	U			NS	NS	23,000	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0022	U			6,730	N	90,800	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0022	U			87	N	137	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0034	U			NS	NS	411,000	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0022	U			NS	NS	26,000	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0022	U			NS	NS	1,300	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0022	U			NS	NS	23,000	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0022	U			NS	NS	81,600	N	RSL		
Acetone	67-64-1	mg/kg	0.042				NS	NS	960,000	N	NMED		4.38E-08
Benzene	71-43-2	mg/kg	0.0022	U			87	N	729	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0022	U			NS	NS	1,800	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0022	U			NS	NS	630	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0022	U			30	N	26,000	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0022	U			1,760	N	18,300	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0022	U			NS	NS	95	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0022	U			NS	NS	8,540	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0022	U			53	N	1,020	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0022	U			NS	NS	2,160	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0022	U			NS	NS	89,500	N	NMED		
Chloroform	67-66-3	mg/kg	0.0022	U			29	N	2,000	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0056	U			201	N	1,260	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0022	U			NS	NS	2,600	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0022	U			146	N	695	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0022	U			67	N	18,300	N	NMED		

TABLE D1-AP9-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP9
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0022	U			NS	NS	288	N	NMED		
Dichlorodifluoromethane	75-71-8	mg/kg	0.0022	U			NS	NS	865	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0022	U			29,000	N	368	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0022	U			52	N	916	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0022	U			NS	NS	14,200	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0056	U			NS	NS	3,730	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0022	U			4,820	N	178,000	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.011	U			14,400	N	5,130	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0022	U			NS	NS	58,000	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0022	U			NS	NS	24,000	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0022	U			108	N	843	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0028	U			NS	NS	3,940	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0022	U			NS	NS	14,200	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0022	U			NS	NS	120,000	N	RSL		
Styrene	100-42-5	mg/kg	0.0022	U			NS	NS	51,300	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0022	U			NS	NS	120,000	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0022	U			1,650	N	629	N	NMED		
Toluene	108-88-3	mg/kg	0.0022	U			NS	NS	61,300	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0022	U			NS	NS	1,100	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0022	U			146	N	695	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0022	U			112	N	37	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0022	U			NS	NS	6,030	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0022	U			28	N	46	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.35	U			1,250	N	423	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.35	U			NS	NS	13,000	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.35	U			6,730	N	90,800	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.35	U			6,730	N	90,800	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.35	U			NS	NS	91,600	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.35	U			2,330	N	916	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.35	U			NS	NS	2,750	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.35	U			NS	NS	18,300	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.35	U			NS	NS	1,830	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.35	U			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.35	U			17	N	276	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.35	U			NS	NS	104,000	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.35	U			NS	NS	6,490	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.35	U			NS	NS	3,370	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.35	U			NS	NS	41,000	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.35	U			NS	NS	8,000	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.35	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.35	U			NS	NS	410	N	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.35	U			1,100	N	3,300	N	RSL[S]		

TABLE D1-AP9-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP9
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.35	U			NS	NS	73	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.35	U			NS	NS	NS	NS	NS		
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.35	U			NS	NS	82,000	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.35	U			110	N	410	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.35	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.35	U			1,100	N	3,300	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.35	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.35	U			NS	NS	50,500	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.35	U			NS	NS	25,300	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.35	U			NS	NS	253,000	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.35	U			32	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.28	U			24	N	251	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.35	U			32	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.35	U			NS	NS	25,300	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.35	U			323	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.35	U			NS	NS	3,300,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.35	U			NS	NS	82,000	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.35	U			NS	NS	2,500	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.35	U			16	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.35	U			519	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.35	U			1,830	N	18,300	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.35	U			12,000	N	160,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.35	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.35	U			3,230	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.35	U			NS	NS	91,600	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.35	U			NS	NS	8,200	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.28	U			3	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.35	U			NS	NS	1,200	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.35	U			NS	NS	733,000	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.35	U			NS	NS	916,000	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.35	U			NS	NS	33,700	N	NMED		
Fluorene	86-73-7	mg/kg	0.35	U			NS	NS	33,700	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.35	U			16	N	733	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.35	U			52	N	916	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.35	U			641	N	641	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.35	U			32	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.35	U			27,000	N	183,000	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.35	U			3	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.042	U			1	N	7	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.35	U			5,240	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.35	U			108	N	843	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.35	U			293	N	1,540	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.35	U			45	N	3,180	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.35	U			NS	NS	27,500	N	NMED		
Phenol	108-95-2	mg/kg	0.35	U			NS	NS	275,000	N	NMED		
Pyrene	129-00-0	mg/kg	0.35	U			NS	NS	25,300	N	NMED		

TABLE D1-AP9-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP9
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U			NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U			428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U			NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U			293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U			1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			5,300	N	7,400	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.021	U			304	N	57	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.021	U			9	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.011	U			9	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.011	U			11	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.011	U			11	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.011	U			11	N	16	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.011	U			11	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (3)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg	0.00000000066	J	0.0000022	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000189		0.000063	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg	0.000000017	J	0.0000017	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.000000075	J	0.0000075	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000029	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.00000015	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.0000002	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.00000014	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		UJ	0.00000036	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		UJ	0.00000018	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000028	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000011	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000082	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		UJ	0.0000004	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000006	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000023	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000052	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.00000011				0.000238	N	0.000808	N	NMED	4.69E-09	1.38E-04

TABLE D1-AP9-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP9
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	15,000				NS	NS	1,290,000	N	NMED		1.16E-02
Antimony	7440-36-0	mg/kg	0.15	U			NS	NS	519	N	NMED		
Arsenic	7440-38-2	mg/kg	1.8				36	N	208	N	NMED	5.01E-07	8.65E-03
Barium	7440-39-3	mg/kg	280	J			NS	NS	255,000	N	NMED		1.10E-03
Beryllium	7440-41-7	mg/kg	0.7	J			313,000	N	2,580	N	NMED	2.24E-11	2.71E-04
Cadmium	7440-43-9	mg/kg	0.44				417,000	N	1,110	N	NMED	1.06E-11	3.96E-04
Calcium	7440-70-2	mg/kg	18,000				NS	NS	32,400,000	N	NMED		5.56E-04
Chromium (Total) (4)	7440-47-3	mg/kg	10				505	N	314,000	N	NMED	1.98E-07	3.18E-05
Cobalt	7440-48-4	mg/kg	4.1				83,400	N	388	N	NMED	4.92E-10	1.06E-02
Copper	7440-50-8	mg/kg	50				NS	NS	51,900	N	NMED		9.63E-04
Iron	7439-89-6	mg/kg	11,000				NS	NS	908,000	N	NMED		1.21E-02
Lead	7439-92-1	mg/kg	13				NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	5,000				NS	NS	5,680,000	N	NMED		8.80E-04
Manganese	7439-96-5	mg/kg	470				NS	NS	160,000	N	NMED		2.94E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.048	J			NS	NS	112	N	NMED		4.29E-04
Nickel	7440-02-0	mg/kg	8.5				2,890,000	N	25,700	N	NMED	2.94E-11	3.31E-04
Potassium	7440-09-7	mg/kg	2,500				NS	NS	76,200,000	N	NMED		3.28E-05
Selenium	7782-49-2	mg/kg	1.2				NS	NS	6,490	N	NMED		1.85E-04
Silver	7440-22-4	mg/kg	0.084	J			NS	NS	6,490	N	NMED		1.29E-05
Sodium	7440-23-5	mg/kg	56				NS	NS	37,300,000	N	NMED		1.50E-06
Thallium	7440-28-0	mg/kg	0.083	J			NS	NS	13	N	NMED		6.38E-03
Vanadium	7440-62-2	mg/kg	14				NS	NS	6,530	N	NMED		2.14E-03
Zinc	7440-66-6	mg/kg	43				NS	NS	38,900	N	NMED		1.11E-03
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.33	U			NS	NS	63	N	NMED		
Nitrate	14797-55-8	mg/kg	4.1	J			NS	NS	2,080,000	N	NMED		1.97E-06
Perchlorate	14797-73-0	mg/kg	0.0021	U			NS	NS	908	N	NMED		
										Cumulative Risk/Hazard		**7E-07**	**0.06**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

ηg/kg = nanograms per kilogram

CAS = Chemical Abstracts Service

IEUBK = Integrated Exposure Uptake Biokentic Model

J = Estimated

mg/kg = milligrams per kilogram

NS = No Standard

U = Nondetect

UJ = Estimated Nondetect

TABLE D1-AP9-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP9
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2,3)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0022	U			659	N	10,600	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0022	U			NS	NS	13,600	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0022	U			197	N	7,080	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0022	U			4,300	N	2	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0022	U			1,820	N	70,800	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0022	U			NS	NS	424	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0022	U			781	N	130	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0022	U			NS	NS	283	N	NMED[C]			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0056	U			8	N	6	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0022	U			8,540	N	79	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0022	U			NS	NS	492	N	NMED[C]			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0056	U			6	N	8	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0022	U			16	N	140	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0022	U			NS	NS	2,500	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0022	U			195	N	54	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0022	U			415	N	25	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0022	U			NS	NS	422	N	NMED[C]			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0022	U			45,900	N	24,800	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0022	U			NS	NS	7,080	N	NMED[C]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0022	U			45,900	N	24,800	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0022	U			415	N	25	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.0034	U			NS	NS	90,700	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0022	U			NS	NS	7,080	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.0022	U			NS	NS	599	N	NMED[C]			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0022	U			NS	NS	7,080	N	NMED[C]			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0022	U			NS	NS	20,400	N	NMED[C]			
Acetone	67-64-1	mg/kg	0.042				NS	NS	242,000	N	NMED		1.74E-07	
Benzene	71-43-2	mg/kg	0.0022	U			423	N	142	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.0022	U			NS	NS	538	N	NMED[C]			
Bromochloromethane	74-97-5	mg/kg	0.0022	U			NS	NS	296	N	NMED[C]			
Bromodichloromethane	75-27-4	mg/kg	0.0022	U			143	N	7,080	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0022	U			23,700	N	5,380	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0022	U			NS	NS	18	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.0022	U			NS	NS	1,620	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0022	U			252	N	202	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0022	U			NS	NS	412	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0022	U			NS	NS	16,600	N	NMED			
Chloroform	67-66-3	mg/kg	0.0022	U			134	N	391	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0056	U			956	N	235	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0022	U			NS	NS	708	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0022	U			781	N	130	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0022	U			340	N	5,380	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0022	U			NS	NS	54	N	NMED			

TABLE D1-AP9-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP9
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2,3)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Dichlorodifluoromethane	75-71-8	mg/kg	0.0022	U			NS	NS	161	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.0022	U			1,770	N	5,800	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0022	U			2,400	N	269	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0022	U			NS	NS	2,740	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0056	U			NS	NS	696	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0022	U			24,200	N	33,100	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.011	U			89,600	N	1,210	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0022	U			NS	NS	17,700	N	NMED[C]			
n-Propylbenzene	103-65-1	mg/kg	0.0022	U			NS	NS	6,730	N	NMED[C]			
Naphthalene	91-20-3	mg/kg	0.0022	U			633	N	159	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0028	U			NS	NS	736	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.0022	U			NS	NS	2,740	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.0022	U			NS	NS	35,400	N	NMED[C]			
Styrene	100-42-5	mg/kg	0.0022	U			NS	NS	10,200	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0022	U			NS	NS	35,400	N	NMED[C]			
Tetrachloroethene	127-18-4	mg/kg	0.0022	U			7,910	N	120	N	NMED			
Toluene	108-88-3	mg/kg	0.0022	U			NS	NS	14,000	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0022	U			NS	NS	206	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0022	U			781	N	130	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0022	U			5,370	N	7	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0022	U			NS	NS	1,130	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0022	U			161	N	162	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.35	U			8,540	N	79	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.35	U			NS	NS	2,500	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.35	U			45,900	N	24,800	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.35	U			45,900	N	24,800	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.35	U			NS	NS	26,900	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.35	U			17,000	N	269	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.35	U			NS	NS	807	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.35	U			NS	NS	5,380	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.35	U			NS	NS	538	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.35	U			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.35	U			165	N	81	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.35	U			NS	NS	28,300	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.35	U			NS	NS	1,770	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.35	U			NS	NS	1,000	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.35	U			NS	NS	13,500	N	NMED[C]			
2-Nitroaniline	88-74-4	mg/kg	0.35	U			NS	NS	2,690	N	NMED[C]			
2-Nitrophenol	88-75-5	mg/kg	0.35	U			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.35	U			410	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.35	U			135	N	1,080	N	NMED[SC]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.35	U			NS	NS	22	N	NMED			

TABLE D1-AP9-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP9
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2,3)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.35	U			NS	NS	NS	NS	NS			
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.35	U			NS	NS	26,900	N	NMED[C]			
4-Chloroaniline	106-47-8	mg/kg	0.35	U			14	N	135	N	NMED[C]			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.35	U			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.35	U			135	N	1,080	N	NMED[C]			
4-Nitrophenol	100-02-7	mg/kg	0.35	U			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.35	U			NS	NS	15,100	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.35	U			NS	NS	7,530	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.35	U			NS	NS	75,300	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.35	U			240	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.28	U			173	N	15	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.35	U			240	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.35	U			NS	NS	7,530	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.35	U			2,310	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.35	U			NS	NS	1,080,000	N	NMED[C]			
Benzyl Alcohol	100-51-6	mg/kg	0.35	U			NS	NS	26,900	N	NMED[C]			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.35	U			NS	NS	807	N	NMED[C]			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.35	U			2	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.35	U			3,540	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.35	U			13,400	N	5,380	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.35	U			1,420	N	53,800	N	NMED[C]			
Carbazole	86-74-8	mg/kg	0.35	U			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.35	U			23,100	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.35	U			NS	NS	26,900	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.35	U			NS	NS	2,690	N	NMED[C]			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.28	U			24	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.35	U			NS	NS	269	N	NMED[C]			
Diethylphthalate	84-66-2	mg/kg	0.35	U			NS	NS	215,000	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.35	U			NS	NS	269,000	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.35	U			NS	NS	10,000	N	NMED			
Fluorene	86-73-7	mg/kg	0.35	U			NS	NS	10,000	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.35	U			117	N	215	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.35	U			2,400	N	269	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.35	U			4,670	N	188	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.35	U			240	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.35	U			198,000	N	53,700	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.35	U			0.38	N	NA	N	NMED[C]			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.042	U			4	N	2	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.35	U			37,900	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.35	U			633	N	159	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.35	U			1,350	N	353	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.35	U			346	N	989	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.35	U			NS	NS	8,070	N	NMED			
Phenol	108-95-2	mg/kg	0.35	U			NS	NS	77,400	N	NMED			
Pyrene	129-00-0	mg/kg	0.35	U			NS	NS	7,530	N	NMED			

TABLE D1-AP9-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP9
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2,3)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	8,070	N	NMED[C]			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	27	N	NMED[C]			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U			NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U			2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U			NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U			1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U			11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			626	N	2,420	N	NMED[C]			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.021	U			2,440	N	17	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.021	U			55	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.011	U			58	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.011	U			85	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.011	U			85	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.011	U			85	N	5	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.011	U			85	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (4)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg	0.00000000066	J	0.0000022	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000189		0.000063	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg	0.000000017	J	0.0000017	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.000000075	J	0.0000075	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000029	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.00000015	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.0000002	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.00000014	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		UJ	0.00000036	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		UJ	0.00000018	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000028	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000011	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000082	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		UJ	0.0000004	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000006	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000023	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000052	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.00000011				0.00172	N	0.000226	N	NMED	6.49E-10	4.94E-04	

TABLE D1-AP9-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP9
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2,3)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	15,000				NS	NS	41,400	N	NMED		3.62E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	U			NS	NS	142	N	NMED			
Arsenic	7440-38-2	mg/kg	1.8				216	N	41	N	NMED	8.33E-08	4.37E-02	
Barium	7440-39-3	mg/kg	280	J			NS	NS	4,390	N	NMED		6.38E-02	
Beryllium	7440-41-7	mg/kg	0.7	J			2,710	N	148	N	NMED	2.58E-09	4.73E-03	
Cadmium	7440-43-9	mg/kg	0.44				3,610	N	72	N	NMED	1.22E-09	6.10E-03	
Calcium	7440-70-2	mg/kg	18,000				NS	NS	8,850,000	N	NMED		2.03E-03	
Chromium (Total) (5)	7440-47-3	mg/kg	10				468	N	134	N	NMED	2.14E-07	7.46E-02	
Cobalt	7440-48-4	mg/kg	4.1				722	N	37	N	NMED	5.68E-08	1.12E-01	Endocrine
Copper	7440-50-8	mg/kg	50				NS	NS	14,200	N	NMED		3.52E-03	
Iron	7439-89-6	mg/kg	11,000				NS	NS	248,000	N	NMED		4.44E-02	
Lead	7439-92-1	mg/kg	13				NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	5,000				NS	NS	1,550,000	N	NMED		3.23E-03	
Manganese	7439-96-5	mg/kg	470				NS	NS	464	Y	NMED		1.01E+00	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.048	J			NS	NS	21	N	NMED		2.32E-03	
Nickel	7440-02-0	mg/kg	8.5				20,500	N	753	N	NMED	4.15E-09	1.13E-02	
Potassium	7440-09-7	mg/kg	2,500				NS	NS	20,800,000	N	NMED		1.20E-04	
Selenium	7782-49-2	mg/kg	1.2				NS	NS	1,750	N	NMED		6.86E-04	
Silver	7440-22-4	mg/kg	0.084	J			NS	NS	1,770	N	NMED		4.75E-05	
Sodium	7440-23-5	mg/kg	56				NS	NS	10,200,000	N	NMED		5.49E-06	
Thallium	7440-28-0	mg/kg	0.083	J			NS	NS	4	N	NMED		2.34E-02	
Vanadium	7440-62-2	mg/kg	14				NS	NS	614	N	NMED		2.28E-02	
Zinc	7440-66-6	mg/kg	43				NS	NS	106,000	N	NMED		4.06E-04	
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.33	U			NS	NS	12	N	NMED			
Nitrate	14797-55-8	mg/kg	4.1	J			NS	NS	566,000	N	NMED		7.24E-06	
Perchlorate	14797-73-0	mg/kg	0.0021	U			NS	NS	248	N	NMED			
										Cumulative Risk/Hazard		**4E-07**	**1.8**	
										Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	1.4
Endocrine	0.11
All Others	0.31

Notes:

[s] = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update).

2) NMED[C] = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

3) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

4) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service

DL = Detection limit

J = Estimated

LOD = Limit of detection

LOQ = Limit of quantitation

mg/kg = milligrams per kilogram

NS = No Standard

U = Nondetect

UJ = Estimated Nondetect

UTL = Upper tolerance limit

TABLE D1-AP10-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AP10
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0023	U			28.1	N	2,350	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0023	UJ			NS	NS	14,400	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0023	U			7.98	N	1,560	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0023	UJ			18.8	N	2.61	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0023	UJ			78.6	N	15,600	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0023	UJ			NS	NS	440	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0023	UJ			29.3	N	141	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0023	U			NS	NS	63	N	RSL			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0057	U			0.051	N	7.09	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0023	U			240	N	82.9	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0023	U			NS	NS	300	N	RSL			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0057	U			0.0858	N	5.88	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0023	U			0.672	N	135	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0023	U			NS	NS	2,150	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0023	UJ			8.32	N	55.6	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0023	UJ			17.8	N	29	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0023	U			NS	NS	270	N	RSL			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0023	U			1,290	N	5,480	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0023	U			NS	NS	1,600	N	RSL			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0023	U			1,290	N	5,480	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0023	UJ			17.8	N	29	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.0034	UJ			NS	NS	37,400	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0023	U			NS	NS	1,560	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.0023	UJ			NS	NS	200	N	RSL			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0023	U			NS	NS	1,600	N	RSL			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0023	UJ			NS	NS	5,810	N	RSL			
Acetone	67-64-1	mg/kg	0.029	J			NS	NS	66,300	N	NMED		4.37E-07	
Benzene	71-43-2	mg/kg	0.0023	UJ			17.8	N	114	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.0023	U			NS	NS	290	N	RSL			
Bromochloromethane	74-97-5	mg/kg	0.0023	UJ			NS	NS	150	N	RSL			
Bromodichloromethane	75-27-4	mg/kg	0.0023	UJ			6.19	N	1,560	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0023	U			674	N	1,230	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0023	UJ			NS	NS	17.7	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.0023	UJ			NS	NS	1,550	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0023	UJ			10.7	N	144	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0023	U			NS	NS	378	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0023	UJ			NS	NS	19,000	N	NMED			
Chloroform	67-66-3	mg/kg	0.0023	UJ			5.9	N	306	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0057	UJ			41.1	N	268	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0023	UJ			NS	NS	156	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0023	UJ			29.3	N	141	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0023	U			13.9	N	1,230	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0023	UJ			NS	NS	57.9	N	NMED			

TABLE D1-AP10-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AP10
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Dichlorodifluoromethane	75-71-8	mg/kg	0.0023	UJ			NS	NS	182	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.0023	U			75.1	N	3,930	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0023	U			68.3	N	61.6	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0023	U			NS	NS	2,360	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0057	U			NS	NS	764	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0023	UJ			975	N	37,800	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.011	UJ			766	N	409	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0023	U			NS	NS	3,900	N	RSL			
n-Propylbenzene	103-65-1	mg/kg	0.0023	U			NS	NS	3,800	N	RSL			
Naphthalene	91-20-3	mg/kg	0.0023	U			22.6	N	162	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0029	U			NS	NS	805	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.0023	U			NS	NS	2,360	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.0023	U			NS	NS	7,800	N	RSL			
Styrene	100-42-5	mg/kg	0.0023	U			NS	NS	7,260	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0023	U			NS	NS	7,800	N	RSL			
Tetrachloroethene	127-18-4	mg/kg	0.0023	U			337	N	111	N	NMED			
Toluene	108-88-3	mg/kg	0.0023	UJ			NS	NS	5,230	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0023	UJ			NS	NS	210	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0023	UJ			29.3	N	141	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0023	UJ			15.5	N	6.77	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0023	UJ			NS	NS	1,230	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0023	UJ			0.742	N	113	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.18	U			240	N	82.9	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.18	U			NS	NS	2,150	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.18	U			1,290	N	5,480	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.18	U			1,290	N	5,480	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.18	U			NS	NS	6,160	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.18	U			484	N	61.6	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.18	U			NS	NS	185	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.18	U			NS	NS	1,230	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.18	U			NS	NS	123	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.18	U			17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.18	U			3.56	N	18.5	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.18	U			NS	NS	6,260	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.18	U			NS	NS	391	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.18	U			NS	NS	232	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.18	U			NS	NS	3,200	N	RSL			
2-Nitroaniline	88-74-4	mg/kg	0.18	U			NS	NS	630	N	RSL			
2-Nitrophenol	88-75-5	mg/kg	0.18	U			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.18	U			11.8	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.18	U			270	N	250	N	RSL[S]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.18	U			NS	NS	4.93	N	NMED			
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.18	U			NS	NS	NS	NS	NS			

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SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.18	U			NS	NS	6,300	N	RSL			
4-Chloroaniline	106-47-8	mg/kg	0.18	U			27	N	32	N	RSL			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.18	U			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.18	U			270	N	250	N	RSL			
4-Nitrophenol	100-02-7	mg/kg	0.18	U			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.18	U			NS	NS	3,480	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.18	U			NS	NS	1,740	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.18	U			NS	NS	17,400	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.18	U			1.53	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			1.12	N	17.4	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.18	U			1.53	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.18	U			NS	NS	1,740	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.18	U			15.3	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.18	U			NS	NS	250,000	N	RSL			
Benzyl Alcohol	100-51-6	mg/kg	0.18	U			NS	NS	6,300	N	RSL			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.18	U			NS	NS	190	N	RSL			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.18	U			3.11	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.18	U			99.3	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.18	U			380	N	1,230	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.18	U			2,900	N	13,000	N	RSL			
Carbazole	86-74-8	mg/kg	0.18	U			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.18	U			153	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.18	U			NS	NS	6,160	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.18	U			NS	NS	630	N	RSL			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			0.153	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.18	U			NS	NS	78	N	RSL			
Diethylphthalate	84-66-2	mg/kg	0.18	U			NS	NS	49,300	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.18	U			NS	NS	61,600	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.18	U			NS	NS	2,320	N	NMED			
Fluorene	86-73-7	mg/kg	0.18	U			NS	NS	2,320	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.18	U			3.33	N	49.3	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.18	U			68.3	N	61.6	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.18	U			133	N	43.1	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.18	U			1.53	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.18	U			5,610	N	12,300	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.18	U			0.78	N	NS	NS	RSL			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	U			0.0234	N	0.493	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.18	U			1,090	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.18	U			22.6	N	162	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.18	U			60.4	N	131	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.18	U			9.85	N	234	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.18	U			NS	NS	1,740	N	NMED			
Phenol	108-95-2	mg/kg	0.18	U			NS	NS	18,500	N	NMED			
Pyrene	129-00-0	mg/kg	0.18	U			NS	NS	1,740	N	NMED			

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EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	2,200	N	RSL			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	6.3	N	RSL			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			211	N	36	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			3.56	N	18.5	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	7.7	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			31.6	N	70.4	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	6.16	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U			NS	NS	7.64	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			333	N	247	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U			83.1	N	301	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U			NS	NS	156	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U			60.4	N	131	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U			313	N	6.16	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NS	NS	3,850	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			1,300	N	570	N	RSL			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.021	U			69.6	N	3.98	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.021	U			1.81	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.01	U			1.86	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.01	U			2.43	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.01	U			2.43	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.01	U			2.43	N	1.14	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.01	U			2.43	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (2)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg	0.00000000027	J	0.00000091	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000042	J	0.000014	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg	0.0000000068	J	0.00000068	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.000000026	J	0.0000026	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000013	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.0000001	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000016	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.00000010	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.00000016	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.00000011	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000016	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000017	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.00000007	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.00000015	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000017	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000034	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.00000012	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.000000037				0.000049	N	0.0000506	N	NMED	7.61E-09	7.37E-04	

TABLE D1-AP10-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AP10
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	19,000				NS	NS	78,000	N	NMED		2.44E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	U			NS	NS	31.3	N	NMED			
Arsenic	7440-38-2	mg/kg	1.6				7.07	N	13	N	NMED	2.26E-06	1.23E-01	
Barium	7440-39-3	mg/kg	250				NS	NS	15,600	N	NMED		1.60E-02	
Beryllium	7440-41-7	mg/kg	0.78	J			64,400	N	156	N	NMED	1.21E-10	5.00E-03	
Cadmium	7440-43-9	mg/kg	0.52				85,900	N	70.5	N	NMED	6.05E-11	7.38E-03	
Calcium	7440-70-2	mg/kg	8,100				NS	NS	13,000,000	N	NMED		6.23E-04	
Chromium (Total) (3)	7440-47-3	mg/kg	12				96.6	N	45,200	N	NMED	1.24E-06	2.65E-04	
Cobalt	7440-48-4	mg/kg	4.4				17,200	N	23.4	N	NMED	2.56E-09	1.88E-01	Endocrine
Copper	7440-50-8	mg/kg	70				NS	NS	3,130	N	NMED		2.24E-02	
Iron	7439-89-6	mg/kg	11,000				NS	NS	54,800	N	NMED		2.01E-01	GI
Lead	7439-92-1	mg/kg	16				NS	NS	200	N	RSL			
Magnesium	7439-95-4	mg/kg	6,000				NS	NS	15,600,000	N	NMED		3.85E-04	
Manganese	7439-96-5	mg/kg	410				NS	NS	10,500	N	NMED		3.90E-02	
Mercury (Elemental)	7439-97-6	mg/kg	0.071	J			NS	NS	23.8	N	NMED		2.98E-03	
Nickel	7440-02-0	mg/kg	9.5				595,000	N	1,560	N	NMED	1.60E-10	6.09E-03	
Potassium	7440-09-7	mg/kg	2,600				NS	NS	15,600,000	N	NMED		1.67E-04	
Selenium	7782-49-2	mg/kg	1.2				NS	NS	391	N	NMED		3.07E-03	
Silver	7440-22-4	mg/kg	0.1				NS	NS	391	N	NMED		2.56E-04	
Sodium	7440-23-5	mg/kg	55				NS	NS	7,820,000	N	NMED		7.03E-06	
Thallium	7440-28-0	mg/kg	0.075	J			NS	NS	0.782	N	NMED		9.59E-02	
Vanadium	7440-62-2	mg/kg	18				NS	NS	394	N	NMED		4.57E-02	
Zinc	7440-66-6	mg/kg	53				NS	NS	23,500	N	NMED		2.26E-03	

TABLE D1-AP10-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AP10
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.33	U			NS	NS	11.2	N	NMED			
Nitrate	14797-55-8	mg/kg	8.9	J			NS	NS	125,000	N	NMED		7.12E-05	
Perchlorate	14797-73-0	mg/kg	0.002	UJ			NS	NS	54.8	N	NMED			
										Cumulative Risk/Hazard		**4E-06**	**1.0**	
										Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	0.24
Endocrine	0.19
GI	0.20
All Others	0.37

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of Quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper Tolerance Limit

TABLE D1-AP10-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP10
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0023	U			137	N	39,400	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0023	UJ			NS	NS	72,500	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0023	U			39	N	26,000	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0023	UJ			92	N	12	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0023	UJ			383	N	260,000	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0023	UJ			NS	NS	2,260	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0023	UJ			146	N	695	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0023	U			NS	NS	930	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0057	U			1	N	34	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0023	U			1,250	N	423	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0023	U			NS	NS	1,800	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0057	U			1	N	41	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0023	U			3	N	738	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0023	U			NS	NS	13,000	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0023	UJ			41	N	286	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0023	UJ			87	N	137	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0023	U			NS	NS	1,500	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0023	U			6,730	N	90,800	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0023	U			NS	NS	23,000	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0023	U			6,730	N	90,800	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0023	UJ			87	N	137	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0034	UJ			NS	NS	411,000	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0023	U			NS	NS	26,000	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0023	UJ			NS	NS	1,300	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0023	U			NS	NS	23,000	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0023	UJ			NS	NS	81,600	N	RSL		
Acetone	67-64-1	mg/kg	0.029	J			NS	NS	960,000	N	NMED		3.02E-08
Benzene	71-43-2	mg/kg	0.0023	UJ			87	N	729	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0023	U			NS	NS	1,800	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0023	UJ			NS	NS	630	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0023	UJ			30	N	26,000	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0023	U			1,760	N	18,300	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0023	UJ			NS	NS	95	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0023	UJ			NS	NS	8,540	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0023	UJ			53	N	1,020	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0023	U			NS	NS	2,160	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0023	UJ			NS	NS	89,500	N	NMED		
Chloroform	67-66-3	mg/kg	0.0023	UJ			29	N	2,000	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0057	UJ			201	N	1,260	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0023	UJ			NS	NS	2,600	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0023	UJ			146	N	695	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0023	U			67	N	18,300	N	NMED		

TABLE D1-AP10-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP10
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0023	UJ			NS	NS	288	N	NMED		
Dichlorodifluoromethane	75-71-8	mg/kg	0.0023	UJ			NS	NS	865	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0023	U			29,000	N	368	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0023	U			52	N	916	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0023	U			NS	NS	14,200	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0057	U			NS	NS	3,730	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0023	UJ			4,820	N	178,000	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.011	UJ			14,400	N	5,130	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0023	U			NS	NS	58,000	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0023	U			NS	NS	24,000	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0023	U			108	N	843	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0029	U			NS	NS	3,940	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0023	U			NS	NS	14,200	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0023	U			NS	NS	120,000	N	RSL		
Styrene	100-42-5	mg/kg	0.0023	U			NS	NS	51,300	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0023	U			NS	NS	120,000	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0023	U			1,650	N	629	N	NMED		
Toluene	108-88-3	mg/kg	0.0023	UJ			NS	NS	61,300	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0023	UJ			NS	NS	1,100	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0023	UJ			146	N	695	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0023	UJ			112	N	37	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0023	UJ			NS	NS	6,030	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0023	UJ			28	N	46	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.18	U			1,250	N	423	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.18	U			NS	NS	13,000	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.18	U			6,730	N	90,800	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.18	U			6,730	N	90,800	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.18	U			NS	NS	91,600	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.18	U			2,330	N	916	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.18	U			NS	NS	2,750	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.18	U			NS	NS	18,300	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.18	U			NS	NS	1,830	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.18	U			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.18	U			17	N	276	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.18	U			NS	NS	104,000	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.18	U			NS	NS	6,490	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.18	U			NS	NS	3,370	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.18	U			NS	NS	41,000	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.18	U			NS	NS	8,000	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.18	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.18	U			NS	NS	410	N	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.18	U			1,100	N	3,300	N	RSL[S]		

TABLE D1-AP10-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP10
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.18	U			NS	NS	73	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.18	U			NS	NS	NS	NS	NS		
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.18	U			NS	NS	82,000	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.18	U			110	N	410	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.18	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.18	U			1,100	N	3,300	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.18	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.18	U			NS	NS	50,500	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.18	U			NS	NS	25,300	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.18	U			NS	NS	253,000	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.18	U			32	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			24	N	251	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.18	U			32	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.18	U			NS	NS	25,300	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.18	U			323	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.18	U			NS	NS	3,300,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.18	U			NS	NS	82,000	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.18	U			NS	NS	2,500	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.18	U			16	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.18	U			519	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.18	U			1,830	N	18,300	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.18	U			12,000	N	160,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.18	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.18	U			3,230	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.18	U			NS	NS	91,600	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.18	U			NS	NS	8,200	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			3	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.18	U			NS	NS	1,200	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.18	U			NS	NS	733,000	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.18	U			NS	NS	916,000	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.18	U			NS	NS	33,700	N	NMED		
Fluorene	86-73-7	mg/kg	0.18	U			NS	NS	33,700	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.18	U			16	N	733	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.18	U			52	N	916	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.18	U			641	N	641	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.18	U			32	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.18	U			27,000	N	183,000	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.18	U			3	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	U			1	N	7	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.18	U			5,240	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.18	U			108	N	843	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.18	U			293	N	1,540	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.18	U			45	N	3,180	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.18	U			NS	NS	27,500	N	NMED		
Phenol	108-95-2	mg/kg	0.18	U			NS	NS	275,000	N	NMED		
Pyrene	129-00-0	mg/kg	0.18	U			NS	NS	25,300	N	NMED		

TABLE D1-AP10-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP10
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U			NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U			428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U			NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U			293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U			1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			5,300	N	7,400	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.021	U			304	N	57	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.021	U			9	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.01	U			9	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.01	U			11	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.01	U			11	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.01	U			11	N	16	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.01	U			11	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg	0.00000000027	J	0.00000091	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000042	J	0.000014	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg	0.0000000068	J	0.00000068	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.000000026	J	0.0000026	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000013	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.0000001	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000016	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.00000010	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.00000016	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.00000011	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000016	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000017	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.00000007	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.00000015	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000017	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000034	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.00000012	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.000000037				0.000238	N	0.000808	N	NMED	1.57E-09	4.61E-05

TABLE D1-AP10-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP10
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	19,000				NS	NS	1,290,000	N	NMED		1.47E-02
Antimony	7440-36-0	mg/kg	0.15	U			NS	NS	519	N	NMED		
Arsenic	7440-38-2	mg/kg	1.6				36	N	208	N	NMED	4.46E-07	7.69E-03
Barium	7440-39-3	mg/kg	250				NS	NS	255,000	N	NMED		9.80E-04
Beryllium	7440-41-7	mg/kg	0.78	J			313,000	N	2,580	N	NMED	2.49E-11	3.02E-04
Cadmium	7440-43-9	mg/kg	0.52				417,000	N	1,110	N	NMED	1.25E-11	4.68E-04
Calcium	7440-70-2	mg/kg	8,100				NS	NS	32,400,000	N	NMED		
Chromium (Total) (3)	7440-47-3	mg/kg	12				505	N	314,000	N	NMED	2.38E-07	3.82E-05
Cobalt	7440-48-4	mg/kg	4.4				83,400	N	388	N	NMED	5.28E-10	1.13E-02
Copper	7440-50-8	mg/kg	70				NS	NS	51,900	N	NMED		1.35E-03
Iron	7439-89-6	mg/kg	11,000				NS	NS	908,000	N	NMED		1.21E-02
Lead	7439-92-1	mg/kg	16				NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	6,000				NS	NS	5,680,000	N	NMED		
Manganese	7439-96-5	mg/kg	410				NS	NS	160,000	N	NMED		2.56E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.071	J			NS	NS	112	N	NMED		6.34E-04
Nickel	7440-02-0	mg/kg	9.5				2,890,000	N	25,700	N	NMED	3.29E-11	3.70E-04
Potassium	7440-09-7	mg/kg	2,600				NS	NS	76,200,000	N	NMED		
Selenium	7782-49-2	mg/kg	1.2				NS	NS	6,490	N	NMED		1.85E-04
Silver	7440-22-4	mg/kg	0.1				NS	NS	6,490	N	NMED		1.54E-05
Sodium	7440-23-5	mg/kg	55				NS	NS	37,300,000	N	NMED		1.47E-06
Thallium	7440-28-0	mg/kg	0.075	J			NS	NS	13	N	NMED		5.77E-03
Vanadium	7440-62-2	mg/kg	18				NS	NS	6,530	N	NMED		2.76E-03
Zinc	7440-66-6	mg/kg	53				NS	NS	38,900	N	NMED		1.36E-03

TABLE D1-AP10-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP10
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.33	U			NS	NS	63	N	NMED		
Nitrate	14797-55-8	mg/kg	8.9	J			NS	NS	2,080,000	N	NMED		4.28E-06
Perchlorate	14797-73-0	mg/kg	0.002	UJ			NS	NS	908	N	NMED		
										Cumulative Risk/Hazard		**7E-07**	**0.06**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper tolerance limit

TABLE D1-AP10-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP10
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0023	U			659	N	10,600	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0023	UJ			NS	NS	13,600	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0023	U			197	N	7,080	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0023	UJ			4,300	N	2	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0023	UJ			1,820	N	70,800	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0023	UJ			NS	NS	424	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0023	UJ			781	N	130	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0023	U			NS	NS	283	N	NMED[C]			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0057	U			8	N	6	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0023	U			8,540	N	79	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0023	U			NS	NS	492	N	NMED[C]			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0057	U			6	N	8	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0023	U			16	N	140	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0023	U			NS	NS	2,500	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0023	UJ			195	N	54	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0023	UJ			415	N	25	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0023	U			NS	NS	422	N	NMED[C]			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0023	U			45,900	N	24,800	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0023	U			NS	NS	7,080	N	NMED[C]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0023	U			45,900	N	24,800	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0023	UJ			415	N	25	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.0034	UJ			NS	NS	90,700	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0023	U			NS	NS	7,080	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.0023	UJ			NS	NS	599	N	NMED[C]			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0023	U			NS	NS	7,080	N	NMED[C]			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0023	UJ			NS	NS	20,400	N	NMED[C]			
Acetone	67-64-1	mg/kg	0.029	J			NS	NS	242,000	N	NMED		1.20E-07	
Benzene	71-43-2	mg/kg	0.0023	UJ			423	N	142	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.0023	U			NS	NS	538	N	NMED[C]			
Bromochloromethane	74-97-5	mg/kg	0.0023	UJ			NS	NS	296	N	NMED[C]			
Bromodichloromethane	75-27-4	mg/kg	0.0023	UJ			143	N	7,080	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0023	U			23,700	N	5,380	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0023	UJ			NS	NS	18	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.0023	UJ			NS	NS	1,620	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0023	UJ			252	N	202	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0023	U			NS	NS	412	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0023	UJ			NS	NS	16,600	N	NMED			
Chloroform	67-66-3	mg/kg	0.0023	UJ			134	N	391	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0057	UJ			956	N	235	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0023	UJ			NS	NS	708	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0023	UJ			781	N	130	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0023	U			340	N	5,380	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0023	UJ			NS	NS	54	N	NMED			

TABLE D1-AP10-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP10
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Dichlorodifluoromethane	75-71-8	mg/kg	0.0023	UJ			NS	NS	161	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.0023	U			1,770	N	5,800	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0023	U			2,400	N	269	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0023	U			NS	NS	2,740	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0057	U			NS	NS	696	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0023	UJ			24,200	N	33,100	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.011	UJ			89,600	N	1,210	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0023	U			NS	NS	17,700	N	NMED[C]			
n-Propylbenzene	103-65-1	mg/kg	0.0023	U			NS	NS	6,730	N	NMED[C]			
Naphthalene	91-20-3	mg/kg	0.0023	U			633	N	159	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0029	U			NS	NS	736	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.0023	U			NS	NS	2,740	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.0023	U			NS	NS	35,400	N	NMED[C]			
Styrene	100-42-5	mg/kg	0.0023	U			NS	NS	10,200	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0023	U			NS	NS	35,400	N	NMED[C]			
Tetrachloroethene	127-18-4	mg/kg	0.0023	U			7,910	N	120	N	NMED			
Toluene	108-88-3	mg/kg	0.0023	UJ			NS	NS	14,000	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0023	UJ			NS	NS	206	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0023	UJ			781	N	130	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0023	UJ			5,370	N	7	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0023	UJ			NS	NS	1,130	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0023	UJ			161	N	162	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.18	U			8,540	N	79	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.18	U			NS	NS	2,500	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.18	U			45,900	N	24,800	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.18	U			45,900	N	24,800	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.18	U			NS	NS	26,900	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.18	U			17,000	N	269	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.18	U			NS	NS	807	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.18	U			NS	NS	5,380	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.18	U			NS	NS	538	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.18	U			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.18	U			165	N	81	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.18	U			NS	NS	28,300	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.18	U			NS	NS	1,770	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.18	U			NS	NS	1,000	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.18	U			NS	NS	13,500	N	NMED[C]			
2-Nitroaniline	88-74-4	mg/kg	0.18	U			NS	NS	2,690	N	NMED[C]			
2-Nitrophenol	88-75-5	mg/kg	0.18	U			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.18	U			410	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.18	U			135	N	1,080	N	NMED[SC]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.18	U			NS	NS	22	N	NMED			

TABLE D1-AP10-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP10
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.18	U			NS	NS	NS	NS	NS			
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.18	U			NS	NS	26,900	N	NMED[C]			
4-Chloroaniline	106-47-8	mg/kg	0.18	U			14	N	135	N	NMED[C]			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.18	U			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.18	U			135	N	1,080	N	NMED[C]			
4-Nitrophenol	100-02-7	mg/kg	0.18	U			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.18	U			NS	NS	15,100	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.18	U			NS	NS	7,530	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.18	U			NS	NS	75,300	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.18	U			240	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			173	N	15	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.18	U			240	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.18	U			NS	NS	7,530	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.18	U			2,310	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.18	U			NS	NS	1,080,000	N	NMED[C]			
Benzyl Alcohol	100-51-6	mg/kg	0.18	U			NS	NS	26,900	N	NMED[C]			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.18	U			NS	NS	807	N	NMED[C]			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.18	U			2	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.18	U			3,540	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.18	U			13,400	N	5,380	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.18	U			1,420	N	53,800	N	NMED[C]			
Carbazole	86-74-8	mg/kg	0.18	U			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.18	U			23,100	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.18	U			NS	NS	26,900	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.18	U			NS	NS	2,690	N	NMED[C]			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			24	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.18	U			NS	NS	269	N	NMED[C]			
Diethylphthalate	84-66-2	mg/kg	0.18	U			NS	NS	215,000	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.18	U			NS	NS	269,000	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.18	U			NS	NS	10,000	N	NMED			
Fluorene	86-73-7	mg/kg	0.18	U			NS	NS	10,000	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.18	U			117	N	215	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.18	U			2,400	N	269	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.18	U			4,670	N	188	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.18	U			240	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.18	U			198,000	N	53,700	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.18	U			0.38	N	NA	N	NMED[C]			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	U			4	N	2	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.18	U			37,900	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.18	U			633	N	159	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.18	U			1,350	N	353	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.18	U			346	N	989	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.18	U			NS	NS	8,070	N	NMED			
Phenol	108-95-2	mg/kg	0.18	U			NS	NS	77,400	N	NMED			
Pyrene	129-00-0	mg/kg	0.18	U			NS	NS	7,530	N	NMED			

TABLE D1-AP10-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP10
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	8,070	N	NMED[C]			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	27	N	NMED[C]			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U			NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U			2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U			NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U			1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U			11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			626	N	2,420	N	NMED[C]			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.021	U			2,440	N	17	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.021	U			55	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.01	U			58	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.01	U			85	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.01	U			85	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.01	U			85	N	5	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.01	U			85	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (3)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg	0.00000000027	J	0.00000091	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000042	J	0.000014	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg	0.0000000068	J	0.00000068	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.000000026	J	0.0000026	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000013	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.0000001	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000016	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.0000001	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.00000016	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.00000011	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000016	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000017	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.00000007	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.00000015	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000017	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000034	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.00000012	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.000000037				0.00172	N	0.000226	N	NMED	2.17E-10	1.65E-04	

TABLE D1-AP10-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP10
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	19,000				NS	NS	41,400	N	NMED		4.59E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	U			NS	NS	142	N	NMED			
Arsenic	7440-38-2	mg/kg	1.6				216	N	41	N	NMED	7.41E-08	3.88E-02	
Barium	7440-39-3	mg/kg	250				NS	NS	4,390	N	NMED		5.69E-02	
Beryllium	7440-41-7	mg/kg	0.78	J			2,710	N	148	N	NMED	2.88E-09	5.27E-03	
Cadmium	7440-43-9	mg/kg	0.52				3,610	N	72	N	NMED	1.44E-09	7.21E-03	
Calcium	7440-70-2	mg/kg	8,100				NS	NS	8,850,000	N	NMED		9.15E-04	
Chromium (Total) (4)	7440-47-3	mg/kg	12				468	N	134	N	NMED	2.56E-07	8.96E-02	
Cobalt	7440-48-4	mg/kg	4.4				722	N	37	N	NMED	6.09E-08	1.20E-01	Endocrine
Copper	7440-50-8	mg/kg	70				NS	NS	14,200	N	NMED		4.93E-03	
Iron	7439-89-6	mg/kg	11,000				NS	NS	248,000	N	NMED		4.44E-02	
Lead	7439-92-1	mg/kg	16				NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	6,000				NS	NS	1,550,000	N	NMED		3.87E-03	
Manganese	7439-96-5	mg/kg	410				NS	NS	464	N	NMED		8.84E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.071	J			NS	NS	21	N	NMED		3.43E-03	
Nickel	7440-02-0	mg/kg	9.5				20,500	N	753	N	NMED	4.63E-09	1.26E-02	
Potassium	7440-09-7	mg/kg	2,600				NS	NS	20,800,000	N	NMED		1.25E-04	
Selenium	7782-49-2	mg/kg	1.2				NS	NS	1,750	N	NMED		6.86E-04	
Silver	7440-22-4	mg/kg	0.1				NS	NS	1,770	N	NMED		5.65E-05	
Sodium	7440-23-5	mg/kg	55				NS	NS	10,200,000	N	NMED		5.39E-06	
Thallium	7440-28-0	mg/kg	0.075	J			NS	NS	4	N	NMED		2.12E-02	
Vanadium	7440-62-2	mg/kg	18				NS	NS	614	N	NMED		2.93E-02	
Zinc	7440-66-6	mg/kg	53				NS	NS	106,000	N	NMED		5.00E-04	

TABLE D1-AP10-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP10
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.33	U			NS	NS	12	N	NMED			
Nitrate	14797-55-8	mg/kg	8.9	J			NS	NS	566,000	N	NMED		1.57E-05	
Perchlorate	14797-73-0	mg/kg	0.002	UJ			NS	NS	248	N	NMED			
										Cumulative Risk/Hazard		**4E-07**	**1.8**	
										Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	1.3
Endocrine	0.12
All Others	0.32

Notes:

[s] = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update).

2) NMED[C] = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

3) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

4) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper tolerance limit

TABLE D1-AP11-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AP11
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0023	U			28.1	N	2,350	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0023	U			NS	NS	14,400	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0023	U			7.98	N	1,560	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0023	U			18.8	N	2.61	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0023	U			78.6	N	15,600	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0023	U			NS	NS	440	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0023	U			29.3	N	141	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0023	U			NS	NS	63	N	RSL			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0058	U			0.051	N	7.09	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0023	U			240	N	82.9	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0023	U			NS	NS	300	N	RSL			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0058	U			0.0858	N	5.88	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0023	U			0.672	N	135	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0023	U			NS	NS	2,150	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0023	U			8.32	N	55.6	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0023	U			17.8	N	29	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0023	U			NS	NS	270	N	RSL			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0023	U			1,290	N	5,480	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0023	U			NS	NS	1,600	N	RSL			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0023	U			1,290	N	5,480	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0023	U			17.8	N	29	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.0035	U			NS	NS	37,400	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0023	U			NS	NS	1,560	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.0023	U			NS	NS	200	N	RSL			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0023	U			NS	NS	1,600	N	RSL			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0023	U			NS	NS	5,810	N	RSL			
Acetone	67-64-1	mg/kg	0.1				NS	NS	66,300	N	NMED		1.51E-06	
Benzene	71-43-2	mg/kg	0.0023	U			17.8	N	114	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.0023	U			NS	NS	290	N	RSL			
Bromochloromethane	74-97-5	mg/kg	0.0023	U			NS	NS	150	N	RSL			
Bromodichloromethane	75-27-4	mg/kg	0.0023	U			6.19	N	1,560	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0023	U			674	N	1,230	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0023	U			NS	NS	17.7	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.0023	U			NS	NS	1,550	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0023	U			10.7	N	144	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0023	U			NS	NS	378	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0023	U			NS	NS	19,000	N	NMED			
Chloroform	67-66-3	mg/kg	0.0023	U			5.9	N	306	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0058	U			41.1	N	268	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0023	U			NS	NS	156	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0023	U			29.3	N	141	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0023	U			13.9	N	1,230	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0023	U			NS	NS	57.9	N	NMED			

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HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AP11
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Dichlorodifluoromethane	75-71-8	mg/kg	0.0023	U			NS	NS	182	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.0023	U			75.1	N	3,930	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0023	U			68.3	N	61.6	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0023	U			NS	NS	2,360	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0058	U			NS	NS	764	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0023	U			975	N	37,800	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.012	U			766	N	409	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0023	U			NS	NS	3,900	N	RSL			
n-Propylbenzene	103-65-1	mg/kg	0.0023	U			NS	NS	3,800	N	RSL			
Naphthalene	91-20-3	mg/kg	0.0023	U			22.6	N	162	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0029	U			NS	NS	805	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.02				NS	NS	2,360	N	NMED[S]		8.47E-06	
sec-Butylbenzene	135-98-8	mg/kg	0.0023	U			NS	NS	7,800	N	RSL			
Styrene	100-42-5	mg/kg	0.0023	U			NS	NS	7,260	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0023	U			NS	NS	7,800	N	RSL			
Tetrachloroethene	127-18-4	mg/kg	0.0023	U			337	N	111	N	NMED			
Toluene	108-88-3	mg/kg	0.0023	U			NS	NS	5,230	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0023	U			NS	NS	210	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0023	U			29.3	N	141	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0023	U			15.5	N	6.77	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0023	U			NS	NS	1,230	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0023	U			0.742	N	113	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.18	U			240	N	82.9	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.18	U			NS	NS	2,150	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.18	U			1,290	N	5,480	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.18	U			1,290	N	5,480	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.18	U			NS	NS	6,160	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.18	U			484	N	61.6	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.18	U			NS	NS	185	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.18	U			NS	NS	1,230	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.18	U			NS	NS	123	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.18	U			17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.18	U			3.56	N	18.5	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.18	U			NS	NS	6,260	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.18	U			NS	NS	391	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.18	U			NS	NS	232	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.18	U			NS	NS	3,200	N	RSL			
2-Nitroaniline	88-74-4	mg/kg	0.18	U			NS	NS	630	N	RSL			
2-Nitrophenol	88-75-5	mg/kg	0.18	U			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.18	U			11.8	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.18	U			270	N	250	N	RSL[S]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.18	U			NS	NS	4.93	N	NMED			
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.18	U			NS	NS	NS	NS	NS			

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MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.18	U			NS	NS	6,300	N	RSL			
4-Chloroaniline	106-47-8	mg/kg	0.18	U			27	N	32	N	RSL			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.18	U			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.18	U			270	N	250	N	RSL			
4-Nitrophenol	100-02-7	mg/kg	0.18	U			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.18	U			NS	NS	3,480	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.18	U			NS	NS	1,740	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.18	U			NS	NS	17,400	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.18	U			1.53	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			1.12	N	17.4	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.18	U			1.53	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.18	U			NS	NS	1,740	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.18	U			15.3	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.18	U			NS	NS	250,000	N	RSL			
Benzyl Alcohol	100-51-6	mg/kg	0.18	U			NS	NS	6,300	N	RSL			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.18	U			NS	NS	190	N	RSL			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.18	U			3.11	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.18	U			99.3	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.18	U			380	N	1,230	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.18	U			2,900	N	13,000	N	RSL			
Carbazole	86-74-8	mg/kg	0.18	U			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.18	U			153	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.18	U			NS	NS	6,160	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.18	U			NS	NS	630	N	RSL			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			0.153	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.18	U			NS	NS	78	N	RSL			
Diethylphthalate	84-66-2	mg/kg	0.18	U			NS	NS	49,300	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.18	U			NS	NS	61,600	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.18	U			NS	NS	2,320	N	NMED			
Fluorene	86-73-7	mg/kg	0.18	U			NS	NS	2,320	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.18	U			3.33	N	49.3	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.18	U			68.3	N	61.6	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.18	U			133	N	43.1	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.18	U			1.53	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.18	U			5,610	N	12,300	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.18	U			0.78	N	NS	NS	RSL			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.022	U			0.0234	N	0.493	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.18	U			1,090	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.18	U			22.6	N	162	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.18	U			60.4	N	131	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.18	U			9.85	N	234	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.18	U			NS	NS	1,740	N	NMED			
Phenol	108-95-2	mg/kg	0.18	U			NS	NS	18,500	N	NMED			
Pyrene	129-00-0	mg/kg	0.18	U			NS	NS	1,740	N	NMED			

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FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	2,200	N	RSL			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	6.3	N	RSL			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			211	N	36	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			3.56	N	18.5	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	7.7	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			31.6	N	70.4	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	6.16	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U			NS	NS	7.64	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			333	N	247	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U			83.1	N	301	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U			NS	NS	156	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U			60.4	N	131	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U			313	N	6.16	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NS	NS	3,850	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			1,300	N	570	N	RSL			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.022	U			69.6	N	3.98	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.022	U			1.81	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.011	U			1.86	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.011	U			2.43	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.011	U			2.43	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.011	U			2.43	N	1.14	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.011	U			2.43	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (2)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg	0.00000000045	J	0.0000015	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000051	J	0.000017	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000041	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.000000027	J	0.0000027	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000013	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg	0.0000000088	J	0.000000088	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.00000013	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.00000014	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000011	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000065	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000015	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000032	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.00000018	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.000000041				0.00049	N	0.000506	N	NMED	8.44E-10	8.17E-05	

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MCKINLEY COUNTY, NEW MEXICO

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METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	30,000				NS	NS	78,000	N	NMED		3.85E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	U			NS	NS	31.3	N	NMED			
Arsenic	7440-38-2	mg/kg	2.1				7.07	N	13	N	NMED	2.97E-06	1.62E-01	Heart/Endocrine
Barium	7440-39-3	mg/kg	320				NS	NS	15,600	N	NMED		2.05E-02	
Beryllium	7440-41-7	mg/kg	1.1				64,400	N	156	N	NMED	1.71E-10	7.05E-03	
Cadmium	7440-43-9	mg/kg	1.5	J			85,900	N	70.5	N	NMED	1.75E-10	2.13E-02	
Calcium	7440-70-2	mg/kg	7,900				NS	NS	13,000,000	N	NMED		6.08E-04	
Chromium (Total) (3)	7440-47-3	mg/kg	18				96.6	N	45,200	N	NMED	1.86E-06	3.98E-04	
Cobalt	7440-48-4	mg/kg	5.6				17,200	N	23.4	N	NMED	3.26E-09	2.39E-01	Endocrine
Copper	7440-50-8	mg/kg	52				NS	NS	3,130	N	NMED		1.66E-02	
Iron	7439-89-6	mg/kg	15,000				NS	NS	54,800	N	NMED		2.74E-01	GI
Lead	7439-92-1	mg/kg	16				NS	NS	200	N	RSL			
Magnesium	7439-95-4	mg/kg	8,600				NS	NS	15,600,000	N	NMED		5.51E-04	
Manganese	7439-96-5	mg/kg	360				NS	NS	10,500	N	NMED		3.43E-02	
Mercury (Elemental)	7439-97-6	mg/kg	0.066	J			NS	NS	23.8	N	NMED		2.77E-03	
Nickel	7440-02-0	mg/kg	12				595,000	N	1,560	N	NMED	2.02E-10	7.69E-03	
Potassium	7440-09-7	mg/kg	3,400	J			NS	NS	15,600,000	N	NMED		2.18E-04	
Selenium	7782-49-2	mg/kg	1.5				NS	NS	391	N	NMED		3.84E-03	
Silver	7440-22-4	mg/kg	0.12				NS	NS	391	N	NMED		3.07E-04	
Sodium	7440-23-5	mg/kg	62				NS	NS	7,820,000	N	NMED		7.93E-06	
Thallium	7440-28-0	mg/kg	0.12				NS	NS	0.782	N	NMED		1.53E-01	Hair/Coat/Eyes
Vanadium	7440-62-2	mg/kg	26				NS	NS	394	N	NMED		6.60E-02	
Zinc	7440-66-6	mg/kg	43				NS	NS	23,500	N	NMED		1.83E-03	

TABLE D1-AP11-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AP11
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.34	U			NS	NS	11.2	N	NMED			
Nitrate	14797-55-8	mg/kg	2.2	U			NS	NS	125,000	N	NMED			
Perchlorate	14797-73-0	mg/kg	0.0019	UJ			NS	NS	54.8	N	NMED			
										Cumulative Risk/Hazard		**5E-06**	**1.4**	
										Exceeds Target Level		**N**	**Y**	

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	0.4
Endocrine	0.40
GI	0.27
Heart	0.16
Hair/Coat	0.15
Eyes	0.15
All Others	0.18

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of Quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper Tolerance Limit

TABLE D1-AP11-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP11
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0023	U			137	N	39,400	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0023	U			NS	NS	72,500	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0023	U			39	N	26,000	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0023	U			92	N	12	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0023	U			383	N	260,000	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0023	U			NS	NS	2,260	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0023	U			146	N	695	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0023	U			NS	NS	930	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0058	U			1	N	34	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0023	U			1,250	N	423	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0023	U			NS	NS	1,800	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0058	U			1	N	41	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0023	U			3	N	738	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0023	U			NS	NS	13,000	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0023	U			41	N	286	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0023	U			87	N	137	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0023	U			NS	NS	1,500	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0023	U			6,730	N	90,800	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0023	U			NS	NS	23,000	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0023	U			6,730	N	90,800	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0023	U			87	N	137	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0035	U			NS	NS	411,000	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0023	U			NS	NS	26,000	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0023	U			NS	NS	1,300	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0023	U			NS	NS	23,000	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0023	U			NS	NS	81,600	N	RSL		
Acetone	67-64-1	mg/kg	0.1				NS	NS	960,000	N	NMED		1.04E-07
Benzene	71-43-2	mg/kg	0.0023	U			87	N	729	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0023	U			NS	NS	1,800	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0023	U			NS	NS	630	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0023	U			30	N	26,000	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0023	U			1,760	N	18,300	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0023	U			NS	NS	95	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0023	U			NS	NS	8,540	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0023	U			53	N	1,020	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0023	U			NS	NS	2,160	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0023	U			NS	NS	89,500	N	NMED		
Chloroform	67-66-3	mg/kg	0.0023	U			29	N	2,000	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0058	U			201	N	1,260	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0023	U			NS	NS	2,600	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0023	U			146	N	695	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0023	U			67	N	18,300	N	NMED		

TABLE D1-AP11-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP11
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0023	U			NS	NS	288	N	NMED		
Dichlorodifluoromethane	75-71-8	mg/kg	0.0023	U			NS	NS	865	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0023	U			29,000	N	368	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0023	U			52	N	916	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0023	U			NS	NS	14,200	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0058	U			NS	NS	3,730	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0023	U			4,820	N	178,000	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.012	U			14,400	N	5,130	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0023	U			NS	NS	58,000	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0023	U			NS	NS	24,000	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0023	U			108	N	843	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0029	U			NS	NS	3,940	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.02				NS	NS	14,200	N	NMED[S]		1.41E-06
sec-Butylbenzene	135-98-8	mg/kg	0.0023	U			NS	NS	120,000	N	RSL		
Styrene	100-42-5	mg/kg	0.0023	U			NS	NS	51,300	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0023	U			NS	NS	120,000	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0023	U			1,650	N	629	N	NMED		
Toluene	108-88-3	mg/kg	0.0023	U			NS	NS	61,300	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0023	U			NS	NS	1,100	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0023	U			146	N	695	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0023	U			112	N	37	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0023	U			NS	NS	6,030	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0023	U			28	N	46	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.18	U			1,250	N	423	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.18	U			NS	NS	13,000	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.18	U			6,730	N	90,800	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.18	U			6,730	N	90,800	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.18	U			NS	NS	91,600	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.18	U			2,330	N	916	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.18	U			NS	NS	2,750	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.18	U			NS	NS	18,300	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.18	U			NS	NS	1,830	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.18	U			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.18	U			17	N	276	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.18	U			NS	NS	104,000	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.18	U			NS	NS	6,490	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.18	U			NS	NS	3,370	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.18	U			NS	NS	41,000	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.18	U			NS	NS	8,000	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.18	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.18	U			NS	NS	410	N	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.18	U			1,100	N	3,300	N	RSL[S]		

TABLE D1-AP11-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP11
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.18	U			NS	NS	73	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.18	U			NS	NS	NS	NS	NS		
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.18	U			NS	NS	82,000	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.18	U			110	N	410	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.18	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.18	U			1,100	N	3,300	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.18	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.18	U			NS	NS	50,500	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.18	U			NS	NS	25,300	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.18	U			NS	NS	253,000	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.18	U			32	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			24	N	251	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.18	U			32	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.18	U			NS	NS	25,300	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.18	U			323	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.18	U			NS	NS	3,300,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.18	U			NS	NS	82,000	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.18	U			NS	NS	2,500	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.18	U			16	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.18	U			519	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.18	U			1,830	N	18,300	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.18	U			12,000	N	160,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.18	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.18	U			3,230	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.18	U			NS	NS	91,600	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.18	U			NS	NS	8,200	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			3	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.18	U			NS	NS	1,200	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.18	U			NS	NS	733,000	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.18	U			NS	NS	916,000	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.18	U			NS	NS	33,700	N	NMED		
Fluorene	86-73-7	mg/kg	0.18	U			NS	NS	33,700	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.18	U			16	N	733	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.18	U			52	N	916	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.18	U			641	N	641	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.18	U			32	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.18	U			27,000	N	183,000	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.18	U			3	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.022	U			1	N	7	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.18	U			5,240	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.18	U			108	N	843	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.18	U			293	N	1,540	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.18	U			45	N	3,180	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.18	U			NS	NS	27,500	N	NMED		
Phenol	108-95-2	mg/kg	0.18	U			NS	NS	275,000	N	NMED		
Pyrene	129-00-0	mg/kg	0.18	U			NS	NS	25,300	N	NMED		

TABLE D1-AP11-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP11
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U			NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U			428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U			NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U			293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U			1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			5,300	N	7,400	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.022	U			304	N	57	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.022	U			9	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.011	U			9	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.011	U			11	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.011	U			11	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.011	U			11	N	16	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.011	U			11	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg	0.00000000045	J	0.0000015	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000051	J	0.000017	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000041	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.000000027	J	0.0000027	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000013	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg	0.0000000088	J	0.000000088	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.00000013	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.00000014	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000011	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000065	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000015	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000032	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.00000018	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.000000041				0.000238	N	0.000808	N	NMED	1.74E-09	5.12E-05

TABLE D1-AP11-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP11
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	30,000				NS	NS	1,290,000	N	NMED		2.33E-02
Antimony	7440-36-0	mg/kg	0.15	U			NS	NS	519	N	NMED		
Arsenic	7440-38-2	mg/kg	2.1				36	N	208	N	NMED	5.85E-07	1.01E-02
Barium	7440-39-3	mg/kg	320				NS	NS	255,000	N	NMED		1.25E-03
Beryllium	7440-41-7	mg/kg	1.1				313,000	N	2,580	N	NMED	3.51E-11	4.26E-04
Cadmium	7440-43-9	mg/kg	1.5	J			417,000	N	1,110	N	NMED	3.60E-11	1.35E-03
Calcium	7440-70-2	mg/kg	7,900				NS	NS	32,400,000	N	NMED		2.44E-04
Chromium (Total) (3)	7440-47-3	mg/kg	18				505	N	314,000	N	NMED	3.56E-07	5.73E-05
Cobalt	7440-48-4	mg/kg	5.6				83,400	N	388	N	NMED	6.71E-10	1.44E-02
Copper	7440-50-8	mg/kg	52				NS	NS	51,900	N	NMED		1.00E-03
Iron	7439-89-6	mg/kg	15,000				NS	NS	908,000	N	NMED		1.65E-02
Lead	7439-92-1	mg/kg	16				NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	8,600				NS	NS	5,680,000	N	NMED		1.51E-03
Manganese	7439-96-5	mg/kg	360				NS	NS	160,000	N	NMED		2.25E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.066	J			NS	NS	112	N	NMED		5.89E-04
Nickel	7440-02-0	mg/kg	12				2,890,000	N	25,700	N	NMED	4.15E-11	4.67E-04
Potassium	7440-09-7	mg/kg	3,400	J			NS	NS	76,200,000	N	NMED		4.46E-05
Selenium	7782-49-2	mg/kg	1.5				NS	NS	6,490	N	NMED		2.31E-04
Silver	7440-22-4	mg/kg	0.12				NS	NS	6,490	N	NMED		1.85E-05
Sodium	7440-23-5	mg/kg	62				NS	NS	37,300,000	N	NMED		1.66E-06
Thallium	7440-28-0	mg/kg	0.12				NS	NS	13	N	NMED		9.23E-03
Vanadium	7440-62-2	mg/kg	26				NS	NS	6,530	N	NMED		3.98E-03
Zinc	7440-66-6	mg/kg	43				NS	NS	38,900	N	NMED		1.11E-03

TABLE D1-AP11-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP11
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.34	U			NS	NS	63	N	NMED		
Nitrate	14797-55-8	mg/kg	2.2	U			NS	NS	2,080,000	N	NMED		
Perchlorate	14797-73-0	mg/kg	0.0019	UJ			NS	NS	908	N	NMED		
										Cumulative Risk/Hazard		**9E-07**	**0.09**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper tolerance limit

TABLE D1-AP11-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP11
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0023	U			659	N	10,600	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0023	U			NS	NS	13,600	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0023	U			197	N	7,080	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0023	U			4,300	N	2	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0023	U			1,820	N	70,800	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0023	U			NS	NS	424	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0023	U			781	N	130	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0023	U			NS	NS	283	N	NMED[C]			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0058	U			8	N	6	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0023	U			8,540	N	79	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0023	U			NS	NS	492	N	NMED[C]			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0058	U			6	N	8	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0023	U			16	N	140	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0023	U			NS	NS	2,500	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0023	U			195	N	54	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0023	U			415	N	25	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0023	U			NS	NS	422	N	NMED[C]			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0023	U			45,900	N	24,800	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0023	U			NS	NS	7,080	N	NMED[C]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0023	U			45,900	N	24,800	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0023	U			415	N	25	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.0035	U			NS	NS	90,700	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0023	U			NS	NS	7,080	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.0023	U			NS	NS	599	N	NMED[C]			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0023	U			NS	NS	7,080	N	NMED[C]			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0023	U			NS	NS	20,400	N	NMED[C]			
Acetone	67-64-1	mg/kg	0.1				NS	NS	242,000	N	NMED		4.13E-07	
Benzene	71-43-2	mg/kg	0.0023	U			423	N	142	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.0023	U			NS	NS	538	N	NMED[C]			
Bromochloromethane	74-97-5	mg/kg	0.0023	U			NS	NS	296	N	NMED[C]			
Bromodichloromethane	75-27-4	mg/kg	0.0023	U			143	N	7,080	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0023	U			23,700	N	5,380	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0023	U			NS	NS	18	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.0023	U			NS	NS	1,620	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0023	U			252	N	202	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0023	U			NS	NS	412	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0023	U			NS	NS	16,600	N	NMED			
Chloroform	67-66-3	mg/kg	0.0023	U			134	N	391	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0058	U			956	N	235	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0023	U			NS	NS	708	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0023	U			781	N	130	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0023	U			340	N	5,380	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0023	U			NS	NS	54	N	NMED			

TABLE D1-AP11-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP11
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Dichlorodifluoromethane	75-71-8	mg/kg	0.0023	U			NS	NS	161	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.0023	U			1,770	N	5,800	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0023	U			2,400	N	269	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0023	U			NS	NS	2,740	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0058	U			NS	NS	696	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0023	U			24,200	N	33,100	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.012	U			89,600	N	1,210	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0023	U			NS	NS	17,700	N	NMED[C]			
n-Propylbenzene	103-65-1	mg/kg	0.0023	U			NS	NS	6,730	N	NMED[C]			
Naphthalene	91-20-3	mg/kg	0.0023	U			633	N	159	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0029	U			NS	NS	736	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.02				NS	NS	2,740	N	NMED[S]		7.30E-06	
sec-Butylbenzene	135-98-8	mg/kg	0.0023	U			NS	NS	35,400	N	NMED[C]			
Styrene	100-42-5	mg/kg	0.0023	U			NS	NS	10,200	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0023	U			NS	NS	35,400	N	NMED[C]			
Tetrachloroethene	127-18-4	mg/kg	0.0023	U			7,910	N	120	N	NMED			
Toluene	108-88-3	mg/kg	0.0023	U			NS	NS	14,000	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0023	U			NS	NS	206	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0023	U			781	N	130	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0023	U			5,370	N	7	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0023	U			NS	NS	1,130	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0023	U			161	N	162	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.18	U			8,540	N	79	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.18	U			NS	NS	2,500	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.18	U			45,900	N	24,800	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.18	U			45,900	N	24,800	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.18	U			NS	NS	26,900	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.18	U			17,000	N	269	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.18	U			NS	NS	807	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.18	U			NS	NS	5,380	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.18	U			NS	NS	538	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.18	U			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.18	U			165	N	81	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.18	U			NS	NS	28,300	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.18	U			NS	NS	1,770	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.18	U			NS	NS	1,000	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.18	U			NS	NS	13,500	N	NMED[C]			
2-Nitroaniline	88-74-4	mg/kg	0.18	U			NS	NS	2,690	N	NMED[C]			
2-Nitrophenol	88-75-5	mg/kg	0.18	U			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.18	U			410	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.18	U			135	N	1,080	N	NMED[SC]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.18	U			NS	NS	22	N	NMED			

TABLE D1-AP11-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP11
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.18	U			NS	NS	NS	NS	NS			
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.18	U			NS	NS	26,900	N	NMED[C]			
4-Chloroaniline	106-47-8	mg/kg	0.18	U			14	N	135	N	NMED[C]			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.18	U			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.18	U			135	N	1,080	N	NMED[C]			
4-Nitrophenol	100-02-7	mg/kg	0.18	U			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.18	U			NS	NS	15,100	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.18	U			NS	NS	7,530	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.18	U			NS	NS	75,300	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.18	U			240	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			173	N	15	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.18	U			240	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.18	U			NS	NS	7,530	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.18	U			2,310	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.18	U			NS	NS	1,080,000	N	NMED[C]			
Benzyl Alcohol	100-51-6	mg/kg	0.18	U			NS	NS	26,900	N	NMED[C]			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.18	U			NS	NS	807	N	NMED[C]			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.18	U			2	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.18	U			3,540	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.18	U			13,400	N	5,380	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.18	U			1,420	N	53,800	N	NMED[C]			
Carbazole	86-74-8	mg/kg	0.18	U			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.18	U			23,100	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.18	U			NS	NS	26,900	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.18	U			NS	NS	2,690	N	NMED[C]			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			24	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.18	U			NS	NS	269	N	NMED[C]			
Diethylphthalate	84-66-2	mg/kg	0.18	U			NS	NS	215,000	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.18	U			NS	NS	269,000	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.18	U			NS	NS	10,000	N	NMED			
Fluorene	86-73-7	mg/kg	0.18	U			NS	NS	10,000	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.18	U			117	N	215	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.18	U			2,400	N	269	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.18	U			4,670	N	188	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.18	U			240	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.18	U			198,000	N	53,700	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.18	U			0.38	N	NA	N	NMED[C]			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.022	U			4	N	2	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.18	U			37,900	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.18	U			633	N	159	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.18	U			1,350	N	353	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.18	U			346	N	989	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.18	U			NS	NS	8,070	N	NMED			
Phenol	108-95-2	mg/kg	0.18	U			NS	NS	77,400	N	NMED			
Pyrene	129-00-0	mg/kg	0.18	U			NS	NS	7,530	N	NMED			

TABLE D1-AP11-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP11
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	8,070	N	NMED[C]			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	27	N	NMED[C]			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U			NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U			2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U			NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U			1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U			11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			626	N	2,420	N	NMED[C]			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.022	U			2,440	N	17	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.022	U			55	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.011	U			58	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.011	U			85	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.011	U			85	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.011	U			85	N	5	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.011	U			85	N	NS	NS	NMED			
DIOXINS/FURANS (ηg/kg) (3)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg	0.00000000045	J	0.0000015	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000051	J	0.000017	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000041	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.000000027	J	0.0000027	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000013	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg	0.0000000088	J	0.000000088	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.00000013	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.00000014	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000011	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000065	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000015	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000032	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.00000018	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.000000041				0.00172	N	0.000226	N	NMED	2.40E-10	1.83E-04	

TABLE D1-AP11-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP11
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	30,000				NS	NS	41,400	N	NMED		7.25E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	U			NS	NS	142	N	NMED			
Arsenic	7440-38-2	mg/kg	2.1				216	N	41	N	NMED	9.72E-08	5.10E-02	
Barium	7440-39-3	mg/kg	320				NS	NS	4,390	N	NMED		7.29E-02	
Beryllium	7440-41-7	mg/kg	1.1				2,710	N	148	N	NMED	4.06E-09	7.43E-03	
Cadmium	7440-43-9	mg/kg	1.5	J			3,610	N	72	N	NMED	4.16E-09	2.08E-02	
Calcium	7440-70-2	mg/kg	7,900				NS	NS	8,850,000	N	NMED		8.93E-04	
Chromium (Total) (4)	7440-47-3	mg/kg	18				468	N	134	N	NMED	3.85E-07	1.34E-01	GI, Blood
Cobalt	7440-48-4	mg/kg	5.6				722	N	37	N	NMED	7.76E-08	1.53E-01	Endocrine
Copper	7440-50-8	mg/kg	52				NS	NS	14,200	N	NMED		3.66E-03	
Iron	7439-89-6	mg/kg	15,000				NS	NS	248,000	N	NMED		6.05E-02	
Lead	7439-92-1	mg/kg	16				NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	8,600				NS	NS	1,550,000	N	NMED		5.55E-03	
Manganese	7439-96-5	mg/kg	360				NS	NS	464	N	NMED		7.76E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.066	J			NS	NS	21	N	NMED		3.19E-03	
Nickel	7440-02-0	mg/kg	12				20,500	N	753	N	NMED	5.85E-09	1.59E-02	
Potassium	7440-09-7	mg/kg	3,400	J			NS	NS	20,800,000	N	NMED		1.63E-04	
Selenium	7782-49-2	mg/kg	1.5				NS	NS	1,750	N	NMED		8.57E-04	
Silver	7440-22-4	mg/kg	0.12				NS	NS	1,770	N	NMED		6.78E-05	
Sodium	7440-23-5	mg/kg	62				NS	NS	10,200,000	N	NMED		6.08E-06	
Thallium	7440-28-0	mg/kg	0.12				NS	NS	4	N	NMED		3.39E-02	
Vanadium	7440-62-2	mg/kg	26				NS	NS	614	N	NMED		4.23E-02	
Zinc	7440-66-6	mg/kg	43				NS	NS	106,000	N	NMED		4.06E-04	

TABLE D1-AP11-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP11
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.34	U			NS	NS	12	N	NMED			
Nitrate	14797-55-8	mg/kg	2.2	U			NS	NS	566,000	N	NMED			
Perchlorate	14797-73-0	mg/kg	0.0019	UJ			NS	NS	248	N	NMED			
										Cumulative Risk/Hazard		**6E-07**	**2.1**	
										Exceeds Target Level		**N**	Y	

System	Hazard Quotient
Nervous	1.5
Endocrine	0.15
GI	0.13
Blood	0.13
All Others	0.32

Notes:

[s] = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update).

2) NMED[C] = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

3) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

4) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper tolerance limit

TABLE D1-AP12-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AP12
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0025	U			28.1	N	2,350	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0025	U			NS	NS	14,400	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0025	U			7.98	N	1,560	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0025	U			18.8	N	2.61	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0025	U			78.6	N	15,600	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0025	U			NS	NS	440	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0025	U			29.3	N	141	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0025	U			NS	NS	63	N	RSL			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0062	U			0.051	N	7.09	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0025	U			240	N	82.9	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0025	U			NS	NS	300	N	RSL			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0062	U			0.0858	N	5.88	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0025	U			0.672	N	135	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0025	U			NS	NS	2,150	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0025	U			8.32	N	55.6	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0025	U			17.8	N	29	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0025	U			NS	NS	270	N	RSL			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0025	U			1,290	N	5,480	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0025	U			NS	NS	1,600	N	RSL			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0025	U			1,290	N	5,480	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0025	U			17.8	N	29	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.0037	U			NS	NS	37,400	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0025	U			NS	NS	1,560	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.0025	U			NS	NS	200	N	RSL			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0025	U			NS	NS	1,600	N	RSL			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0025	U			NS	NS	5,810	N	RSL			
Acetone	67-64-1	mg/kg	0.054				NS	NS	66,300	N	NMED		8.14E-07	
Benzene	71-43-2	mg/kg	0.0025	U			17.8	N	114	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.0025	U			NS	NS	290	N	RSL			
Bromochloromethane	74-97-5	mg/kg	0.0025	U			NS	NS	150	N	RSL			
Bromodichloromethane	75-27-4	mg/kg	0.0025	U			6.19	N	1,560	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0025	U			674	N	1,230	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0025	U			NS	NS	17.7	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.0025	U			NS	NS	1,550	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0025	U			10.7	N	144	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0025	U			NS	NS	378	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0025	U			NS	NS	19,000	N	NMED			
Chloroform	67-66-3	mg/kg	0.0025	U			5.9	N	306	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0062	U			41.1	N	268	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0025	U			NS	NS	156	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0025	U			29.3	N	141	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0025	U			13.9	N	1,230	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0025	U			NS	NS	57.9	N	NMED			

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HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AP12
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Dichlorodifluoromethane	75-71-8	mg/kg	0.0025	U			NS	NS	182	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.0025	U			75.1	N	3,930	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0025	U			68.3	N	61.6	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0025	U			NS	NS	2,360	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0062	U			NS	NS	764	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0025	U			975	N	37,800	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.012	U			766	N	409	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0025	U			NS	NS	3,900	N	RSL			
n-Propylbenzene	103-65-1	mg/kg	0.0025	U			NS	NS	3,800	N	RSL			
Naphthalene	91-20-3	mg/kg	0.0025	U			22.6	N	162	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0031	U			NS	NS	805	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.0025	U			NS	NS	2,360	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.0025	U			NS	NS	7,800	N	RSL			
Styrene	100-42-5	mg/kg	0.0025	U			NS	NS	7,260	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0025	U			NS	NS	7,800	N	RSL			
Tetrachloroethene	127-18-4	mg/kg	0.0025	U			337	N	111	N	NMED			
Toluene	108-88-3	mg/kg	0.0025	U			NS	NS	5,230	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0025	U			NS	NS	210	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0025	U			29.3	N	141	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0025	U			15.5	N	6.77	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0025	U			NS	NS	1,230	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0025	U			0.742	N	113	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.21	U			240	N	82.9	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.21	U			NS	NS	2,150	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.21	U			1,290	N	5,480	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.21	U			1,290	N	5,480	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.21	U			NS	NS	6,160	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.21	U			484	N	61.6	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.21	U			NS	NS	185	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.21	U			NS	NS	1,230	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.21	U			NS	NS	123	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.21	U			17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.21	U			3.56	N	18.5	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.21	U			NS	NS	6,260	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.21	U			NS	NS	391	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.21	U			NS	NS	232	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.21	U			NS	NS	3,200	N	RSL			
2-Nitroaniline	88-74-4	mg/kg	0.21	U			NS	NS	630	N	RSL			
2-Nitrophenol	88-75-5	mg/kg	0.21	U			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.21	U			11.8	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.21	U			270	N	250	N	RSL[S]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.21	U			NS	NS	4.93	N	NMED			
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.21	U			NS	NS	NS	NS	NS			

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HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AP12
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.21	U			NS	NS	6,300	N	RSL			
4-Chloroaniline	106-47-8	mg/kg	0.21	U			27	N	32	N	RSL			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.21	U			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.21	U			270	N	250	N	RSL			
4-Nitrophenol	100-02-7	mg/kg	0.21	U			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.21	U			NS	NS	3,480	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.21	U			NS	NS	1,740	N	NMED[$]			
Anthracene	120-12-7	mg/kg	0.21	U			NS	NS	17,400	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.21	U			1.53	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.16	U			1.12	N	17.4	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.21	U			1.53	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.21	U			NS	NS	1,740	N	NMED[$]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.21	U			15.3	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.21	U			NS	NS	250,000	N	RSL			
Benzyl Alcohol	100-51-6	mg/kg	0.21	U			NS	NS	6,300	N	RSL			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.21	U			NS	NS	190	N	RSL			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.21	U			3.11	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.21	U			99.3	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.21	U			380	N	1,230	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.21	U			2,900	N	13,000	N	RSL			
Carbazole	86-74-8	mg/kg	0.21	U			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.21	U			153	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.21	U			NS	NS	6,160	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.21	U			NS	NS	630	N	RSL			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.16	U			0.153	Y	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.21	U			NS	NS	78	N	RSL			
Diethylphthalate	84-66-2	mg/kg	0.21	U			NS	NS	49,300	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.21	U			NS	NS	61,600	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.21	U			NS	NS	2,320	N	NMED			
Fluorene	86-73-7	mg/kg	0.21	U			NS	NS	2,320	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.21	U			3.33	N	49.3	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.21	U			68.3	N	61.6	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.21	U			133	N	43.1	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.21	U			1.53	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.21	U			5,610	N	12,300	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.21	U			0.78	N	NS	NS	RSL			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.025	U			0.0234	Y	0.493	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.21	U			1,090	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.21	U			22.6	N	162	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.21	U			60.4	N	131	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.21	U			9.85	N	234	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.21	U			NS	NS	1,740	N	NMED			
Phenol	108-95-2	mg/kg	0.21	U			NS	NS	18,500	N	NMED			
Pyrene	129-00-0	mg/kg	0.21	U			NS	NS	1,740	N	NMED			

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FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	2,200	N	RSL			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	6.3	N	RSL			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			211	N	36	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			3.56	N	18.5	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	7.7	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			31.6	N	70.4	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	6.16	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U			NS	NS	7.64	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			333	N	247	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U			83.1	N	301	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U			NS	NS	156	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U			60.4	N	131	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U			313	N	6.16	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NS	NS	3,850	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			1,300	N	570	N	RSL			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.025	U			69.6	N	3.98	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.025	U			1.81	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.012	U			1.86	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.012	U			2.43	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.012	U			2.43	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.012	U			2.43	N	1.14	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.012	U			2.43	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (2)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000023	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg		U	0.0000021	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000016	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.00000038	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.000000043	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000069	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000099	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000066	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000075	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg	0.0000000041	J	0.000000041	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.0000001	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000024	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.00000021	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg	0.000000011	J	0.00000011	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000011	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000069	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.00000013	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.000000015				0.000049	N	0.0000506	N	NMED	3.08E-09	2.98E-04	

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MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	24,000				NS	NS	78,000	N	NMED		3.08E-01	Nervous
Antimony	7440-36-0	mg/kg	0.24				NS	NS	31.3	N	NMED		7.67E-03	
Arsenic	7440-38-2	mg/kg	2.1				7.07	N	13	N	NMED	2.97E-06	1.62E-01	Heart/Endocrine
Barium	7440-39-3	mg/kg	250				NS	NS	15,600	N	NMED		1.60E-02	
Beryllium	7440-41-7	mg/kg	0.93	J			64,400	N	156	N	NMED	1.44E-10	5.96E-03	
Cadmium	7440-43-9	mg/kg	0.37				85,900	N	70.5	N	NMED	4.31E-11	5.25E-03	
Calcium	7440-70-2	mg/kg	5,100				NS	NS	13,000,000	N	NMED		3.92E-04	
Chromium (Total) (3)	7440-47-3	mg/kg	15				96.6	N	45,200	N	NMED	1.55E-06	3.32E-04	
Cobalt	7440-48-4	mg/kg	5.2				17,200	N	23.4	N	NMED	3.02E-09	2.22E-01	Endocrine
Copper	7440-50-8	mg/kg	42	J			NS	NS	3,130	N	NMED		1.34E-02	
Iron	7439-89-6	mg/kg	13,000				NS	NS	54,800	N	NMED		2.37E-01	GI
Lead	7439-92-1	mg/kg	14				NS	NS	200	N	RSL			
Magnesium	7439-95-4	mg/kg	7,200				NS	NS	15,600,000	N	NMED		4.62E-04	
Manganese	7439-96-5	mg/kg	360				NS	NS	10,500	N	NMED		3.43E-02	
Mercury (Elemental)	7439-97-6	mg/kg	0.052	J			NS	NS	23.8	N	NMED		2.18E-03	
Nickel	7440-02-0	mg/kg	12				595,000	N	1,560	N	NMED	2.02E-10	7.69E-03	
Potassium	7440-09-7	mg/kg	2,300				NS	NS	15,600,000	N	NMED		1.47E-04	
Selenium	7782-49-2	mg/kg	1.3				NS	NS	391	N	NMED		3.32E-03	
Silver	7440-22-4	mg/kg	0.083	J			NS	NS	391	N	NMED		2.12E-04	
Sodium	7440-23-5	mg/kg	24				NS	NS	7,820,000	N	NMED		3.07E-06	
Thallium	7440-28-0	mg/kg	0.1				NS	NS	0.782	N	NMED		1.28E-01	Hair/Coat/Eyes
Vanadium	7440-62-2	mg/kg	28				NS	NS	394	N	NMED		7.11E-02	
Zinc	7440-66-6	mg/kg	47				NS	NS	23,500	N	NMED		2.00E-03	

TABLE D1-AP12-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AP12
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.37	U			NS	NS	11.2	N	NMED			
Nitrate	14797-55-8	mg/kg	1.4	J			NS	NS	125,000	N	NMED		1.12E-05	
Perchlorate	14797-73-0	mg/kg	0.0022	UJ			NS	NS	54.8	N	NMED			
										Cumulative Risk/Hazard		**5E-06**	**1.2**	
										Exceeds Target Level		**N**	**Y**	

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	0.31
Endocrine	0.38
GI	0.24
Heart	0.16
Hair/Coat	0.13
Eyes	0.13
All Others	0.17

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of Quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper Tolerance Limit

TABLE D1-AP12-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP12
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0025	U			137	N	39,400	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0025	U			NS	NS	72,500	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0025	U			39	N	26,000	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0025	U			92	N	12	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0025	U			383	N	260,000	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0025	U			NS	NS	2,260	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0025	U			146	N	695	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0025	U			NS	NS	930	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0062	U			1	N	34	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0025	U			1,250	N	423	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0025	U			NS	NS	1,800	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0062	U			1	N	41	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0025	U			3	N	738	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0025	U			NS	NS	13,000	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0025	U			41	N	286	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0025	U			87	N	137	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0025	U			NS	NS	1,500	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0025	U			6,730	N	90,800	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0025	U			NS	NS	23,000	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0025	U			6,730	N	90,800	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0025	U			87	N	137	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0037	U			NS	NS	411,000	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0025	U			NS	NS	26,000	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0025	U			NS	NS	1,300	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0025	U			NS	NS	23,000	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0025	U			NS	NS	81,600	N	RSL		
Acetone	67-64-1	mg/kg	0.054				NS	NS	960,000	N	NMED		5.63E-08
Benzene	71-43-2	mg/kg	0.0025	U			87	N	729	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0025	U			NS	NS	1,800	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0025	U			NS	NS	630	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0025	U			30	N	26,000	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0025	U			1,760	N	18,300	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0025	U			NS	NS	95	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0025	U			NS	NS	8,540	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0025	U			53	N	1,020	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0025	U			NS	NS	2,160	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0025	U			NS	NS	89,500	N	NMED		
Chloroform	67-66-3	mg/kg	0.0025	U			29	N	2,000	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0062	U			201	N	1,260	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0025	U			NS	NS	2,600	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0025	U			146	N	695	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0025	U			67	N	18,300	N	NMED		

TABLE D1-AP12-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP12
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0025	U			NS	NS	288	N	NMED		
Dichlorodifluoromethane	75-71-8	mg/kg	0.0025	U			NS	NS	865	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0025	U			29,000	N	368	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0025	U			52	N	916	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0025	U			NS	NS	14,200	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0062	U			NS	NS	3,730	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0025	U			4,820	N	178,000	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.012	U			14,400	N	5,130	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0025	U			NS	NS	58,000	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0025	U			NS	NS	24,000	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0025	U			108	N	843	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0031	U			NS	NS	3,940	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0025	U			NS	NS	14,200	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0025	U			NS	NS	120,000	N	RSL		
Styrene	100-42-5	mg/kg	0.0025	U			NS	NS	51,300	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0025	U			NS	NS	120,000	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0025	U			1,650	N	629	N	NMED		
Toluene	108-88-3	mg/kg	0.0025	U			NS	NS	61,300	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0025	U			NS	NS	1,100	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0025	U			146	N	695	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0025	U			112	N	37	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0025	U			NS	NS	6,030	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0025	U			28	N	46	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.21	U			1,250	N	423	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.21	U			NS	NS	13,000	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.21	U			6,730	N	90,800	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.21	U			6,730	N	90,800	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.21	U			NS	NS	91,600	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.21	U			2,330	N	916	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.21	U			NS	NS	2,750	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.21	U			NS	NS	18,300	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.21	U			NS	NS	1,830	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.21	U			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.21	U			17	N	276	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.21	U			NS	NS	104,000	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.21	U			NS	NS	6,490	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.21	U			NS	NS	3,370	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.21	U			NS	NS	41,000	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.21	U			NS	NS	8,000	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.21	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.21	U			NS	NS	410	N	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.21	U			1,100	N	3,300	N	RSL[S]		

TABLE D1-AP12-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP12
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.21	U			NS	NS	73	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.21	U			NS	NS	NS	NS	NS		
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.21	U			NS	NS	82,000	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.21	U			110	N	410	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.21	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.21	U			1,100	N	3,300	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.21	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.21	U			NS	NS	50,500	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.21	U			NS	NS	25,300	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.21	U			NS	NS	253,000	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.21	U			32	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.16	U			24	N	251	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.21	U			32	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.21	U			NS	NS	25,300	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.21	U			323	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.21	U			NS	NS	3,300,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.21	U			NS	NS	82,000	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.21	U			NS	NS	2,500	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.21	U			16	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.21	U			519	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.21	U			1,830	N	18,300	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.21	U			12,000	N	160,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.21	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.21	U			3,230	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.21	U			NS	NS	91,600	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.21	U			NS	NS	8,200	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.16	U			3	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.21	U			NS	NS	1,200	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.21	U			NS	NS	733,000	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.21	U			NS	NS	916,000	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.21	U			NS	NS	33,700	N	NMED		
Fluorene	86-73-7	mg/kg	0.21	U			NS	NS	33,700	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.21	U			16	N	733	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.21	U			52	N	916	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.21	U			641	N	641	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.21	U			32	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.21	U			27,000	N	183,000	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.21	U			3	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.025	U			1	N	7	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.21	U			5,240	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.21	U			108	N	843	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.21	U			293	N	1,540	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.21	U			45	N	3,180	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.21	U			NS	NS	27,500	N	NMED		
Phenol	108-95-2	mg/kg	0.21	U			NS	NS	275,000	N	NMED		
Pyrene	129-00-0	mg/kg	0.21	U			NS	NS	25,300	N	NMED		

TABLE D1-AP12-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP12
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U			NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U			428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U			NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U			293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U			1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			5,300	N	7,400	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.025	U			304	N	57	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.025	U			9	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.012	U			9	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.012	U			11	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.012	U			11	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.012	U			11	N	16	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.012	U			11	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000023	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg		U	0.0000021	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000016	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.00000038	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.000000043	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000069	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000099	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000066	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000075	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg	0.0000000041	J	0.000000041	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.0000001	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000024	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.00000021	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg	0.000000011	J	0.00000011	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000011	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000069	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.00000013	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.000000015				0.000238	N	0.000808	N	NMED	6.34E-10	1.87E-05

TABLE D1-AP12-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP12
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	24,000				NS	NS	1,290,000	N	NMED		1.86E-02
Antimony	7440-36-0	mg/kg	0.24				NS	NS	519	N	NMED		4.62E-04
Arsenic	7440-38-2	mg/kg	2.1				36	N	208	N	NMED	5.85E-07	1.01E-02
Barium	7440-39-3	mg/kg	250				NS	NS	255,000	N	NMED		9.80E-04
Beryllium	7440-41-7	mg/kg	0.93	J			313,000	N	2,580	N	NMED	2.97E-11	3.60E-04
Cadmium	7440-43-9	mg/kg	0.37				417,000	N	1,110	N	NMED	8.87E-12	3.33E-04
Calcium	7440-70-2	mg/kg	5,100				NS	NS	32,400,000	N	NMED		1.57E-04
Chromium (Total) (3)	7440-47-3	mg/kg	15				505	N	314,000	N	NMED	2.97E-07	4.78E-05
Cobalt	7440-48-4	mg/kg	5.2				83,400	N	388	N	NMED	6.24E-10	1.34E-02
Copper	7440-50-8	mg/kg	42	J			NS	NS	51,900	N	NMED		8.09E-04
Iron	7439-89-6	mg/kg	13,000				NS	NS	908,000	N	NMED		1.43E-02
Lead	7439-92-1	mg/kg	14				NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	7,200				NS	NS	5,680,000	N	NMED		1.27E-03
Manganese	7439-96-5	mg/kg	360				NS	NS	160,000	N	NMED		2.25E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.052	J			NS	NS	112	N	NMED		4.64E-04
Nickel	7440-02-0	mg/kg	12				2,890,000	N	25,700	N	NMED	4.15E-11	4.67E-04
Potassium	7440-09-7	mg/kg	2,300				NS	NS	76,200,000	N	NMED		3.02E-05
Selenium	7782-49-2	mg/kg	1.3				NS	NS	6,490	N	NMED		2.00E-04
Silver	7440-22-4	mg/kg	0.083	J			NS	NS	6,490	N	NMED		1.28E-05
Sodium	7440-23-5	mg/kg	24				NS	NS	37,300,000	N	NMED		6.43E-07
Thallium	7440-28-0	mg/kg	0.1				NS	NS	13	N	NMED		7.69E-03
Vanadium	7440-62-2	mg/kg	28				NS	NS	6,530	N	NMED		4.29E-03
Zinc	7440-66-6	mg/kg	47				NS	NS	38,900	N	NMED		1.21E-03

TABLE D1-AP12-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP12
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.37	U			NS	NS	63	N	NMED		
Nitrate	14797-55-8	mg/kg	1.4	J			NS	NS	2,080,000	N	NMED		6.73E-07
Perchlorate	14797-73-0	mg/kg	0.0022	UJ			NS	NS	908	N	NMED		
										Cumulative Risk/Hazard		**9E-07**	**0.08**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service

DL = Detection limit

J = Estimated

LOD = Limit of detection

LOQ = Limit of quantitation

mg/kg = milligrams per kilogram

NS = No Standard

U = Nondetect

UJ = Estimated Nondetect

UTL = Upper tolerance limit

TABLE D1-AP12-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP12
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0025	U			659	N	10,600	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0025	U			NS	NS	13,600	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0025	U			197	N	7,080	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0025	U			4,300	N	2	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0025	U			1,820	N	70,800	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0025	U			NS	NS	424	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0025	U			781	N	130	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0025	U			NS	NS	283	N	NMED[C]			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0062	U			8	N	6	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0025	U			8,540	N	79	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0025	U			NS	NS	492	N	NMED[C]			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0062	U			6	N	8	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0025	U			16	N	140	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0025	U			NS	NS	2,500	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0025	U			195	N	54	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0025	U			415	N	25	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0025	U			NS	NS	422	N	NMED[C]			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0025	U			45,900	N	24,800	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0025	U			NS	NS	7,080	N	NMED[C]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0025	U			45,900	N	24,800	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0025	U			415	N	25	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.0037	U			NS	NS	90,700	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0025	U			NS	NS	7,080	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.0025	U			NS	NS	599	N	NMED[C]			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0025	U			NS	NS	7,080	N	NMED[C]			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0025	U			NS	NS	20,400	N	NMED[C]			
Acetone	67-64-1	mg/kg	0.054				NS	NS	242,000	N	NMED		2.23E-07	
Benzene	71-43-2	mg/kg	0.0025	U			423	N	142	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.0025	U			NS	NS	538	N	NMED[C]			
Bromochloromethane	74-97-5	mg/kg	0.0025	U			NS	NS	296	N	NMED[C]			
Bromodichloromethane	75-27-4	mg/kg	0.0025	U			143	N	7,080	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0025	U			23,700	N	5,380	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0025	U			NS	NS	18	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.0025	U			NS	NS	1,620	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0025	U			252	N	202	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0025	U			NS	NS	412	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0025	U			NS	NS	16,600	N	NMED			
Chloroform	67-66-3	mg/kg	0.0025	U			134	N	391	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0062	U			956	N	235	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0025	U			NS	NS	708	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0025	U			781	N	130	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0025	U			340	N	5,380	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0025	U			NS	NS	54	N	NMED			

TABLE D1-AP12-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP12
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Dichlorodifluoromethane	75-71-8	mg/kg	0.0025	U			NS	NS	161	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.0025	U			1,770	N	5,800	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0025	U			2,400	N	269	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0025	U			NS	NS	2,740	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0062	U			NS	NS	696	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0025	U			24,200	N	33,100	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.012	U			89,600	N	1,210	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0025	U			NS	NS	17,700	N	NMED[C]			
n-Propylbenzene	103-65-1	mg/kg	0.0025	U			NS	NS	6,730	N	NMED[C]			
Naphthalene	91-20-3	mg/kg	0.0025	U			633	N	159	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0031	U			NS	NS	736	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.0025	U			NS	NS	2,740	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.0025	U			NS	NS	35,400	N	NMED[C]			
Styrene	100-42-5	mg/kg	0.0025	U			NS	NS	10,200	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0025	U			NS	NS	35,400	N	NMED[C]			
Tetrachloroethene	127-18-4	mg/kg	0.0025	U			7,910	N	120	N	NMED			
Toluene	108-88-3	mg/kg	0.0025	U			NS	NS	14,000	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0025	U			NS	NS	206	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0025	U			781	N	130	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0025	U			5,370	N	7	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0025	U			NS	NS	1,130	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0025	U			161	N	162	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.21	U			8,540	N	79	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.21	U			NS	NS	2,500	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.21	U			45,900	N	24,800	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.21	U			45,900	N	24,800	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.21	U			NS	NS	26,900	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.21	U			17,000	N	269	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.21	U			NS	NS	807	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.21	U			NS	NS	5,380	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.21	U			NS	NS	538	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.21	U			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.21	U			165	N	81	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.21	U			NS	NS	28,300	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.21	U			NS	NS	1,770	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.21	U			NS	NS	1,000	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.21	U			NS	NS	13,500	N	NMED[C]			
2-Nitroaniline	88-74-4	mg/kg	0.21	U			NS	NS	2,690	N	NMED[C]			
2-Nitrophenol	88-75-5	mg/kg	0.21	U			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.21	U			410	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.21	U			135	N	1,080	N	NMED[SC]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.21	U			NS	NS	22	N	NMED			

TABLE D1-AP12-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP12
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.21	U			NS	NS	NS	NS	NS			
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.21	U			NS	NS	26,900	N	NMED[C]			
4-Chloroaniline	106-47-8	mg/kg	0.21	U			14	N	135	N	NMED[C]			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.21	U			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.21	U			135	N	1,080	N	NMED[C]			
4-Nitrophenol	100-02-7	mg/kg	0.21	U			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.21	U			NS	NS	15,100	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.21	U			NS	NS	7,530	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.21	U			NS	NS	75,300	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.21	U			240	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.16	U			173	N	15	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.21	U			240	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.21	U			NS	NS	7,530	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.21	U			2,310	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.21	U			NS	NS	1,080,000	N	NMED[C]			
Benzyl Alcohol	100-51-6	mg/kg	0.21	U			NS	NS	26,900	N	NMED[C]			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.21	U			NS	NS	807	N	NMED[C]			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.21	U			2	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.21	U			3,540	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.21	U			13,400	N	5,380	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.21	U			1,420	N	53,800	N	NMED[C]			
Carbazole	86-74-8	mg/kg	0.21	U			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.21	U			23,100	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.21	U			NS	NS	26,900	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.21	U			NS	NS	2,690	N	NMED[C]			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.16	U			24	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.21	U			NS	NS	269	N	NMED[C]			
Diethylphthalate	84-66-2	mg/kg	0.21	U			NS	NS	215,000	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.21	U			NS	NS	269,000	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.21	U			NS	NS	10,000	N	NMED			
Fluorene	86-73-7	mg/kg	0.21	U			NS	NS	10,000	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.21	U			117	N	215	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.21	U			2,400	N	269	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.21	U			4,670	N	188	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.21	U			240	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.21	U			198,000	N	53,700	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.21	U			0.38	N	NA	N	NMED[C]			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.025	U			4	N	2	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.21	U			37,900	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.21	U			633	N	159	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.21	U			1,350	N	353	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.21	U			346	N	989	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.21	U			NS	NS	8,070	N	NMED			
Phenol	108-95-2	mg/kg	0.21	U			NS	NS	77,400	N	NMED			
Pyrene	129-00-0	mg/kg	0.21	U			NS	NS	7,530	N	NMED			

TABLE D1-AP12-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP12
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	8,070	N	NMED[C]			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	27	N	NMED[C]			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U			NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U			2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U			NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U			1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U			11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			626	N	2,420	N	NMED[C]			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.025	U			2,440	N	17	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.025	U			55	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.012	U			58	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.012	U			85	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.012	U			85	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.012	U			85	N	5	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.012	U			85	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (3)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000023	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg		U	0.0000021	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000016	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.00000038	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.000000043	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000069	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000099	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000066	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000075	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg	0.0000000041	J	0.000000041	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.0000001	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000024	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.00000021	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg	0.000000011	J	0.00000011	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000011	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000069	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.00000013	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.000000015				0.00172	N	0.000226	N	NMED	8.78E-11	6.68E-05	

TABLE D1-AP12-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP12
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	24,000				NS	NS	41,400	N	NMED		5.80E-01	Nervous
Antimony	7440-36-0	mg/kg	0.24				NS	NS	142	N	NMED		1.69E-03	
Arsenic	7440-38-2	mg/kg	2.1				216	N	41	N	NMED	9.72E-08	5.10E-02	
Barium	7440-39-3	mg/kg	250				NS	NS	4,390	N	NMED		5.69E-02	
Beryllium	7440-41-7	mg/kg	0.93	J			2,710	N	148	N	NMED	3.43E-09	6.28E-03	
Cadmium	7440-43-9	mg/kg	0.37				3,610	N	72	N	NMED	1.02E-09	5.13E-03	
Calcium	7440-70-2	mg/kg	5,100				NS	NS	8,850,000	N	NMED		5.76E-04	
Chromium (Total) (4)	7440-47-3	mg/kg	15				468	N	134	N	NMED	3.21E-07	1.12E-01	GI, Blood
Cobalt	7440-48-4	mg/kg	5.2				722	N	37	N	NMED	7.20E-08	1.42E-01	Endocrine
Copper	7440-50-8	mg/kg	42	J			NS	NS	14,200	N	NMED		2.96E-03	
Iron	7439-89-6	mg/kg	13,000				NS	NS	248,000	N	NMED		5.24E-02	
Lead	7439-92-1	mg/kg	14				NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	7,200				NS	NS	1,550,000	N	NMED		4.65E-03	
Manganese	7439-96-5	mg/kg	360				NS	NS	464	N	NMED		7.76E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.052	J			NS	NS	21	N	NMED		2.51E-03	
Nickel	7440-02-0	mg/kg	12				20,500	N	753	N	NMED	5.85E-09	1.59E-02	
Potassium	7440-09-7	mg/kg	2,300				NS	NS	20,800,000	N	NMED		1.11E-04	
Selenium	7782-49-2	mg/kg	1.3				NS	NS	1,750	N	NMED		7.43E-04	
Silver	7440-22-4	mg/kg	0.083	J			NS	NS	1,770	N	NMED		4.69E-05	
Sodium	7440-23-5	mg/kg	24				NS	NS	10,200,000	N	NMED		2.35E-06	
Thallium	7440-28-0	mg/kg	0.1				NS	NS	4	N	NMED		2.82E-02	
Vanadium	7440-62-2	mg/kg	28				NS	NS	614	N	NMED		4.56E-02	
Zinc	7440-66-6	mg/kg	47				NS	NS	106,000	N	NMED		4.43E-04	

TABLE D1-AP12-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP12
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.37	U			NS	NS	12	N	NMED			
Nitrate	14797-55-8	mg/kg	1.4	J			NS	NS	566,000	N	NMED		2.47E-06	
Perchlorate	14797-73-0	mg/kg	0.0022	UJ			NS	NS	248	N	NMED			
										Cumulative Risk/Hazard		**5E-07**	**1.9**	
										Exceeds Target Level		**N**	Y	

System	Hazard Quotient
Nervous	1.4
Endocrine	0.14
GI	0.11
Blood	0.11
All Others	0.28

Notes:

[s] = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023,

2) NMED[C] = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

3) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

4) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service

DL = Detection limit

J = Estimated

LOD = Limit of detection

LOQ = Limit of quantitation

mg/kg = milligrams per kilogram

NS = No Standard

U = Nondetect

UJ = Estimated Nondetect

UTL = Upper tolerance limit

TABLE D1-AP14-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AP14
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0021	U			28.1	N	2,350	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0021	U			NS	NS	14,400	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0021	U			7.98	N	1,560	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0021	U			18.8	N	2.61	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0021	U			78.6	N	15,600	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0021	U			NS	NS	440	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0021	U			29.3	N	141	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0021	U			NS	NS	63	N	RSL			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0053	U			0.051	N	7.09	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0021	U			240	N	82.9	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0021	U			NS	NS	300	N	RSL			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0053	U			0.0858	N	5.88	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0021	U			0.672	N	135	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0021	U			NS	NS	2,150	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0021	U			8.32	N	55.6	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0021	U			17.8	N	29	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0021	U			NS	NS	270	N	RSL			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0021	U			1,290	N	5,480	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0021	U			NS	NS	1,600	N	RSL			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0021	U			1,290	N	5,480	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0021	U			17.8	N	29	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.0032	U			NS	NS	37,400	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0021	U			NS	NS	1,560	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.0021	U			NS	NS	200	N	RSL			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0021	U			NS	NS	1,600	N	RSL			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0021	U			NS	NS	5,810	N	RSL			
Acetone	67-64-1	mg/kg	0.12				NS	NS	66,300	N	NMED		1.81E-06	
Benzene	71-43-2	mg/kg	0.0021	U			17.8	N	114	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.0021	U			NS	NS	290	N	RSL			
Bromochloromethane	74-97-5	mg/kg	0.0021	U			NS	NS	150	N	RSL			
Bromodichloromethane	75-27-4	mg/kg	0.0021	U			6.19	N	1,560	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0021	U			674	N	1,230	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0021	U			NS	NS	17.7	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.0021	U			NS	NS	1,550	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0021	U			10.7	N	144	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0021	U			NS	NS	378	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0021	U			NS	NS	19,000	N	NMED			
Chloroform	67-66-3	mg/kg	0.0021	U			5.9	N	306	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0053	U			41.1	N	268	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0021	U			NS	NS	156	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0021	U			29.3	N	141	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0021	U			13.9	N	1,230	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0021	U			NS	NS	57.9	N	NMED			

TABLE D1-AP14-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AP14
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Dichlorodifluoromethane	75-71-8	mg/kg	0.0021	U			NS	NS	182	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.0021	U			75.1	N	3,930	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0021	U			68.3	N	61.6	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0021	U			NS	NS	2,360	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0053	U			NS	NS	764	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0021	U			975	N	37,800	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.011	U			766	N	409	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0021	U			NS	NS	3,900	N	RSL			
n-Propylbenzene	103-65-1	mg/kg	0.0021	U			NS	NS	3,800	N	RSL			
Naphthalene	91-20-3	mg/kg	0.0021	U			22.6	N	162	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0027	U			NS	NS	805	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.0021	U			NS	NS	2,360	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.0021	U			NS	NS	7,800	N	RSL			
Styrene	100-42-5	mg/kg	0.0021	U			NS	NS	7,260	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0021	U			NS	NS	7,800	N	RSL			
Tetrachloroethene	127-18-4	mg/kg	0.0021	U			337	N	111	N	NMED			
Toluene	108-88-3	mg/kg	0.0021	U			NS	NS	5,230	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0021	U			NS	NS	210	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0021	U			29.3	N	141	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0021	U			15.5	N	6.77	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0021	U			NS	NS	1,230	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0021	U			0.742	N	113	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.2	U			240	N	82.9	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.2	U			NS	NS	2,150	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.2	U			1,290	N	5,480	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.2	U			1,290	N	5,480	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.2	U			NS	NS	6,160	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.2	U			484	N	61.6	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.2	U			NS	NS	185	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.2	U			NS	NS	1,230	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.2	U			NS	NS	123	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.2	U			17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.2	U			3.56	N	18.5	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.2	U			NS	NS	6,260	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.2	U			NS	NS	391	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.2	U			NS	NS	232	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.2	U			NS	NS	3,200	N	RSL			
2-Nitroaniline	88-74-4	mg/kg	0.2	U			NS	NS	630	N	RSL			
2-Nitrophenol	88-75-5	mg/kg	0.2	U			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.2	U			11.8	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.2	U			270	N	250	N	RSL[S]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.2	U			NS	NS	4.93	N	NMED			
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.2	U			NS	NS	NS	NS	NS			

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MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.2	U			NS	NS	6,300	N	RSL			
4-Chloroaniline	106-47-8	mg/kg	0.2	U			27	N	32	N	RSL			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.2	U			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.2	U			270	N	250	N	RSL			
4-Nitrophenol	100-02-7	mg/kg	0.2	U			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.2	U			NS	NS	3,480	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.2	U			NS	NS	1,740	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.2	U			NS	NS	17,400	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.2	U			1.53	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.16	U			1.12	N	17.4	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.2	U			1.53	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.2	U			NS	NS	1,740	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.2	U			15.3	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.2	U			NS	NS	250,000	N	RSL			
Benzyl Alcohol	100-51-6	mg/kg	0.2	U			NS	NS	6,300	N	RSL			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.2	U			NS	NS	190	N	RSL			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.2	U			3.11	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.2	U			99.3	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.2	U			380	N	1,230	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.2	U			2,900	N	13,000	N	RSL			
Carbazole	86-74-8	mg/kg	0.2	U			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.2	U			153	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.2	U			NS	NS	6,160	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.2	U			NS	NS	630	N	RSL			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.16	U			0.153	Y	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.2	U			NS	NS	78	N	RSL			
Diethylphthalate	84-66-2	mg/kg	0.2	U			NS	NS	49,300	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.2	U			NS	NS	61,600	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.2	U			NS	NS	2,320	N	NMED			
Fluorene	86-73-7	mg/kg	0.2	U			NS	NS	2,320	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.2	U			3.33	N	49.3	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.2	U			68.3	N	61.6	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.2	U			133	N	43.1	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.2	U			1.53	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.2	U			5,610	N	12,300	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.2	U			0.78	N	NS	NS	RSL			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.025	U			0.0234	Y	0.493	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.2	U			1,090	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.2	U			22.6	N	162	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.2	U			60.4	N	131	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.2	U			9.85	N	234	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.2	U			NS	NS	1,740	N	NMED			
Phenol	108-95-2	mg/kg	0.2	U			NS	NS	18,500	N	NMED			
Pyrene	129-00-0	mg/kg	0.2	U			NS	NS	1,740	N	NMED			

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MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	2,200	N	RSL			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	6.3	N	RSL			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			211	N	36	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			3.56	N	18.5	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	7.7	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			31.6	N	70.4	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	6.16	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U			NS	NS	7.64	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			333	N	247	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U			83.1	N	301	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.52	J			NS	NS	156	N	NMED		3.33E-03	
Nitrobenzene	98-95-3	mg/kg	0.075	U			60.4	N	131	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U			313	N	6.16	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NS	NS	3,850	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			1,300	N	570	N	RSL			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.025	U			69.6	N	3.98	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.025	U			1.81	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.012	U			1.86	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.012	U			2.43	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.012	U			2.43	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.012	U			2.43	N	1.14	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.012	U			2.43	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (1)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg	0.00000000019	J	0.00000062	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000019	J	0.0000064	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000009	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.0000000200	J	0.000002	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000011	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.0000001	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000093	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000014	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000014	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.00000011	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000014	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000065	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.00000044	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.000000022				0.000049	N	0.0000506	N	NMED	4.51E-09	4.37E-04	

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MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	20,000				NS	NS	78,000	N	NMED		2.56E-01	Nervous
Antimony	7440-36-0	mg/kg	0.21				NS	NS	31.3	N	NMED		6.71E-03	
Arsenic	7440-38-2	mg/kg	1.2				7.07	N	13	N	NMED	1.70E-06	9.23E-02	
Barium	7440-39-3	mg/kg	210				NS	NS	15,600	N	NMED		1.35E-02	
Beryllium	7440-41-7	mg/kg	0.77	J			64,400	N	156	N	NMED	1.20E-10	4.94E-03	
Cadmium	7440-43-9	mg/kg	0.58				85,900	N	70.5	N	NMED	6.75E-11	8.23E-03	
Calcium	7440-70-2	mg/kg	8,500				NS	NS	13,000,000	N	NMED		6.54E-04	
Chromium (Total) (3)	7440-47-3	mg/kg	13				96.6	N	45,200	N	NMED	1.35E-06	2.88E-04	
Cobalt	7440-48-4	mg/kg	4.3				17,200	N	23.4	N	NMED	2.50E-09	1.84E-01	Endocrine
Copper	7440-50-8	mg/kg	65				NS	NS	3,130	N	NMED		2.08E-02	
Iron	7439-89-6	mg/kg	11,000				NS	NS	54,800	N	NMED		2.01E-01	GI
Lead	7439-92-1	mg/kg	14				NS	NS	200	N	RSL			
Magnesium	7439-95-4	mg/kg	6,800				NS	NS	15,600,000	N	NMED		4.36E-04	
Manganese	7439-96-5	mg/kg	440				NS	NS	10,500	N	NMED		4.19E-02	
Mercury (Elemental)	7439-97-6	mg/kg	0.05	J			NS	NS	23.8	N	NMED		2.10E-03	
Nickel	7440-02-0	mg/kg	11				595,000	N	1,560	N	NMED	1.85E-10	7.05E-03	
Potassium	7440-09-7	mg/kg	2,100				NS	NS	15,600,000	N	NMED		1.35E-04	
Selenium	7782-49-2	mg/kg	1.2				NS	NS	391	N	NMED		3.07E-03	
Silver	7440-22-4	mg/kg	0.11				NS	NS	391	N	NMED		2.81E-04	
Sodium	7440-23-5	mg/kg	28				NS	NS	7,820,000	N	NMED		3.58E-06	
Thallium	7440-28-0	mg/kg	0.089	J			NS	NS	0.782	N	NMED		1.14E-01	Hair/Coat/Eyes
Vanadium	7440-62-2	mg/kg	22				NS	NS	394	N	NMED		5.58E-02	
Zinc	7440-66-6	mg/kg	51				NS	NS	23,500	N	NMED		2.17E-03	

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OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.39	U			NS	NS	11.2	N	NMED			
Nitrate	14797-55-8	mg/kg	2.5	J			NS	NS	125,000	N	NMED		2.00E-05	
Perchlorate	14797-73-0	mg/kg	0.0023	UJ			NS	NS	54.8	N	NMED			
										Cumulative Risk/Hazard		**3E-06**	**1.02**	
										Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	0.26
Endocrine	0.18
GI	0.20
Hair/Coat	0.11
Eyes	0.11
All Others	0.26

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients mat be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of Quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper Tolerance Limit

TABLE D1-AP14-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP14
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0021	U			137	N	39,400	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0021	U			NS	NS	72,500	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0021	U			39	N	26,000	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0021	U			92	N	12	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0021	U			383	N	260,000	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0021	U			NS	NS	2,260	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0021	U			146	N	695	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0021	U			NS	NS	930	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0053	U			1	N	34	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0021	U			1,250	N	423	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0021	U			NS	NS	1,800	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0053	U			1	N	41	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0021	U			3	N	738	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0021	U			NS	NS	13,000	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0021	U			41	N	286	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0021	U			87	N	137	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0021	U			NS	NS	1,500	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0021	U			6,730	N	90,800	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0021	U			NS	NS	23,000	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0021	U			6,730	N	90,800	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0021	U			87	N	137	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0032	U			NS	NS	411,000	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0021	U			NS	NS	26,000	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0021	U			NS	NS	1,300	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0021	U			NS	NS	23,000	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0021	U			NS	NS	81,600	N	RSL		
Acetone	67-64-1	mg/kg	0.12				NS	NS	960,000	N	NMED		1.25E-07
Benzene	71-43-2	mg/kg	0.0021	U			87	N	729	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0021	U			NS	NS	1,800	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0021	U			NS	NS	630	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0021	U			30	N	26,000	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0021	U			1,760	N	18,300	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0021	U			NS	NS	95	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0021	U			NS	NS	8,540	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0021	U			53	N	1,020	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0021	U			NS	NS	2,160	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0021	U			NS	NS	89,500	N	NMED		
Chloroform	67-66-3	mg/kg	0.0021	U			29	N	2,000	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0053	U			201	N	1,260	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0021	U			NS	NS	2,600	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0021	U			146	N	695	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0021	U			67	N	18,300	N	NMED		

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MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0021	U			NS	NS	288	N	NMED		
Dichlorodifluoromethane	75-71-8	mg/kg	0.0021	U			NS	NS	865	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0021	U			29,000	N	368	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0021	U			52	N	916	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0021	U			NS	NS	14,200	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0053	U			NS	NS	3,730	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0021	U			4,820	N	178,000	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.011	U			14,400	N	5,130	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0021	U			NS	NS	58,000	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0021	U			NS	NS	24,000	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0021	U			108	N	843	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0027	U			NS	NS	3,940	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0021	U			NS	NS	14,200	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0021	U			NS	NS	120,000	N	RSL		
Styrene	100-42-5	mg/kg	0.0021	U			NS	NS	51,300	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0021	U			NS	NS	120,000	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0021	U			1,650	N	629	N	NMED		
Toluene	108-88-3	mg/kg	0.0021	U			NS	NS	61,300	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0021	U			NS	NS	1,100	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0021	U			146	N	695	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0021	U			112	N	37	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0021	U			NS	NS	6,030	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0021	U			28	N	46	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.2	U			1,250	N	423	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.2	U			NS	NS	13,000	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.2	U			6,730	N	90,800	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.2	U			6,730	N	90,800	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.2	U			NS	NS	91,600	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.2	U			2,330	N	916	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.2	U			NS	NS	2,750	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.2	U			NS	NS	18,300	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.2	U			NS	NS	1,830	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.2	U			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.2	U			17	N	276	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.2	U			NS	NS	104,000	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.2	U			NS	NS	6,490	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.2	U			NS	NS	3,370	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.2	U			NS	NS	41,000	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.2	U			NS	NS	8,000	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.2	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.2	U			NS	NS	410	N	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.2	U			1,100	N	3,300	N	RSL[S]		

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	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.2	U			NS	NS	73	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.2	U			NS	NS	NS	NS	NS		
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.2	U			NS	NS	82,000	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.2	U			110	N	410	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.2	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.2	U			1,100	N	3,300	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.2	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.2	U			NS	NS	50,500	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.2	U			NS	NS	25,300	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.2	U			NS	NS	253,000	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.2	U			32	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.16	U			24	N	251	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.2	U			32	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.2	U			NS	NS	25,300	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.2	U			323	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.2	U			NS	NS	3,300,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.2	U			NS	NS	82,000	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.2	U			NS	NS	2,500	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.2	U			16	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.2	U			519	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.2	U			1,830	N	18,300	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.2	U			12,000	N	160,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.2	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.2	U			3,230	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.2	U			NS	NS	91,600	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.2	U			NS	NS	8,200	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.16	U			3	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.2	U			NS	NS	1,200	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.2	U			NS	NS	733,000	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.2	U			NS	NS	916,000	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.2	U			NS	NS	33,700	N	NMED		
Fluorene	86-73-7	mg/kg	0.2	U			NS	NS	33,700	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.2	U			16	N	733	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.2	U			52	N	916	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.2	U			641	N	641	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.2	U			32	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.2	U			27,000	N	183,000	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.2	U			3	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.025	U			1	N	7	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.2	U			5,240	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.2	U			108	N	843	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.2	U			293	N	1,540	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.2	U			45	N	3,180	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.2	U			NS	NS	27,500	N	NMED		
Phenol	108-95-2	mg/kg	0.2	U			NS	NS	275,000	N	NMED		
Pyrene	129-00-0	mg/kg	0.2	U			NS	NS	25,300	N	NMED		

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	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U			NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U			428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.52	J			NS	NS	2,590	N	NMED		2.01E-04
Nitrobenzene	98-95-3	mg/kg	0.075	U			293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U			1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			5,300	N	7,400	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.025	U			304	N	57	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.025	U			9	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.012	U			9	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.012	U			11	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.012	U			11	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.012	U			11	N	16	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.012	U			11	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg	0.00000000019	J	0.00000062	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000019	J	0.0000064	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000009	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.00000002	J	0.000002	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000011	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.0000001	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000093	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000014	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000014	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.00000011	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000014	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000065	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.00000044	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.000000022				0.000238	N	0.000808	N	NMED	9.29E-10	2.74E-05

TABLE D1-AP14-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP14
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	20,000				NS	NS	1,290,000	N	NMED		1.55E-02
Antimony	7440-36-0	mg/kg	0.21				NS	NS	519	N	NMED		4.05E-04
Arsenic	7440-38-2	mg/kg	1.2				36	N	208	N	NMED	3.34E-07	5.77E-03
Barium	7440-39-3	mg/kg	210				NS	NS	255,000	N	NMED		8.24E-04
Beryllium	7440-41-7	mg/kg	0.77	J			313,000	N	2,580	N	NMED	2.46E-11	2.98E-04
Cadmium	7440-43-9	mg/kg	0.58				417,000	N	1,110	N	NMED	1.39E-11	5.23E-04
Calcium	7440-70-2	mg/kg	8,500				NS	NS	32,400,000	N	NMED		2.62E-04
Chromium (Total) (3)	7440-47-3	mg/kg	13				505	N	314,000	N	NMED	2.57E-07	4.14E-05
Cobalt	7440-48-4	mg/kg	4.3				83,400	N	388	N	NMED	5.16E-10	1.11E-02
Copper	7440-50-8	mg/kg	65				NS	NS	51,900	N	NMED		1.25E-03
Iron	7439-89-6	mg/kg	11,000				NS	NS	908,000	N	NMED		1.21E-02
Lead	7439-92-1	mg/kg	14				NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	6,800				NS	NS	5,680,000	N	NMED		1.20E-03
Manganese	7439-96-5	mg/kg	440				NS	NS	160,000	N	NMED		2.75E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.05	J			NS	NS	112	N	NMED		4.46E-04
Nickel	7440-02-0	mg/kg	11				2,890,000	N	25,700	N	NMED	3.81E-11	4.28E-04
Potassium	7440-09-7	mg/kg	2,100				NS	NS	76,200,000	N	NMED		2.76E-05
Selenium	7782-49-2	mg/kg	1.2				NS	NS	6,490	N	NMED		1.85E-04
Silver	7440-22-4	mg/kg	0.11				NS	NS	6,490	N	NMED		1.69E-05
Sodium	7440-23-5	mg/kg	28				NS	NS	37,300,000	N	NMED		7.51E-07
Thallium	7440-28-0	mg/kg	0.089	J			NS	NS	13	N	NMED		6.85E-03
Vanadium	7440-62-2	mg/kg	22				NS	NS	6,530	N	NMED		3.37E-03
Zinc	7440-66-6	mg/kg	51				NS	NS	38,900	N	NMED		1.31E-03

TABLE D1-AP14-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP14
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.39	U			NS	NS	63	N	NMED		
Nitrate	14797-55-8	mg/kg	2.5	J			NS	NS	2,080,000	N	NMED		1.20E-06
Perchlorate	14797-73-0	mg/kg	0.0023	UJ			NS	NS	908	N	NMED		
										Cumulative Risk/Hazard		**6E-07**	**0.06**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den Berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update)

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper tolerance limit

TABLE D1-AP14-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP14
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0021	U			659	N	10,600	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0021	U			NS	NS	13,600	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0021	U			197	N	7,080	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0021	U			4,300	N	2	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0021	U			1,820	N	70,800	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0021	U			NS	NS	424	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0021	U			781	N	130	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0021	U			NS	NS	283	N	NMED[C]			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0053	U			8	N	6	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0021	U			8,540	N	79	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0021	U			NS	NS	492	N	NMED[C]			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0053	U			6	N	8	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0021	U			16	N	140	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0021	U			NS	NS	2,500	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0021	U			195	N	54	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0021	U			415	N	25	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0021	U			NS	NS	422	N	NMED[C]			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0021	U			45,900	N	24,800	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0021	U			NS	NS	7,080	N	NMED[C]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0021	U			45,900	N	24,800	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0021	U			415	N	25	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.0032	U			NS	NS	90,700	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0021	U			NS	NS	7,080	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.0021	U			NS	NS	599	N	NMED[C]			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0021	U			NS	NS	7,080	N	NMED[C]			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0021	U			NS	NS	20,400	N	NMED[C]			
Acetone	67-64-1	mg/kg	0.12				NS	NS	242,000	N	NMED		4.96E-07	
Benzene	71-43-2	mg/kg	0.0021	U			423	N	142	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.0021	U			NS	NS	538	N	NMED[C]			
Bromochloromethane	74-97-5	mg/kg	0.0021	U			NS	NS	296	N	NMED[C]			
Bromodichloromethane	75-27-4	mg/kg	0.0021	U			143	N	7,080	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0021	U			23,700	N	5,380	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0021	U			NS	NS	18	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.0021	U			NS	NS	1,620	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0021	U			252	N	202	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0021	U			NS	NS	412	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0021	U			NS	NS	16,600	N	NMED			
Chloroform	67-66-3	mg/kg	0.0021	U			134	N	391	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0053	U			956	N	235	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0021	U			NS	NS	708	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0021	U			781	N	130	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0021	U			340	N	5,380	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0021	U			NS	NS	54	N	NMED			

TABLE D1-AP14-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP14
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Dichlorodifluoromethane	75-71-8	mg/kg	0.0021	U			NS	NS	161	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.0021	U			1,770	N	5,800	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0021	U			2,400	N	269	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0021	U			NS	NS	2,740	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0053	U			NS	NS	696	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0021	U			24,200	N	33,100	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.011	U			89,600	N	1,210	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0021	U			NS	NS	17,700	N	NMED[C]			
n-Propylbenzene	103-65-1	mg/kg	0.0021	U			NS	NS	6,730	N	NMED[C]			
Naphthalene	91-20-3	mg/kg	0.0021	U			633	N	159	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0027	U			NS	NS	736	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.0021	U			NS	NS	2,740	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.0021	U			NS	NS	35,400	N	NMED[C]			
Styrene	100-42-5	mg/kg	0.0021	U			NS	NS	10,200	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0021	U			NS	NS	35,400	N	NMED[C]			
Tetrachloroethene	127-18-4	mg/kg	0.0021	U			7,910	N	120	N	NMED			
Toluene	108-88-3	mg/kg	0.0021	U			NS	NS	14,000	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0021	U			NS	NS	206	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0021	U			781	N	130	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0021	U			5,370	N	7	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0021	U			NS	NS	1,130	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0021	U			161	N	162	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.2	U			8,540	N	79	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.2	U			NS	NS	2,500	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.2	U			45,900	N	24,800	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.2	U			45,900	N	24,800	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.2	U			NS	NS	26,900	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.2	U			17,000	N	269	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.2	U			NS	NS	807	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.2	U			NS	NS	5,380	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.2	U			NS	NS	538	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.2	U			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.2	U			165	N	81	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.2	U			NS	NS	28,300	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.2	U			NS	NS	1,770	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.2	U			NS	NS	1,000	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.2	U			NS	NS	13,500	N	NMED[C]			
2-Nitroaniline	88-74-4	mg/kg	0.2	U			NS	NS	2,690	N	NMED[C]			
2-Nitrophenol	88-75-5	mg/kg	0.2	U			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.2	U			410	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.2	U			135	N	1,080	N	NMED[SC]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.2	U			NS	NS	22	N	NMED			

TABLE D1-AP14-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP14
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.2	U			NS	NS	NS	NS	NS			
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.2	U			NS	NS	26,900	N	NMED[C]			
4-Chloroaniline	106-47-8	mg/kg	0.2	U			14	N	135	N	NMED[C]			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.2	U			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.2	U			135	N	1,080	N	NMED[C]			
4-Nitrophenol	100-02-7	mg/kg	0.2	U			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.2	U			NS	NS	15,100	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.2	U			NS	NS	7,530	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.2	U			NS	NS	75,300	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.2	U			240	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.16	U			173	N	15	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.2	U			240	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.2	U			NS	NS	7,530	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.2	U			2,310	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.2	U			NS	NS	1,080,000	N	NMED[C]			
Benzyl Alcohol	100-51-6	mg/kg	0.2	U			NS	NS	26,900	N	NMED[C]			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.2	U			NS	NS	807	N	NMED[C]			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.2	U			2	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.2	U			3,540	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.2	U			13,400	N	5,380	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.2	U			1,420	N	53,800	N	NMED[C]			
Carbazole	86-74-8	mg/kg	0.2	U			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.2	U			23,100	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.2	U			NS	NS	26,900	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.2	U			NS	NS	2,690	N	NMED[C]			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.16	U			24	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.2	U			NS	NS	269	N	NMED[C]			
Diethylphthalate	84-66-2	mg/kg	0.2	U			NS	NS	215,000	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.2	U			NS	NS	269,000	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.2	U			NS	NS	10,000	N	NMED			
Fluorene	86-73-7	mg/kg	0.2	U			NS	NS	10,000	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.2	U			117	N	215	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.2	U			2,400	N	269	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.2	U			4,670	N	188	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.2	U			240	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.2	U			198,000	N	53,700	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.2	U			0.38	N	NA	N	NMED[C]			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.025	U			4	N	2	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.2	U			37,900	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.2	U			633	N	159	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.2	U			1,350	N	353	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.2	U			346	N	989	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.2	U			NS	NS	8,070	N	NMED			
Phenol	108-95-2	mg/kg	0.2	U			NS	NS	77,400	N	NMED			
Pyrene	129-00-0	mg/kg	0.2	U			NS	NS	7,530	N	NMED			

TABLE D1-AP14-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP14
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	8,070	N	NMED[C]			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	27	N	NMED[C]			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U			NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U			2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.52	J			NS	NS	706	N	NMED		7.37E-04	
Nitrobenzene	98-95-3	mg/kg	0.075	U			1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U			11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			626	N	2,420	N	NMED[C]			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.025	U			2,440	N	17	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.025	U			55	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.012	U			58	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.012	U			85	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.012	U			85	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.012	U			85	N	5	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.012	U			85	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (3)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg	0.00000000019	J	0.00000062	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000019	J	0.0000064	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000009	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.00000002	J	0.000002	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000011	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.0000001	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000093	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000014	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000014	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.00000011	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000014	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000065	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.00000044	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.000000022				0.00172	N	0.000226	N	NMED	1.29E-10	9.78E-05	

TABLE D1-AP14-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP14
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	20,000				NS	NS	41,400	N	NMED		4.83E-01	Nervous
Antimony	7440-36-0	mg/kg	0.21				NS	NS	142	N	NMED		1.48E-03	
Arsenic	7440-38-2	mg/kg	1.2				216	N	41	N	NMED		2.91E-02	
Barium	7440-39-3	mg/kg	210				NS	NS	4,390	N	NMED		4.78E-02	
Beryllium	7440-41-7	mg/kg	0.77	J			2,710	N	148	N	NMED		5.20E-03	
Cadmium	7440-43-9	mg/kg	0.58				3,610	N	72	N	NMED		8.04E-03	
Calcium	7440-70-2	mg/kg	8,500				NS	NS	8,850,000	N	NMED		9.60E-04	
Chromium (Total) (4)	7440-47-3	mg/kg	13				468	N	134	N	NMED		9.70E-02	
Cobalt	7440-48-4	mg/kg	4.3				722	N	37	N	NMED		1.17E-01	Endocrine
Copper	7440-50-8	mg/kg	65				NS	NS	14,200	N	NMED		4.58E-03	
Iron	7439-89-6	mg/kg	11,000				NS	NS	248,000	N	NMED		4.44E-02	
Lead	7439-92-1	mg/kg	14				NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	6,800				NS	NS	1,550,000	N	NMED		4.39E-03	
Manganese	7439-96-5	mg/kg	440				NS	NS	464	N	NMED		9.48E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.05	J			NS	NS	21	N	NMED		2.42E-03	
Nickel	7440-02-0	mg/kg	11				20,500	N	753	N	NMED		1.46E-02	
Potassium	7440-09-7	mg/kg	2,100				NS	NS	20,800,000	N	NMED		1.01E-04	
Selenium	7782-49-2	mg/kg	1.2				NS	NS	1,750	N	NMED		6.86E-04	
Silver	7440-22-4	mg/kg	0.11				NS	NS	1,770	N	NMED		6.21E-05	
Sodium	7440-23-5	mg/kg	28				NS	NS	10,200,000	N	NMED		2.75E-06	
Thallium	7440-28-0	mg/kg	0.089	J			NS	NS	4	N	NMED		2.51E-02	
Vanadium	7440-62-2	mg/kg	22				NS	NS	614	N	NMED		3.58E-02	
Zinc	7440-66-6	mg/kg	51				NS	NS	106,000	N	NMED		4.81E-04	

TABLE D1-AP14-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP14
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.39	U			NS	NS	12	N	NMED			
Nitrate	14797-55-8	mg/kg	2.5	J			NS	NS	566,000	N	NMED		4.42E-06	
Perchlorate	14797-73-0	mg/kg	0.0023	UJ			NS	NS	248	N	NMED			
										Cumulative Risk/Hazard		**1E-10**	**1.9**	
										Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	1.4
Endocrine	0.12
All Others	0.32

Notes:

[s] = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update).

2) NMED[C] = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

3) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

4) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service

DL = Detection limit

J = Estimated

LOD = Limit of detection

LOQ = Limit of quantitation

mg/kg = milligrams per kilogram

NS = No Standard

U = Nondetect

UJ = Estimated Nondetect

UTL = Upper tolerance limit

TABLE D1-AP15-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AP15
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.004	U			28.1	N	2,350	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.004	U			NS	NS	14,400	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.004	U			7.98	N	1,560	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.004	U			18.8	N	2.61	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.004	U			78.6	N	15,600	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.004	U			NS	NS	440	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.004	U			29.3	N	141	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.004	U			NS	NS	63	N	RSL			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.01	U			0.051	N	7.09	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.004	U			240	N	82.9	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.004	U			NS	NS	300	N	RSL			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.01	U			0.0858	N	5.88	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.004	U			0.672	N	135	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.004	U			NS	NS	2,150	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.004	U			8.32	N	55.6	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.004	U			17.8	N	29	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.004	U			NS	NS	270	N	RSL			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.004	U			1,290	N	5,480	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.004	U			NS	NS	1,600	N	RSL			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.004	U			1,290	N	5,480	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.004	U			17.8	N	29	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.0061	U			NS	NS	37,400	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.004	U			NS	NS	1,560	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.004	U			NS	NS	200	N	RSL			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.004	U			NS	NS	1,600	N	RSL			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.004	U			NS	NS	5,810	N	RSL			
Acetone	67-64-1	mg/kg	0.093				NS	NS	66,300	N	NMED		1.40E-06	
Benzene	71-43-2	mg/kg	0.004	U			17.8	N	114	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.004	U			NS	NS	290	N	RSL			
Bromochloromethane	74-97-5	mg/kg	0.004	U			NS	NS	150	N	RSL			
Bromodichloromethane	75-27-4	mg/kg	0.004	U			6.19	N	1,560	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.004	U			674	N	1,230	N	NMED			
Bromomethane	74-83-9	mg/kg	0.004	U			NS	NS	17.7	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.004	U			NS	NS	1,550	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.004	U			10.7	N	144	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.004	U			NS	NS	378	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.004	U			NS	NS	19,000	N	NMED			
Chloroform	67-66-3	mg/kg	0.004	U			5.9	N	306	N	NMED			
Chloromethane	74-87-3	mg/kg	0.01	U			41.1	N	268	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.004	U			NS	NS	156	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.004	U			29.3	N	141	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.004	U			13.9	N	1,230	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.004	U			NS	NS	57.9	N	NMED			

TABLE D1-AP15-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AP15
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Dichlorodifluoromethane	75-71-8	mg/kg	0.004	U			NS	NS	182	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.004	U			75.1	N	3,930	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.004	U			68.3	N	61.6	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.004	U			NS	NS	2,360	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.01	U			NS	NS	764	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.004	U			975	N	37,800	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.02	U			766	N	409	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.004	U			NS	NS	3,900	N	RSL			
n-Propylbenzene	103-65-1	mg/kg	0.004	U			NS	NS	3,800	N	RSL			
Naphthalene	91-20-3	mg/kg	0.004	U			22.6	N	162	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0051	U			NS	NS	805	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.004	U			NS	NS	2,360	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.004	U			NS	NS	7,800	N	RSL			
Styrene	100-42-5	mg/kg	0.004	U			NS	NS	7,260	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.004	U			NS	NS	7,800	N	RSL			
Tetrachloroethene	127-18-4	mg/kg	0.004	U			337	N	111	N	NMED			
Toluene	108-88-3	mg/kg	0.004	U			NS	NS	5,230	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.004	U			NS	NS	210	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.004	U			29.3	N	141	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.004	U			15.5	N	6.77	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.004	U			NS	NS	1,230	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.004	U			0.742	N	113	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.18	UJ			240	N	82.9	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.18	UJ			NS	NS	2,150	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.18	UJ			1,290	N	5,480	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.18	UJ			1,290	N	5,480	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.18	U			NS	NS	6,160	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.18	U			484	N	61.6	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.18	U			NS	NS	185	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.18	U			NS	NS	1,230	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.18	U			NS	NS	123	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.18	UJ			17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.18	UJ			3.56	N	18.5	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.18	UJ			NS	NS	6,260	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.18	U			NS	NS	391	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.18	UJ			NS	NS	232	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.18	U			NS	NS	3,200	N	RSL			
2-Nitroaniline	88-74-4	mg/kg	0.18	UJ			NS	NS	630	N	RSL			
2-Nitrophenol	88-75-5	mg/kg	0.18	U			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.18	UJ			11.8	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.18	UJ			270	N	250	N	RSL[S]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.18	U			NS	NS	4.93	N	NMED			
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.18	UJ			NS	NS	NS	NS	NS			

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FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.18	U			NS	NS	6,300	N	RSL			
4-Chloroaniline	106-47-8	mg/kg	0.18	UJ			27	N	32	N	RSL			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.18	UJ			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.18	UJ			270	N	250	N	RSL			
4-Nitrophenol	100-02-7	mg/kg	0.18	U			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.18	UJ			NS	NS	3,480	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.18	UJ			NS	NS	1,740	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.18	UJ			NS	NS	17,400	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.18	UJ			1.53	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.14	UJ			1.12	N	17.4	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.18	UJ			1.53	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.18	UJ			NS	NS	1,740	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.18	UJ			15.3	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.18	U			NS	NS	250,000	N	RSL			
Benzyl Alcohol	100-51-6	mg/kg	0.18	UJ			NS	NS	6,300	N	RSL			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.18	UJ			NS	NS	190	N	RSL			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.18	UJ			3.11	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.18	UJ			99.3	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.18	UJ			380	N	1,230	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.18	UJ			2,900	N	13,000	N	RSL			
Carbazole	86-74-8	mg/kg	0.18	UJ			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.18	UJ			153	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.18	UJ			NS	NS	6,160	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.18	UJ			NS	NS	630	N	RSL			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	UJ			0.153	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.18	UJ			NS	NS	78	N	RSL			
Diethylphthalate	84-66-2	mg/kg	0.18	UJ			NS	NS	49,300	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.18	UJ			NS	NS	61,600	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.18	UJ			NS	NS	2,320	N	NMED			
Fluorene	86-73-7	mg/kg	0.18	UJ			NS	NS	2,320	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.18	UJ			3.33	N	49.3	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.18	UJ			68.3	N	61.6	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.18	UJ			133	N	43.1	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.18	UJ			1.53	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.18	UJ			5,610	N	12,300	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.18	UJ			0.78	N	NS	NS	RSL			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.022	U			0.0234	N	0.493	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.18	UJ			1,090	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.18	UJ			22.6	N	162	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.18	UJ			60.4	N	131	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.18	U			9.85	N	234	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.18	UJ			NS	NS	1,740	N	NMED			
Phenol	108-95-2	mg/kg	0.18	U			NS	NS	18,500	N	NMED			
Pyrene	129-00-0	mg/kg	0.18	UJ			NS	NS	1,740	N	NMED			

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MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	2,200	N	RSL			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	6.3	N	RSL			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			211	N	36	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			3.56	N	18.5	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	7.7	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			31.6	N	70.4	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	6.16	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U			NS	NS	7.64	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			333	N	247	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U			83.1	N	301	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U			NS	NS	156	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U			60.4	N	131	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U			313	N	6.16	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NS	NS	3,850	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			1,300	N	570	N	RSL			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.022	U			69.6	N	3.98	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.022	U			1.81	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.011	U			1.86	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.011	U			2.43	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.011	U			2.43	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.011	U			2.43	N	1.14	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.011	U			2.43	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (1)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000021	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg		U	0.0000027	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.000000046	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.0000000056	J	0.00000056	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.000000054	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000057	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000088	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000056	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000091	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.000000066	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000011	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.000000082	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000083	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg	0.0000000039	J	0.000000039	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000008	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.0000005	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.00000014	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.00000001				0.000049	N	0.0000506	N	NMED	1.94E-09	1.88E-04	

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MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	23,000				NS	NS	78,000	N	NMED		2.95E-01	Nervous
Antimony	7440-36-0	mg/kg	0.19	J			NS	NS	31.3	N	NMED		6.07E-03	
Arsenic	7440-38-2	mg/kg	1.4				7.07	N	13	N	NMED	1.98E-06	1.08E-01	Heart/Endocrine
Barium	7440-39-3	mg/kg	200				NS	NS	15,600	N	NMED		1.28E-02	
Beryllium	7440-41-7	mg/kg	0.92	J			64,400	N	156	N	NMED	1.43E-10	5.90E-03	
Cadmium	7440-43-9	mg/kg	0.52	J			85,900	N	70.5	N	NMED	6.05E-11	7.38E-03	
Calcium	7440-70-2	mg/kg	3,700	J			NS	NS	13,000,000	N	NMED		2.85E-04	
Chromium (Total) (3)	7440-47-3	mg/kg	15				96.6	N	45,200	N	NMED	1.55E-06	3.32E-04	
Cobalt	7440-48-4	mg/kg	5				17,200	N	23.4	N	NMED	2.91E-09	2.14E-01	Endocrine
Copper	7440-50-8	mg/kg	61				NS	NS	3,130	N	NMED		1.95E-02	
Iron	7439-89-6	mg/kg	13,000				NS	NS	54,800	N	NMED		2.37E-01	GI
Lead	7439-92-1	mg/kg	14				NS	NS	200	N	RSL			
Magnesium	7439-95-4	mg/kg	7,700				NS	NS	15,600,000	N	NMED		4.94E-04	
Manganese	7439-96-5	mg/kg	400				NS	NS	10,500	N	NMED		3.81E-02	
Mercury (Elemental)	7439-97-6	mg/kg	0.063	J			NS	NS	23.8	N	NMED		2.65E-03	
Nickel	7440-02-0	mg/kg	12				595,000	N	1,560	N	NMED	2.02E-10	7.69E-03	
Potassium	7440-09-7	mg/kg	2,100				NS	NS	15,600,000	N	NMED		1.35E-04	
Selenium	7782-49-2	mg/kg	1.6				NS	NS	391	N	NMED		4.09E-03	
Silver	7440-22-4	mg/kg	0.1				NS	NS	391	N	NMED		2.56E-04	
Sodium	7440-23-5	mg/kg	30	J			NS	NS	7,820,000	N	NMED		3.84E-06	
Thallium	7440-28-0	mg/kg	0.08	J			NS	NS	0.782	N	NMED		1.02E-01	Hair/Coat/Eyes
Vanadium	7440-62-2	mg/kg	22				NS	NS	394	N	NMED		5.58E-02	
Zinc	7440-66-6	mg/kg	57				NS	NS	23,500	N	NMED		2.43E-03	

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OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.35	U			NS	NS	11.2	N	NMED			
Nitrate	14797-55-8	mg/kg	2.9	J			NS	NS	125,000	N	NMED		2.32E-05	
Perchlorate	14797-73-0	mg/kg	0.0021	UJ			NS	NS	54.8	N	NMED			
										Cumulative Risk/Hazard		**4E-06**	**1.1**	
										Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	0.29
Endocrine	0.32
GI	0.24
Heart	0.11
Hair/Coat	0.10
Eyes	0.10
All Others	0.16

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of Quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper Tolerance Limit

TABLE D1-AP15-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP15
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.004	U			137	N	39,400	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.004	U			NS	NS	72,500	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.004	U			39	N	26,000	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.004	U			92	N	12	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.004	U			383	N	260,000	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.004	U			NS	NS	2,260	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.004	U			146	N	695	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.004	U			NS	NS	930	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.01	U			1	N	34	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.004	U			1,250	N	423	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.004	U			NS	NS	1,800	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.01	U			1	N	41	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.004	U			3	N	738	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.004	U			NS	NS	13,000	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.004	U			41	N	286	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.004	U			87	N	137	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.004	U			NS	NS	1,500	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.004	U			6,730	N	90,800	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.004	U			NS	NS	23,000	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.004	U			6,730	N	90,800	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.004	U			87	N	137	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0061	U			NS	NS	411,000	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.004	U			NS	NS	26,000	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.004	U			NS	NS	1,300	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.004	U			NS	NS	23,000	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.004	U			NS	NS	81,600	N	RSL		
Acetone	67-64-1	mg/kg	0.093				NS	NS	960,000	N	NMED		9.69E-08
Benzene	71-43-2	mg/kg	0.004	U			87	N	729	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.004	U			NS	NS	1,800	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.004	U			NS	NS	630	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.004	U			30	N	26,000	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.004	U			1,760	N	18,300	N	NMED		
Bromomethane	74-83-9	mg/kg	0.004	U			NS	NS	95	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.004	U			NS	NS	8,540	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.004	U			53	N	1,020	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.004	U			NS	NS	2,160	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.004	U			NS	NS	89,500	N	NMED		
Chloroform	67-66-3	mg/kg	0.004	U			29	N	2,000	N	NMED		
Chloromethane	74-87-3	mg/kg	0.01	U			201	N	1,260	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.004	U			NS	NS	2,600	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.004	U			146	N	695	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.004	U			67	N	18,300	N	NMED		
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.004	U			NS	NS	288	N	NMED		

TABLE D1-AP15-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP15
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dichlorodifluoromethane	75-71-8	mg/kg	0.004	U			NS	NS	865	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.004	U			29,000	N	368	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.004	U			52	N	916	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.004	U			NS	NS	14,200	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.01	U			NS	NS	3,730	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.004	U			4,820	N	178,000	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.02	U			14,400	N	5,130	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.004	U			NS	NS	58,000	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.004	U			NS	NS	24,000	N	RSL		
Naphthalene	91-20-3	mg/kg	0.004	U			108	N	843	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0051	U			NS	NS	3,940	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.004	U			NS	NS	14,200	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.004	U			NS	NS	120,000	N	RSL		
Styrene	100-42-5	mg/kg	0.004	U			NS	NS	51,300	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.004	U			NS	NS	120,000	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.004	U			1,650	N	629	N	NMED		
Toluene	108-88-3	mg/kg	0.004	U			NS	NS	61,300	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.004	U			NS	NS	1,100	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.004	U			146	N	695	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.004	U			112	N	37	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.004	U			NS	NS	6,030	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.004	U			28	N	46	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.18	UJ			1,250	N	423	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.18	UJ			NS	NS	13,000	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.18	UJ			6,730	N	90,800	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.18	UJ			6,730	N	90,800	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.18	U			NS	NS	91,600	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.18	U			2,330	N	916	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.18	U			NS	NS	2,750	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.18	U			NS	NS	18,300	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.18	U			NS	NS	1,830	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.18	UJ			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.18	UJ			17	N	276	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.18	UJ			NS	NS	104,000	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.18	U			NS	NS	6,490	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.18	UJ			NS	NS	3,370	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.18	U			NS	NS	41,000	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.18	UJ			NS	NS	8,000	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.18	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.18	UJ			NS	NS	410	N	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.18	UJ			1,100	N	3,300	N	RSL[S]		

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MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.18	U			NS	NS	73	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.18	UJ			NS	NS	NS	NS	NS		
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.18	U			NS	NS	82,000	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.18	UJ			110	N	410	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.18	UJ			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.18	UJ			1,100	N	3,300	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.18	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.18	UJ			NS	NS	50,500	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.18	UJ			NS	NS	25,300	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.18	UJ			NS	NS	253,000	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.18	UJ			32	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.14	UJ			24	N	251	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.18	UJ			32	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.18	UJ			NS	NS	25,300	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.18	UJ			323	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.18	U			NS	NS	3,300,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.18	UJ			NS	NS	82,000	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.18	UJ			NS	NS	2,500	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.18	UJ			16	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.18	UJ			519	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.18	UJ			1,830	N	18,300	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.18	UJ			12,000	N	160,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.18	UJ			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.18	UJ			3,230	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.18	UJ			NS	NS	91,600	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.18	UJ			NS	NS	8,200	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	UJ			3	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.18	UJ			NS	NS	1,200	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.18	UJ			NS	NS	733,000	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.18	UJ			NS	NS	916,000	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.18	UJ			NS	NS	33,700	N	NMED		
Fluorene	86-73-7	mg/kg	0.18	UJ			NS	NS	33,700	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.18	UJ			16	N	733	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.18	UJ			52	N	916	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.18	UJ			641	N	641	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.18	UJ			32	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.18	UJ			27,000	N	183,000	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.18	UJ			3	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.022	U			1	N	7	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.18	UJ			5,240	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.18	UJ			108	N	843	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.18	UJ			293	N	1,540	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.18	U			45	N	3,180	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.18	UJ			NS	NS	27,500	N	NMED		
Phenol	108-95-2	mg/kg	0.18	U			NS	NS	275,000	N	NMED		
Pyrene	129-00-0	mg/kg	0.18	UJ			NS	NS	25,300	N	NMED		

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	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U			NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U			428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U			NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U			293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U			1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			5,300	N	7,400	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.022	U			304	N	57	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.022	U			9	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.011	U			9	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.011	U			11	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.011	U			11	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.011	U			11	N	16	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.011	U			11	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (3)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000021	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg		U	0.0000027	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.000000046	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.0000000056	J	0.00000056	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.000000054	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000057	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000088	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000056	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000091	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.000000066	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000011	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.000000082	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000083	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg	0.0000000039	J	0.000000039	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000008	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.0000005	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.00000014	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.00000001				0.000238	N	0.000808	N	NMED	3.99E-10	1.18E-05

TABLE D1-AP15-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP15
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	23,000				NS	NS	1,290,000	N	NMED		1.78E-02
Antimony	7440-36-0	mg/kg	0.19	J			NS	NS	519	N	NMED		3.66E-04
Arsenic	7440-38-2	mg/kg	1.4				36	N	208	N	NMED	3.90E-07	6.73E-03
Barium	7440-39-3	mg/kg	200				NS	NS	255,000	N	NMED		7.84E-04
Beryllium	7440-41-7	mg/kg	0.92	J			313,000	N	2,580	N	NMED	2.94E-11	3.57E-04
Cadmium	7440-43-9	mg/kg	0.52	J			417,000	N	1,110	N	NMED	1.25E-11	4.68E-04
Calcium	7440-70-2	mg/kg	3,700	J			NS	NS	32,400,000	N	NMED		
Chromium (Total) (4)	7440-47-3	mg/kg	15				505	N	314,000	N	NMED	2.97E-07	4.78E-05
Cobalt	7440-48-4	mg/kg	5				83,400	N	388	N	NMED	6.00E-10	1.29E-02
Copper	7440-50-8	mg/kg	61				NS	NS	51,900	N	NMED		1.18E-03
Iron	7439-89-6	mg/kg	13,000				NS	NS	908,000	N	NMED		1.43E-02
Lead	7439-92-1	mg/kg	14				NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	7,700				NS	NS	5,680,000	N	NMED		
Manganese	7439-96-5	mg/kg	400				NS	NS	160,000	N	NMED		2.50E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.063	J			NS	NS	112	N	NMED		5.63E-04
Nickel	7440-02-0	mg/kg	12				2,890,000	N	25,700	N	NMED	4.15E-11	4.67E-04
Potassium	7440-09-7	mg/kg	2,100				NS	NS	76,200,000	N	NMED		
Selenium	7782-49-2	mg/kg	1.6				NS	NS	6,490	N	NMED		2.47E-04
Silver	7440-22-4	mg/kg	0.1				NS	NS	6,490	N	NMED		1.54E-05
Sodium	7440-23-5	mg/kg	30	J			NS	NS	37,300,000	N	NMED		8.04E-07
Thallium	7440-28-0	mg/kg	0.08	J			NS	NS	13	N	NMED		6.15E-03
Vanadium	7440-62-2	mg/kg	22				NS	NS	6,530	N	NMED		3.37E-03
Zinc	7440-66-6	mg/kg	57				NS	NS	38,900	N	NMED		1.47E-03

TABLE D1-AP15-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP15
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.35	U			NS	NS	63	N	NMED		
Nitrate	14797-55-8	mg/kg	2.9	J			NS	NS	2,080,000	N	NMED		1.39E-06
Perchlorate	14797-73-0	mg/kg	0.0021	UJ			NS	NS	908	N	NMED		
										Cumulative Risk/Hazard		**7E-07**	**0.07**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper tolerance limit

TABLE D1-AP15-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP15
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.004	U			659	N	10,600	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.004	U			NS	NS	13,600	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.004	U			197	N	7,080	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.004	U			4,300	N	2	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.004	U			1,820	N	70,800	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.004	U			NS	NS	424	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.004	U			781	N	130	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.004	U			NS	NS	283	N	NMED[C]			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.01	U			8	N	6	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.004	U			8,540	N	79	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.004	U			NS	NS	492	N	NMED[C]			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.01	U			6	N	8	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.004	U			16	N	140	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.004	U			NS	NS	2,500	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.004	U			195	N	54	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.004	U			415	N	25	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.004	U			NS	NS	422	N	NMED[C]			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.004	U			45,900	N	24,800	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.004	U			NS	NS	7,080	N	NMED[C]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.004	U			45,900	N	24,800	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.004	U			415	N	25	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.0061	U			NS	NS	90,700	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.004	U			NS	NS	7,080	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.004	U			NS	NS	599	N	NMED[C]			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.004	U			NS	NS	7,080	N	NMED[C]			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.004	U			NS	NS	20,400	N	NMED[C]			
Acetone	67-64-1	mg/kg	0.093				NS	NS	242,000	N	NMED		3.84E-07	
Benzene	71-43-2	mg/kg	0.004	U			423	N	142	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.004	U			NS	NS	538	N	NMED[C]			
Bromochloromethane	74-97-5	mg/kg	0.004	U			NS	NS	296	N	NMED[C]			
Bromodichloromethane	75-27-4	mg/kg	0.004	U			143	N	7,080	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.004	U			23,700	N	5,380	N	NMED			
Bromomethane	74-83-9	mg/kg	0.004	U			NS	NS	18	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.004	U			NS	NS	1,620	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.004	U			252	N	202	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.004	U			NS	NS	412	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.004	U			NS	NS	16,600	N	NMED			
Chloroform	67-66-3	mg/kg	0.004	U			134	N	391	N	NMED			
Chloromethane	74-87-3	mg/kg	0.01	U			956	N	235	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.004	U			NS	NS	708	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.004	U			781	N	130	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.004	U			340	N	5,380	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.004	U			NS	NS	54	N	NMED			

TABLE D1-AP15-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP15
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Dichlorodifluoromethane	75-71-8	mg/kg	0.004	U			NS	NS	161	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.004	U			1,770	N	5,800	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.004	U			2,400	N	269	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.004	U			NS	NS	2,740	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.01	U			NS	NS	696	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.004	U			24,200	N	33,100	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.02	U			89,600	N	1,210	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.004	U			NS	NS	17,700	N	NMED[C]			
n-Propylbenzene	103-65-1	mg/kg	0.004	U			NS	NS	6,730	N	NMED[C]			
Naphthalene	91-20-3	mg/kg	0.004	U			633	N	159	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0051	U			NS	NS	736	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.004	U			NS	NS	2,740	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.004	U			NS	NS	35,400	N	NMED[C]			
Styrene	100-42-5	mg/kg	0.004	U			NS	NS	10,200	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.004	U			NS	NS	35,400	N	NMED[C]			
Tetrachloroethene	127-18-4	mg/kg	0.004	U			7,910	N	120	N	NMED			
Toluene	108-88-3	mg/kg	0.004	U			NS	NS	14,000	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.004	U			NS	NS	206	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.004	U			781	N	130	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.004	U			5,370	N	7	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.004	U			NS	NS	1,130	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.004	U			161	N	162	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.18	UJ			8,540	N	79	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.18	UJ			NS	NS	2,500	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.18	UJ			45,900	N	24,800	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.18	UJ			45,900	N	24,800	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.18	U			NS	NS	26,900	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.18	U			17,000	N	269	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.18	U			NS	NS	807	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.18	U			NS	NS	5,380	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.18	U			NS	NS	538	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.18	UJ			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.18	UJ			165	N	81	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.18	UJ			NS	NS	28,300	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.18	U			NS	NS	1,770	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.18	UJ			NS	NS	1,000	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.18	U			NS	NS	13,500	N	NMED[C]			
2-Nitroaniline	88-74-4	mg/kg	0.18	UJ			NS	NS	2,690	N	NMED[C]			
2-Nitrophenol	88-75-5	mg/kg	0.18	U			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.18	UJ			410	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.18	UJ			135	N	1,080	N	NMED[SC]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.18	U			NS	NS	22	N	NMED			

TABLE D1-AP15-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP15
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.18	UJ			NS	NS	NS	NS	NS			
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.18	U			NS	NS	26,900	N	NMED[C]			
4-Chloroaniline	106-47-8	mg/kg	0.18	UJ			14	N	135	N	NMED[C]			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.18	UJ			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.18	UJ			135	N	1,080	N	NMED[C]			
4-Nitrophenol	100-02-7	mg/kg	0.18	U			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.18	UJ			NS	NS	15,100	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.18	UJ			NS	NS	7,530	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.18	UJ			NS	NS	75,300	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.18	UJ			240	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.14	UJ			173	N	15	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.18	UJ			240	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.18	UJ			NS	NS	7,530	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.18	UJ			2,310	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.18	U			NS	NS	1,080,000	N	NMED[C]			
Benzyl Alcohol	100-51-6	mg/kg	0.18	UJ			NS	NS	26,900	N	NMED[C]			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.18	UJ			NS	NS	807	N	NMED[C]			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.18	UJ			2	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.18	UJ			3,540	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.18	UJ			13,400	N	5,380	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.18	UJ			1,420	N	53,800	N	NMED[C]			
Carbazole	86-74-8	mg/kg	0.18	UJ			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.18	UJ			23,100	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.18	UJ			NS	NS	26,900	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.18	UJ			NS	NS	2,690	N	NMED[C]			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	UJ			24	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.18	UJ			NS	NS	269	N	NMED[C]			
Diethylphthalate	84-66-2	mg/kg	0.18	UJ			NS	NS	215,000	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.18	UJ			NS	NS	269,000	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.18	UJ			NS	NS	10,000	N	NMED			
Fluorene	86-73-7	mg/kg	0.18	UJ			NS	NS	10,000	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.18	UJ			117	N	215	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.18	UJ			2,400	N	269	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.18	UJ			4,670	N	188	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.18	UJ			240	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.18	UJ			198,000	N	53,700	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.18	UJ			0.38	N	NA	N	NMED[C]			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.022	U			4	N	2	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.18	UJ			37,900	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.18	UJ			633	N	159	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.18	UJ			1,350	N	353	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.18	U			346	N	989	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.18	UJ			NS	NS	8,070	N	NMED			
Phenol	108-95-2	mg/kg	0.18	U			NS	NS	77,400	N	NMED			
Pyrene	129-00-0	mg/kg	0.18	UJ			NS	NS	7,530	N	NMED			

TABLE D1-AP15-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP15
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	8,070	N	NMED[C]			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	27	N	NMED[C]			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U			NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U			2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U			NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U			1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U			11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			626	N	2,420	N	NMED[C]			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.022	U			2,440	N	17	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.022	U			55	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.011	U			58	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.011	U			85	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.011	U			85	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.011	U			85	N	5	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.011	U			85	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (3)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000021	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg		U	0.0000027	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.000000046	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.0000000056	J	0.00000056	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.000000054	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000057	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000088	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000056	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000091	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.000000066	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000011	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.000000082	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000083	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg	0.0000000039	J	0.000000039	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000008	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.0000005	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.00000014	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.00000001				0.00173	N	0.000226	N	NMED	5.49E-11	4.20E-05	

TABLE D1-AP15-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP15
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	23,000				NS	NS	41,400	N	NMED		5.56E-01	Nervous
Antimony	7440-36-0	mg/kg	0.19	J			NS	NS	142	N	NMED		1.34E-03	
Arsenic	7440-38-2	mg/kg	1.4				216	N	41	N	NMED		3.40E-02	
Barium	7440-39-3	mg/kg	200				NS	NS	4,390	N	NMED		4.56E-02	
Beryllium	7440-41-7	mg/kg	0.92	J			2,710	N	148	N	NMED		6.22E-03	
Cadmium	7440-43-9	mg/kg	0.52	J			3,610	N	72	N	NMED		7.21E-03	
Calcium	7440-70-2	mg/kg	3,700	J			NS	NS	8,850,000	N	NMED		4.18E-04	
Chromium (Total) (4)	7440-47-3	mg/kg	15				468	N	134	N	NMED		1.12E-01	GI, Blood
Cobalt	7440-48-4	mg/kg	5				722	N	37	N	NMED		1.36E-01	Endocrine
Copper	7440-50-8	mg/kg	61				NS	NS	14,200	N	NMED		4.30E-03	
Iron	7439-89-6	mg/kg	13,000				NS	NS	248,000	N	NMED		5.24E-02	
Lead	7439-92-1	mg/kg	14				NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	7,700				NS	NS	1,550,000	N	NMED		4.97E-03	
Manganese	7439-96-5	mg/kg	400				NS	NS	464	N	NMED		8.62E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.063	J			NS	NS	21	N	NMED		3.04E-03	
Nickel	7440-02-0	mg/kg	12				20,500	N	753	N	NMED		1.59E-02	
Potassium	7440-09-7	mg/kg	2,100				NS	NS	20,800,000	N	NMED		1.01E-04	
Selenium	7782-49-2	mg/kg	1.6				NS	NS	1,750	N	NMED		9.14E-04	
Silver	7440-22-4	mg/kg	0.1				NS	NS	1,770	N	NMED		5.65E-05	
Sodium	7440-23-5	mg/kg	30	J			NS	NS	10,200,000	N	NMED		2.94E-06	
Thallium	7440-28-0	mg/kg	0.08	J			NS	NS	4	N	NMED		2.26E-02	
Vanadium	7440-62-2	mg/kg	22				NS	NS	614	N	NMED		3.58E-02	
Zinc	7440-66-6	mg/kg	57				NS	NS	106,000	N	NMED		5.38E-04	

TABLE D1-AP15-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP15
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.35	U			NS	NS	12	N	NMED			
Nitrate	14797-55-8	mg/kg	2.9	J			NS	NS	566,000	N	NMED		5.12E-06	
Perchlorate	14797-73-0	mg/kg	0.0021	UJ			NS	NS	248	N	NMED			
										Cumulative Risk/Hazard		**5E-11**	**1.9**	
										Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	1.4
Endocrine	0.14
GI	0.11
Blood	0.11
All Others	0.24

Notes:

[s] = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update).

2) NMED[C] = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

3) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

4) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper tolerance limit

TABLE D1-AP16-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AP16
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0021	U			28.1	N	2,350	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0021	U			NS	NS	14,400	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0021	U			7.98	N	1,560	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0021	U			18.8	N	2.61	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0021	U			78.6	N	15,600	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0021	U			NS	NS	440	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0021	U			29.3	N	141	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0021	U			NS	NS	63	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0053	U			0.051	N	7.09	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0021	U			240	N	82.9	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0021	U			NS	NS	300	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0053	U			0.0858	N	5.88	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0021	U			0.672	N	135	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0021	U			NS	NS	2,150	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0021	U			8.32	N	55.6	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0021	U			17.8	N	29	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0021	U			NS	NS	270	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0021	U			1,290	N	5,480	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0021	U			NS	NS	1,600	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0021	U			1,290	N	5,480	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0021	U			17.8	N	29	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0032	U			NS	NS	37,400	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0021	U			NS	NS	1,560	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0021	U			NS	NS	200	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0021	U			NS	NS	1,600	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0021	U			NS	NS	5,810	N	RSL		
Acetone	67-64-1	mg/kg	0.034				NS	NS	66,300	N	NMED		5.13E-07
Benzene	71-43-2	mg/kg	0.0021	U			17.8	N	114	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0021	U			NS	NS	290	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0021	U			NS	NS	150	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0021	U			6.19	N	1,560	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0021	U			674	N	1,230	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0021	U			NS	NS	17.7	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0021	U			NS	NS	1,550	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0021	U			10.7	N	144	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0021	U			NS	NS	378	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0021	U			NS	NS	19,000	N	NMED		
Chloroform	67-66-3	mg/kg	0.0021	U			5.9	N	306	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0053	U			41.1	N	268	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0021	U			NS	NS	156	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0021	U			29.3	N	141	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0021	U			13.9	N	1,230	N	NMED		
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0021	U			NS	NS	57.9	N	NMED		

TABLE D1-AP16-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AP16
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dichlorodifluoromethane	75-71-8	mg/kg	0.0021	U			NS	NS	182	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0021	U			75.1	N	3,930	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0021	U			68.3	N	61.6	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0021	U			NS	NS	2,360	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0053	U			NS	NS	764	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0021	U			975	N	37,800	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.011	U			766	N	409	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0021	U			NS	NS	3,900	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0021	U			NS	NS	3,800	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0021	U			22.6	N	162	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0027	U			NS	NS	805	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0021	U			NS	NS	2,360	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0021	U			NS	NS	7,800	N	RSL		
Styrene	100-42-5	mg/kg	0.0021	U			NS	NS	7,260	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0021	U			NS	NS	7,800	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0021	U			337	N	111	N	NMED		
Toluene	108-88-3	mg/kg	0.0021	U			NS	NS	5,230	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0021	U			NS	NS	210	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0021	U			29.3	N	141	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0021	U			15.5	N	6.77	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0021	U			NS	NS	1,230	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0021	U			0.742	N	113	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.2	U			240	N	82.9	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.2	U			NS	NS	2,150	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.2	U			1,290	N	5,480	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.2	U			1,290	N	5,480	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.2	U			NS	NS	6,160	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.2	U			484	N	61.6	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.2	U			NS	NS	185	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.2	U			NS	NS	1,230	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.2	U			NS	NS	123	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.2	U			17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.2	U			3.56	N	18.5	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.2	U			NS	NS	6,260	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.2	U			NS	NS	391	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.2	U			NS	NS	232	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.2	U			NS	NS	3,200	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.2	U			NS	NS	630	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.2	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.2	U			11.8	N	NS	NS	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.2	U			270	N	250	N	RSL[S]		
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.2	U			NS	NS	4.93	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.2	U			NS	NS	NS	NS	NS		
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.2	U			NS	NS	6,300	N	RSL		

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FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4-Chloroaniline	106-47-8	mg/kg	0.2	U			27	N	32	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.2	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.2	U			270	N	250	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.2	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.2	U			NS	NS	3,480	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.2	U			NS	NS	1,740	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.2	U			NS	NS	17,400	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.2	U			1.53	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.15	U			1.12	N	17.4	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.2	U			1.53	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.2	U			NS	NS	1,740	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.2	U			15.3	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.2	U			NS	NS	250,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.2	U			NS	NS	6,300	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.2	U			NS	NS	190	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.2	U			3.11	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.2	U			99.3	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.2	U			380	N	1,230	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.2	U			2,900	N	13,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.2	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.2	U			153	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.2	U			NS	NS	6,160	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.2	U			NS	NS	630	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.15	U			0.153	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.2	U			NS	NS	78	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.2	U			NS	NS	49,300	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.2	U			NS	NS	61,600	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.2	U			NS	NS	2,320	N	NMED		
Fluorene	86-73-7	mg/kg	0.2	U			NS	NS	2,320	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.2	U			3.33	N	49.3	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.2	U			68.3	N	61.6	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.2	U			133	N	43.1	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.2	U			1.53	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.2	U			5,610	N	12,300	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.2	U			0.78	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.024	U			0.0234	Y	0.493	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.2	U			1,090	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.2	U			22.6	N	162	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.2	U			60.4	N	131	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.2	U			9.85	N	234	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.2	U			NS	NS	1,740	N	NMED		
Phenol	108-95-2	mg/kg	0.2	U			NS	NS	18,500	N	NMED		
Pyrene	129-00-0	mg/kg	0.2	U			NS	NS	1,740	N	NMED		

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FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U			NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U			83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U			NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U			60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U			313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			1,300	N	570	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.024	U			69.6	N	3.98	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.024	U			1.81	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.012	U			1.86	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.012	U			2.43	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.012	U			2.43	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.012	U			2.43	N	1.14	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.012	U			2.43	N	NS	NS	NMED		
DIOXINS/FURANS (ηg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	ng/kg	0.000000000051	J	0.00000017	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	ng/kg	0.0000000014	J	0.0000045	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	ng/kg		U	0.000000065	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	ng/kg		U	0.00000056	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	ng/kg		U	0.000000076	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	ng/kg		U	0.000000087	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	ng/kg		U	0.000000041	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	ng/kg		U	0.000000086	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	ng/kg		U	0.000000076	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	ng/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	ng/kg		U	0.00000014	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	ng/kg		U	0.00000014	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	ng/kg		U	0.00000007	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	ng/kg		U	0.00000016	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	ng/kg	0.000000045	J	0.00000015	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	ng/kg		U	0.00000056	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	ng/kg		U	0.00000013	1	NS	NS	NS	NS	NMED		
TEQ		ng/kg	0.000000046				0.000049	N	0.0000506	N	NMED	9.47E-09	9.17E-04

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HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AP16
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	18,000				NS	NS	78,000	N	NMED		2.31E-01
Antimony	7440-36-0	mg/kg	0.19	J			NS	NS	31.3	N	NMED		6.07E-03
Arsenic	7440-38-2	mg/kg	1.2				7.07	N	13	N	NMED	1.70E-06	9.23E-02
Barium	7440-39-3	mg/kg	210				NS	NS	15,600	N	NMED		1.35E-02
Beryllium	7440-41-7	mg/kg	0.99	J			64,400	N	156	N	NMED	1.54E-10	6.35E-03
Cadmium	7440-43-9	mg/kg	0.59				85,900	N	70.5	N	NMED	6.87E-11	8.37E-03
Calcium	7440-70-2	mg/kg	6,500				NS	NS	13,000,000	N	NMED		5.00E-04
Chromium (Total) (3)	7440-47-3	mg/kg	12				96.6	N	45,200	N	NMED	1.24E-06	2.65E-04
Cobalt	7440-48-4	mg/kg	4				17,200	N	23.4	N	NMED	2.33E-09	1.71E-01
Copper	7440-50-8	mg/kg	63				NS	NS	3,130	N	NMED		2.01E-02
Iron	7439-89-6	mg/kg	11,000				NS	NS	54,800	N	NMED		2.01E-01
Lead	7439-92-1	mg/kg	15				NS	NS	200	N	RSL		
Magnesium	7439-95-4	mg/kg	6,500				NS	NS	15,600,000	N	NMED		4.17E-04
Manganese	7439-96-5	mg/kg	380				NS	NS	10,500	N	NMED		3.62E-02
Mercury (Elemental)	7439-97-6	mg/kg	0.074	J			NS	NS	23.8	N	NMED		3.11E-03
Nickel	7440-02-0	mg/kg	11				595,000	N	1,560	N	NMED	1.85E-10	7.05E-03
Potassium	7440-09-7	mg/kg	1,900				NS	NS	15,600,000	N	NMED		1.22E-04
Selenium	7782-49-2	mg/kg	1.4				NS	NS	391	N	NMED		3.58E-03
Silver	7440-22-4	mg/kg	0.088	J			NS	NS	391	N	NMED		2.25E-04
Sodium	7440-23-5	mg/kg	21				NS	NS	7,820,000	N	NMED		2.69E-06
Thallium	7440-28-0	mg/kg	0.063	J			NS	NS	0.782	N	NMED		8.06E-02
Vanadium	7440-62-2	mg/kg	16				NS	NS	394	N	NMED		4.06E-02
Zinc	7440-66-6	mg/kg	46				NS	NS	23,500	N	NMED		1.96E-03

TABLE D1-AP16-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AP16
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.37	U			NS	NS	11.2	N	NMED		
Nitrate	14797-55-8	mg/kg	1.8	J			NS	NS	125,000	N	NMED		1.44E-05
Perchlorate	14797-73-0	mg/kg	0.002	UJ			NS	NS	54.8	N	NMED		
										Cumulative Risk/Hazard		**3E-06**	**0.9**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of Quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper Tolerance Limit

TABLE D1-AP16-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP16
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0021	U			137	N	39,400	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0021	U			NS	NS	72,500	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0021	U			39	N	26,000	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0021	U			92	N	12	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0021	U			383	N	260,000	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0021	U			NS	NS	2,260	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0021	U			146	N	695	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0021	U			NS	NS	930	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0053	U			1	N	34	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0021	U			1,250	N	423	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0021	U			NS	NS	1,800	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0053	U			1	N	41	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0021	U			3	N	738	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0021	U			NS	NS	13,000	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0021	U			41	N	286	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0021	U			87	N	137	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0021	U			NS	NS	1,500	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0021	U			6,730	N	90,800	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0021	U			NS	NS	23,000	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0021	U			6,730	N	90,800	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0021	U			87	N	137	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0032	U			NS	NS	411,000	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0021	U			NS	NS	26,000	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0021	U			NS	NS	1,300	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0021	U			NS	NS	23,000	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0021	U			NS	NS	81,600	N	RSL		
Acetone	67-64-1	mg/kg	0.034				NS	NS	960,000	N	NMED		3.54E-08
Benzene	71-43-2	mg/kg	0.0021	U			87	N	729	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0021	U			NS	NS	1,800	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0021	U			NS	NS	630	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0021	U			30	N	26,000	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0021	U			1,760	N	18,300	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0021	U			NS	NS	95	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0021	U			NS	NS	8,540	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0021	U			53	N	1,020	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0021	U			NS	NS	2,160	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0021	U			NS	NS	89,500	N	NMED		
Chloroform	67-66-3	mg/kg	0.0021	U			29	N	2,000	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0053	U			201	N	1,260	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0021	U			NS	NS	2,600	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0021	U			146	N	695	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0021	U			67	N	18,300	N	NMED		

TABLE D1-AP16-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP16
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0021	U			NS	NS	288	N	NMED		
Dichlorodifluoromethane	75-71-8	mg/kg	0.0021	U			NS	NS	865	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0021	U			29,000	N	368	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0021	U			52	N	916	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0021	U			NS	NS	14,200	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0053	U			NS	NS	3,730	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0021	U			4,820	N	178,000	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.011	U			14,400	N	5,130	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0021	U			NS	NS	58,000	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0021	U			NS	NS	24,000	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0021	U			108	N	843	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0027	U			NS	NS	3,940	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0021	U			NS	NS	14,200	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0021	U			NS	NS	120,000	N	RSL		
Styrene	100-42-5	mg/kg	0.0021	U			NS	NS	51,300	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0021	U			NS	NS	120,000	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0021	U			1,650	N	629	N	NMED		
Toluene	108-88-3	mg/kg	0.0021	U			NS	NS	61,300	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0021	U			NS	NS	1,100	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0021	U			146	N	695	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0021	U			112	N	37	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0021	U			NS	NS	6,030	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0021	U			28	N	46	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.2	U			1,250	N	423	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.2	U			NS	NS	13,000	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.2	U			6,730	N	90,800	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.2	U			6,730	N	90,800	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.2	U			NS	NS	91,600	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.2	U			2,330	N	916	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.2	U			NS	NS	2,750	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.2	U			NS	NS	18,300	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.2	U			NS	NS	1,830	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.2	U			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.2	U			17	N	276	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.2	U			NS	NS	104,000	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.2	U			NS	NS	6,490	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.2	U			NS	NS	3,370	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.2	U			NS	NS	41,000	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.2	U			NS	NS	8,000	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.2	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.2	U			NS	NS	410	N	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.2	U			1,100	N	3,300	N	RSL[S]		

TABLE D1-AP16-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP16
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.2	U			NS	NS	73	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.2	U			NS	NS	NS	NS	NS		
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.2	U			NS	NS	82,000	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.2	U			110	N	410	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.2	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.2	U			1,100	N	3,300	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.2	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.2	U			NS	NS	50,500	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.2	U			NS	NS	25,300	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.2	U			NS	NS	253,000	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.2	U			32	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.15	U			24	N	251	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.2	U			32	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.2	U			NS	NS	25,300	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.2	U			323	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.2	U			NS	NS	3,300,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.2	U			NS	NS	82,000	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.2	U			NS	NS	2,500	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.2	U			16	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.2	U			519	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.2	U			1,830	N	18,300	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.2	U			12,000	N	160,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.2	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.2	U			3,230	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.2	U			NS	NS	91,600	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.2	U			NS	NS	8,200	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.15	U			3	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.2	U			NS	NS	1,200	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.2	U			NS	NS	733,000	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.2	U			NS	NS	916,000	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.2	U			NS	NS	33,700	N	NMED		
Fluorene	86-73-7	mg/kg	0.2	U			NS	NS	33,700	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.2	U			16	N	733	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.2	U			52	N	916	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.2	U			641	N	641	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.2	U			32	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.2	U			27,000	N	183,000	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.2	U			3	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.024	U			1	N	7	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.2	U			5,240	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.2	U			108	N	843	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.2	U			293	N	1,540	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.2	U			45	N	3,180	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.2	U			NS	NS	27,500	N	NMED		
Phenol	108-95-2	mg/kg	0.2	U			NS	NS	275,000	N	NMED		
Pyrene	129-00-0	mg/kg	0.2	U			NS	NS	25,300	N	NMED		

TABLE D1-AP16-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP16
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U			NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U			428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U			NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U			293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U			1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			5,300	N	7,400	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.024	U			304	N	57	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.024	U			9	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.012	U			9	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.012	U			11	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.012	U			11	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.012	U			11	N	16	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.012	U			11	N	NS	NS	NMED		
DIOXINS/FURANS (ηg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	ng/kg	0.000000000051	J	0.00000017	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	ng/kg	0.0000000014	J	0.0000045	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	ng/kg		U	0.000000065	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	ng/kg		U	0.00000056	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	ng/kg		U	0.000000076	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	ng/kg		U	0.000000087	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	ng/kg		U	0.000000041	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	ng/kg		U	0.000000086	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	ng/kg		U	0.000000076	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	ng/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	ng/kg		U	0.00000014	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	ng/kg		U	0.00000014	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	ng/kg		U	0.00000007	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	ng/kg		U	0.00000016	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	ng/kg	0.000000045	J	0.00000015	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	ng/kg		U	0.00000056	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	ng/kg		U	0.00000013	1	NS	NS	NS	NS	NMED		
TEQ		ng/kg	0.000000046				0.000238	N	0.000808	N	NMED	1.95E-09	5.74E-05

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CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP16
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	18,000				NS	NS	1,290,000	N	NMED		1.40E-02
Antimony	7440-36-0	mg/kg	0.19	J			NS	NS	519	N	NMED		3.66E-04
Arsenic	7440-38-2	mg/kg	1.2				36	N	208	N	NMED	3.34E-07	5.77E-03
Barium	7440-39-3	mg/kg	210				NS	NS	255,000	N	NMED		8.24E-04
Beryllium	7440-41-7	mg/kg	0.99	J			313,000	N	2,580	N	NMED	3.16E-11	3.84E-04
Cadmium	7440-43-9	mg/kg	0.59				417,000	N	1,110	N	NMED	1.41E-11	5.32E-04
Calcium	7440-70-2	mg/kg	6,500				NS	NS	32,400,000	N	NMED		2.01E-04
Chromium (Total) (3)	7440-47-3	mg/kg	12				505	N	314,000	N	NMED	2.38E-07	3.82E-05
Cobalt	7440-48-4	mg/kg	4				83,400	N	388	N	NMED	4.80E-10	1.03E-02
Copper	7440-50-8	mg/kg	63				NS	NS	51,900	N	NMED		1.21E-03
Iron	7439-89-6	mg/kg	11,000				NS	NS	908,000	N	NMED		1.21E-02
Lead	7439-92-1	mg/kg	15				NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	6,500				NS	NS	5,680,000	N	NMED		1.14E-03
Manganese	7439-96-5	mg/kg	380				NS	NS	160,000	N	NMED		2.38E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.074	J			NS	NS	112	N	NMED		6.61E-04
Nickel	7440-02-0	mg/kg	11				2,890,000	N	25,700	N	NMED	3.81E-11	4.28E-04
Potassium	7440-09-7	mg/kg	1,900				NS	NS	76,200,000	N	NMED		2.49E-05
Selenium	7782-49-2	mg/kg	1.4				NS	NS	6,490	N	NMED		2.16E-04
Silver	7440-22-4	mg/kg	0.088	J			NS	NS	6,490	N	NMED		1.36E-05
Sodium	7440-23-5	mg/kg	21				NS	NS	37,300,000	N	NMED		5.63E-07
Thallium	7440-28-0	mg/kg	0.063	J			NS	NS	13	N	NMED		4.85E-03
Vanadium	7440-62-2	mg/kg	16				NS	NS	6,530	N	NMED		2.45E-03
Zinc	7440-66-6	mg/kg	46				NS	NS	38,900	N	NMED		1.18E-03

TABLE D1-AP16-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP16
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.37	U			NS	NS	63	N	NMED		
Nitrate	14797-55-8	mg/kg	1.8	J			NS	NS	2,080,000	N	NMED		8.65E-07
Perchlorate	14797-73-0	mg/kg	0.002	UJ			NS	NS	908	N	NMED		
										Cumulative Risk/Hazard		**6E-07**	**0.06**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper tolerance limit

TABLE D1-AP16-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP16
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0021	U			659	N	10,600	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0021	U			NS	NS	13,600	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0021	U			197	N	7,080	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0021	U			4,300	N	2	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0021	U			1,820	N	70,800	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0021	U			NS	NS	424	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0021	U			781	N	130	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0021	U			NS	NS	283	N	NMED[C]			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0053	U			8	N	6	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0021	U			8,540	N	79	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0021	U			NS	NS	492	N	NMED[C]			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0053	U			6	N	8	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0021	U			16	N	140	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0021	U			NS	NS	2,500	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0021	U			195	N	54	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0021	U			415	N	25	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0021	U			NS	NS	422	N	NMED[C]			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0021	U			45,900	N	24,800	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0021	U			NS	NS	7,080	N	NMED[C]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0021	U			45,900	N	24,800	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0021	U			415	N	25	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.0032	U			NS	NS	90,700	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0021	U			NS	NS	7,080	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.0021	U			NS	NS	599	N	NMED[C]			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0021	U			NS	NS	7,080	N	NMED[C]			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0021	U			NS	NS	20,400	N	NMED[C]			
Acetone	67-64-1	mg/kg	0.034				NS	NS	242,000	N	NMED		1.40E-07	
Benzene	71-43-2	mg/kg	0.0021	U			423	N	142	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.0021	U			NS	NS	538	N	NMED[C]			
Bromochloromethane	74-97-5	mg/kg	0.0021	U			NS	NS	296	N	NMED[C]			
Bromodichloromethane	75-27-4	mg/kg	0.0021	U			143	N	7,080	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0021	U			23,700	N	5,380	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0021	U			NS	NS	18	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.0021	U			NS	NS	1,620	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0021	U			252	N	202	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0021	U			NS	NS	412	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0021	U			NS	NS	16,600	N	NMED			
Chloroform	67-66-3	mg/kg	0.0021	U			134	N	391	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0053	U			956	N	235	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0021	U			NS	NS	708	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0021	U			781	N	130	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0021	U			340	N	5,380	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0021	U			NS	NS	54	N	NMED			

TABLE D1-AP16-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP16
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Dichlorodifluoromethane	75-71-8	mg/kg	0.0021	U			NS	NS	161	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.0021	U			1,770	N	5,800	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0021	U			2,400	N	269	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0021	U			NS	NS	2,740	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0053	U			NS	NS	696	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0021	U			24,200	N	33,100	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.011	U			89,600	N	1,210	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0021	U			NS	NS	17,700	N	NMED[C]			
n-Propylbenzene	103-65-1	mg/kg	0.0021	U			NS	NS	6,730	N	NMED[C]			
Naphthalene	91-20-3	mg/kg	0.0021	U			633	N	159	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0027	U			NS	NS	736	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.0021	U			NS	NS	2,740	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.0021	U			NS	NS	35,400	N	NMED[C]			
Styrene	100-42-5	mg/kg	0.0021	U			NS	NS	10,200	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0021	U			NS	NS	35,400	N	NMED[C]			
Tetrachloroethene	127-18-4	mg/kg	0.0021	U			7,910	N	120	N	NMED			
Toluene	108-88-3	mg/kg	0.0021	U			NS	NS	14,000	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0021	U			NS	NS	206	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0021	U			781	N	130	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0021	U			5,370	N	7	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0021	U			NS	NS	1,130	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0021	U			161	N	162	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.2	U			8,540	N	79	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.2	U			NS	NS	2,500	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.2	U			45,900	N	24,800	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.2	U			45,900	N	24,800	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.2	U			NS	NS	26,900	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.2	U			17,000	N	269	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.2	U			NS	NS	807	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.2	U			NS	NS	5,380	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.2	U			NS	NS	538	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.2	U			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.2	U			165	N	81	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.2	U			NS	NS	28,300	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.2	U			NS	NS	1,770	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.2	U			NS	NS	1,000	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.2	U			NS	NS	13,500	N	NMED[C]			
2-Nitroaniline	88-74-4	mg/kg	0.2	U			NS	NS	2,690	N	NMED[C]			
2-Nitrophenol	88-75-5	mg/kg	0.2	U			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.2	U			410	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.2	U			135	N	1,080	N	NMED[SC]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.2	U			NS	NS	22	N	NMED			

TABLE D1-AP16-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP16
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.2	U			NS	NS	NS	NS	NS			
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.2	U			NS	NS	26,900	N	NMED[C]			
4-Chloroaniline	106-47-8	mg/kg	0.2	U			14	N	135	N	NMED[C]			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.2	U			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.2	U			135	N	1,080	N	NMED[C]			
4-Nitrophenol	100-02-7	mg/kg	0.2	U			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.2	U			NS	NS	15,100	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.2	U			NS	NS	7,530	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.2	U			NS	NS	75,300	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.2	U			240	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.15	U			173	N	15	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.2	U			240	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.2	U			NS	NS	7,530	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.2	U			2,310	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.2	U			NS	NS	1,080,000	N	NMED[C]			
Benzyl Alcohol	100-51-6	mg/kg	0.2	U			NS	NS	26,900	N	NMED[C]			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.2	U			NS	NS	807	N	NMED[C]			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.2	U			2	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.2	U			3,540	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.2	U			13,400	N	5,380	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.2	U			1,420	N	53,800	N	NMED[C]			
Carbazole	86-74-8	mg/kg	0.2	U			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.2	U			23,100	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.2	U			NS	NS	26,900	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.2	U			NS	NS	2,690	N	NMED[C]			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.15	U			24	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.2	U			NS	NS	269	N	NMED[C]			
Diethylphthalate	84-66-2	mg/kg	0.2	U			NS	NS	215,000	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.2	U			NS	NS	269,000	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.2	U			NS	NS	10,000	N	NMED			
Fluorene	86-73-7	mg/kg	0.2	U			NS	NS	10,000	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.2	U			117	N	215	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.2	U			2,400	N	269	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.2	U			4,670	N	188	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.2	U			240	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.2	U			198,000	N	53,700	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.2	U			0.38	N	NA	N	NMED[C]			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.024	U			4	N	2	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.2	U			37,900	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.2	U			633	N	159	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.2	U			1,350	N	353	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.2	U			346	N	989	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.2	U			NS	NS	8,070	N	NMED			
Phenol	108-95-2	mg/kg	0.2	U			NS	NS	77,400	N	NMED			
Pyrene	129-00-0	mg/kg	0.2	U			NS	NS	7,530	N	NMED			

TABLE D1-AP16-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP16
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	8,070	N	NMED[C]			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	27	N	NMED[C]			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U			NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U			2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U			NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U			1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U			11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			626	N	2,420	N	NMED[C]			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.024	U			2,440	N	17	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.024	U			55	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.012	U			58	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.012	U			85	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.012	U			85	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.012	U			85	N	5	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.012	U			85	N	NS	NS	NMED			
DIOXINS/FURANS (ηg/kg) (3)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	ng/kg	0.000000000051	J	0.00000017	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	ng/kg	0.0000000014	J	0.0000045	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	ng/kg		U	0.000000065	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	ng/kg		U	0.00000056	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	ng/kg		U	0.000000076	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	ng/kg		U	0.000000087	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	ng/kg		U	0.000000041	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	ng/kg		U	0.000000086	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	ng/kg		U	0.000000076	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	ng/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	ng/kg		U	0.00000014	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	ng/kg		U	0.00000014	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	ng/kg		U	0.00000007	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	ng/kg		U	0.00000016	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	ng/kg	0.000000045	J	0.00000015	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	ng/kg		U	0.00000056	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	ng/kg		U	0.00000013	1	NS	NS	NS	NS	NMED			
TEQ		ng/kg	0.000000046				0.00172	N	0.000226	N	NMED	2.70E-10	2.05E-04	

TABLE D1-AP16-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP16
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	18,000				NS	NS	41,400	N	NMED		4.35E-01	Nervous
Antimony	7440-36-0	mg/kg	0.19	J			NS	NS	142	N	NMED		1.34E-03	
Arsenic	7440-38-2	mg/kg	1.2				216	N	41	N	NMED		2.91E-02	
Barium	7440-39-3	mg/kg	210				NS	NS	4,390	N	NMED		4.78E-02	
Beryllium	7440-41-7	mg/kg	0.99	J			2,710	N	148	N	NMED		6.69E-03	
Cadmium	7440-43-9	mg/kg	0.59				3,610	N	72	N	NMED		8.18E-03	
Calcium	7440-70-2	mg/kg	6,500				NS	NS	8,850,000	N	NMED		7.34E-04	
Chromium (Total) (4)	7440-47-3	mg/kg	12				468	N	134	N	NMED		8.96E-02	
Cobalt	7440-48-4	mg/kg	4				722	N	37	N	NMED		1.09E-01	Endocrine
Copper	7440-50-8	mg/kg	63				NS	NS	14,200	N	NMED		4.44E-03	
Iron	7439-89-6	mg/kg	11,000				NS	NS	248,000	N	NMED		4.44E-02	
Lead	7439-92-1	mg/kg	15				NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	6,500				NS	NS	1,550,000	N	NMED		4.19E-03	
Manganese	7439-96-5	mg/kg	380				NS	NS	464	N	NMED		8.19E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.074	J			NS	NS	21	N	NMED		3.57E-03	
Nickel	7440-02-0	mg/kg	11				20,500	N	753	N	NMED		1.46E-02	
Potassium	7440-09-7	mg/kg	1,900				NS	NS	20,800,000	N	NMED		9.13E-05	
Selenium	7782-49-2	mg/kg	1.4				NS	NS	1,750	N	NMED		8.00E-04	
Silver	7440-22-4	mg/kg	0.088	J			NS	NS	1,770	N	NMED		4.97E-05	
Sodium	7440-23-5	mg/kg	21				NS	NS	10,200,000	N	NMED		2.06E-06	
Thallium	7440-28-0	mg/kg	0.063	J			NS	NS	4	N	NMED		1.78E-02	
Vanadium	7440-62-2	mg/kg	16				NS	NS	614	N	NMED		2.61E-02	
Zinc	7440-66-6	mg/kg	46				NS	NS	106,000	N	NMED		4.34E-04	

TABLE D1-AP16-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP16
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.37	U			NS	NS	12	N	NMED			
Nitrate	14797-55-8	mg/kg	1.8	J			NS	NS	566,000	N	NMED		3.18E-06	
Perchlorate	14797-73-0	mg/kg	0.002	UJ			NS	NS	248	N	NMED			
										Cumulative Risk/Hazard		**3E-10**	**1.7**	
										Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	1.3
Endocrine	0.11
All Others	0.30

Notes:

[s] = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update).

2) NMED[C] = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

3) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

4) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper tolerance limit

TABLE D1-AP17-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AP17
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0032	U			28.1	N	2,350	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0032	U			NS	NS	14,400	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0032	U			7.98	N	1,560	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0032	U			18.8	N	2.61	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0032	U			78.6	N	15,600	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0032	U			NS	NS	440	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0032	U			29.3	N	141	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0032	U			NS	NS	63	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.008	U			0.051	N	7.09	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0032	U			240	N	82.9	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0032	U			NS	NS	300	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.008	U			0.0858	N	5.88	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0032	U			0.672	N	135	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0032	U			NS	NS	2,150	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0032	U			8.32	N	55.6	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0032	U			17.8	N	29	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0032	U			NS	NS	270	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0032	U			1,290	N	5,480	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0032	U			NS	NS	1,600	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0032	U			1,290	N	5,480	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0032	U			17.8	N	29	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0048	U			NS	NS	37,400	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0032	U			NS	NS	1,560	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0032	U			NS	NS	200	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0032	U			NS	NS	1,600	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0032	U			NS	NS	5,810	N	RSL		
Acetone	67-64-1	mg/kg	0.008	U			NS	NS	66,300	N	NMED		
Benzene	71-43-2	mg/kg	0.0032	U			17.8	N	114	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0032	U			NS	NS	290	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0032	U			NS	NS	150	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0032	U			6.19	N	1,560	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0032	U			674	N	1,230	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0032	U			NS	NS	17.7	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0032	U			NS	NS	1,550	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0032	U			10.7	N	144	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0032	U			NS	NS	378	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0032	U			NS	NS	19,000	N	NMED		
Chloroform	67-66-3	mg/kg	0.0032	U			5.9	N	306	N	NMED		
Chloromethane	74-87-3	mg/kg	0.008	U			41.1	N	268	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0032	U			NS	NS	156	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0032	U			29.3	N	141	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0032	U			13.9	N	1,230	N	NMED		
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0032	U			NS	NS	57.9	N	NMED		

TABLE D1-AP17-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AP17
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dichlorodifluoromethane	75-71-8	mg/kg	0.0032	U			NS	NS	182	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0032	U			75.1	N	3,930	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0032	U			68.3	N	61.6	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0032	U			NS	NS	2,360	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.008	U			NS	NS	764	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0032	U			975	N	37,800	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.016	U			766	N	409	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0032	U			NS	NS	3,900	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0032	U			NS	NS	3,800	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0032	U			22.6	N	162	N	NMED		
o-Xylene	95-47-6	mg/kg	0.004	U			NS	NS	805	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0032	U			NS	NS	2,360	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0032	U			NS	NS	7,800	N	RSL		
Styrene	100-42-5	mg/kg	0.0032	U			NS	NS	7,260	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0032	U			NS	NS	7,800	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0032	U			337	N	111	N	NMED		
Toluene	108-88-3	mg/kg	0.0032	U			NS	NS	5,230	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0032	U			NS	NS	210	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0032	U			29.3	N	141	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0032	U			15.5	N	6.77	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0032	U			NS	NS	1,230	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0032	U			0.742	N	113	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.19	U			240	N	82.9	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.19	U			NS	NS	2,150	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.19	U			1,290	N	5,480	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.19	U			1,290	N	5,480	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.19	U			NS	NS	6,160	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.19	U			484	N	61.6	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.19	U			NS	NS	185	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.19	U			NS	NS	1,230	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.19	U			NS	NS	123	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.19	U			17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.19	U			3.56	N	18.5	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.19	U			NS	NS	6,260	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.19	U			NS	NS	391	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.19	U			NS	NS	232	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.19	U			NS	NS	3,200	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.19	U			NS	NS	630	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.19	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.19	U			11.8	N	NS	NS	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.19	U			270	N	250	N	RSL[S]		
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.19	U			NS	NS	4.93	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.19	U			NS	NS	NS	NS	NS		

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FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.19	U			NS	NS	6,300	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.19	U			27	N	32	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.19	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.19	U			270	N	250	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.19	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.19	U			NS	NS	3,480	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.19	U			NS	NS	1,740	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.19	U			NS	NS	17,400	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.19	U			1.53	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			1.12	N	17.4	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.19	U			1.53	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.19	U			NS	NS	1,740	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.19	U			15.3	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.19	U			NS	NS	250,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.19	U			NS	NS	6,300	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.19	U			NS	NS	190	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.19	U			3.11	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.19	U			99.3	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.19	U			380	N	1,230	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.19	U			2,900	N	13,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.19	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.19	U			153	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.19	U			NS	NS	6,160	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.19	U			NS	NS	630	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			0.153	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.19	U			NS	NS	78	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.19	U			NS	NS	49,300	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.19	U			NS	NS	61,600	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.19	U			NS	NS	2,320	N	NMED		
Fluorene	86-73-7	mg/kg	0.19	U			NS	NS	2,320	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.19	U			3.33	N	49.3	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.19	U			68.3	N	61.6	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.19	U			133	N	43.1	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.19	U			1.53	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.19	U			5,610	N	12,300	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.19	U			0.78	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.022	U			0.0234	N	0.493	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.19	U			1,090	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.19	U			22.6	N	162	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.19	U			60.4	N	131	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.19	U			9.85	N	234	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.19	U			NS	NS	1,740	N	NMED		
Phenol	108-95-2	mg/kg	0.19	U			NS	NS	18,500	N	NMED		
Pyrene	129-00-0	mg/kg	0.19	U			NS	NS	1,740	N	NMED		

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MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U			NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U			83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U			NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U			60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U			313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			1,300	N	570	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.022	U			69.6	N	3.98	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.022	U			1.81	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.011	U			1.86	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.011	U			2.43	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.011	U			2.43	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.011	U			2.43	N	1.14	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.011	U			2.43	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg	0.00000000023	J	0.00000075	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000045	J	0.000015	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000024	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.000000032	J	0.0000032	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.000000061	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000093	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000058	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000092	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000069	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.00000011	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.000000096	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000016	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.00000014	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg	0.000000017	J	0.00000017	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000013	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000048	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.00000012	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.000000054				0.000049	N	0.0000506	N	NMED	1.10E-08	1.06E-03

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HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AP17
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	19,000				NS	NS	78,000	N	NMED		2.44E-01
Antimony	7440-36-0	mg/kg	0.16	J			NS	NS	31.3	N	NMED		5.11E-03
Arsenic	7440-38-2	mg/kg	1.2				7.07	N	13	N	NMED	1.70E-06	9.23E-02
Barium	7440-39-3	mg/kg	230				NS	NS	15,600	N	NMED		1.47E-02
Beryllium	7440-41-7	mg/kg	1.1				64,400	N	156	N	NMED	1.71E-10	7.05E-03
Cadmium	7440-43-9	mg/kg	0.5				85,900	N	70.5	N	NMED	5.82E-11	7.09E-03
Calcium	7440-70-2	mg/kg	13,000	J			NS	NS	13,000,000	N	NMED		1.00E-03
Chromium (Total) (3)	7440-47-3	mg/kg	13				96.6	N	45,200	N	NMED	1.35E-06	2.88E-04
Cobalt	7440-48-4	mg/kg	4.1				17,200	N	23.4	N	NMED	2.38E-09	1.75E-01
Copper	7440-50-8	mg/kg	58				NS	NS	3,130	N	NMED		1.85E-02
Iron	7439-89-6	mg/kg	10,000				NS	NS	54,800	N	NMED		1.82E-01
Lead	7439-92-1	mg/kg	14				NS	NS	200	N	RSL		
Magnesium	7439-95-4	mg/kg	7,600				NS	NS	15,600,000	N	NMED		4.87E-04
Manganese	7439-96-5	mg/kg	300				NS	NS	10,500	N	NMED		2.86E-02
Mercury (Elemental)	7439-97-6	mg/kg	0.054	J			NS	NS	23.8	N	NMED		2.27E-03
Nickel	7440-02-0	mg/kg	10				595,000	N	1,560	N	NMED	1.68E-10	6.41E-03
Potassium	7440-09-7	mg/kg	1,400				NS	NS	15,600,000	N	NMED		8.97E-05
Selenium	7782-49-2	mg/kg	1.4				NS	NS	391	N	NMED		3.58E-03
Silver	7440-22-4	mg/kg	0.08	J			NS	NS	391	N	NMED		2.05E-04
Sodium	7440-23-5	mg/kg	23				NS	NS	7,820,000	N	NMED		2.94E-06
Thallium	7440-28-0	mg/kg	0.052	J			NS	NS	0.782	N	NMED		6.65E-02
Vanadium	7440-62-2	mg/kg	19				NS	NS	394	N	NMED		4.82E-02
Zinc	7440-66-6	mg/kg	47				NS	NS	23,500	N	NMED		2.00E-03

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HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AP17
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.35	U			NS	NS	11.2	N	NMED		
Nitrate	14797-55-8	mg/kg	4.2	J			NS	NS	125,000	N	NMED		3.36E-05
Perchlorate	14797-73-0	mg/kg	0.0022	UJ			NS	NS	54.8	N	NMED		
										Cumulative Risk/Hazard		**3E-06**	**0.9**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of Quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper Tolerance Limit

TABLE D1-AP17-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP17
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0032	U			137	N	39,400	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0032	U			NS	NS	72,500	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0032	U			39	N	26,000	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0032	U			92	N	12	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0032	U			383	N	260,000	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0032	U			NS	NS	2,260	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0032	U			146	N	695	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0032	U			NS	NS	930	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.008	U			1	N	34	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0032	U			1,250	N	423	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0032	U			NS	NS	1,800	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.008	U			1	N	41	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0032	U			3	N	738	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0032	U			NS	NS	13,000	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0032	U			41	N	286	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0032	U			87	N	137	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0032	U			NS	NS	1,500	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0032	U			6,730	N	90,800	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0032	U			NS	NS	23,000	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0032	U			6,730	N	90,800	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0032	U			87	N	137	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0048	U			NS	NS	411,000	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0032	U			NS	NS	26,000	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0032	U			NS	NS	1,300	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0032	U			NS	NS	23,000	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0032	U			NS	NS	81,600	N	RSL		
Acetone	67-64-1	mg/kg	0.008	U			NS	NS	960,000	N	NMED		
Benzene	71-43-2	mg/kg	0.0032	U			87	N	729	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0032	U			NS	NS	1,800	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0032	U			NS	NS	630	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0032	U			30	N	26,000	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0032	U			1,760	N	18,300	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0032	U			NS	NS	95	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0032	U			NS	NS	8,540	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0032	U			53	N	1,020	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0032	U			NS	NS	2,160	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0032	U			NS	NS	89,500	N	NMED		
Chloroform	67-66-3	mg/kg	0.0032	U			29	N	2,000	N	NMED		
Chloromethane	74-87-3	mg/kg	0.008	U			201	N	1,260	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0032	U			NS	NS	2,600	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0032	U			146	N	695	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0032	U			67	N	18,300	N	NMED		

TABLE D1-AP17-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP17
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0032	U			NS	NS	288	N	NMED		
Dichlorodifluoromethane	75-71-8	mg/kg	0.0032	U			NS	NS	865	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0032	U			29,000	N	368	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0032	U			52	N	916	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0032	U			NS	NS	14,200	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.008	U			NS	NS	3,730	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0032	U			4,820	N	178,000	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.016	U			14,400	N	5,130	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0032	U			NS	NS	58,000	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0032	U			NS	NS	24,000	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0032	U			108	N	843	N	NMED		
o-Xylene	95-47-6	mg/kg	0.004	U			NS	NS	3,940	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0032	U			NS	NS	14,200	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0032	U			NS	NS	120,000	N	RSL		
Styrene	100-42-5	mg/kg	0.0032	U			NS	NS	51,300	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0032	U			NS	NS	120,000	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0032	U			1,650	N	629	N	NMED		
Toluene	108-88-3	mg/kg	0.0032	U			NS	NS	61,300	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0032	U			NS	NS	1,100	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0032	U			146	N	695	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0032	U			112	N	37	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0032	U			NS	NS	6,030	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0032	U			28	N	46	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.19	U			1,250	N	423	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.19	U			NS	NS	13,000	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.19	U			6,730	N	90,800	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.19	U			6,730	N	90,800	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.19	U			NS	NS	91,600	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.19	U			2,330	N	916	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.19	U			NS	NS	2,750	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.19	U			NS	NS	18,300	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.19	U			NS	NS	1,830	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.19	U			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.19	U			17	N	276	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.19	U			NS	NS	104,000	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.19	U			NS	NS	6,490	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.19	U			NS	NS	3,370	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.19	U			NS	NS	41,000	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.19	U			NS	NS	8,000	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.19	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.19	U			NS	NS	410	N	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.19	U			1,100	N	3,300	N	RSL[S]		

TABLE D1-AP17-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP17
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.19	U			NS	NS	73	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.19	U			NS	NS	NS	NS	NS		
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.19	U			NS	NS	82,000	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.19	U			110	N	410	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.19	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.19	U			1,100	N	3,300	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.19	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.19	U			NS	NS	50,500	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.19	U			NS	NS	25,300	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.19	U			NS	NS	253,000	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.19	U			32	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			24	N	251	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.19	U			32	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.19	U			NS	NS	25,300	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.19	U			323	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.19	U			NS	NS	3,300,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.19	U			NS	NS	82,000	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.19	U			NS	NS	2,500	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.19	U			16	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.19	U			519	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.19	U			1,830	N	18,300	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.19	U			12,000	N	160,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.19	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.19	U			3,230	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.19	U			NS	NS	91,600	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.19	U			NS	NS	8,200	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			3	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.19	U			NS	NS	1,200	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.19	U			NS	NS	733,000	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.19	U			NS	NS	916,000	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.19	U			NS	NS	33,700	N	NMED		
Fluorene	86-73-7	mg/kg	0.19	U			NS	NS	33,700	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.19	U			16	N	733	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.19	U			52	N	916	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.19	U			641	N	641	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.19	U			32	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.19	U			27,000	N	183,000	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.19	U			3	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.022	U			1	N	7	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.19	U			5,240	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.19	U			108	N	843	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.19	U			293	N	1,540	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.19	U			45	N	3,180	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.19	U			NS	NS	27,500	N	NMED		
Phenol	108-95-2	mg/kg	0.19	U			NS	NS	275,000	N	NMED		
Pyrene	129-00-0	mg/kg	0.19	U			NS	NS	25,300	N	NMED		

TABLE D1-AP17-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP17
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U			NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U			428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U			NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U			293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U			1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			5,300	N	7,400	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.022	U			304	N	57	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.022	U			9	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.011	U			9	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.011	U			11	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.011	U			11	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.011	U			11	N	16	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.011	U			11	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg	0.00000000023	J	0.00000075	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000045	J	0.000015	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000024	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.000000032	J	0.0000032	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.000000061	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000093	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000058	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000092	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000069	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.00000011	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.000000096	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000016	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.00000014	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg	0.000000017	J	0.00000017	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000013	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000048	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.00000012	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.000000054				0.000238	N	0.000808	N	NMED	2.26E-09	6.65E-05

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MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	19,000				NS	NS	1,290,000	N	NMED		1.47E-02
Antimony	7440-36-0	mg/kg	0.16	J			NS	NS	519	N	NMED		3.08E-04
Arsenic	7440-38-2	mg/kg	1.2				36	N	208	N	NMED	3.34E-07	5.77E-03
Barium	7440-39-3	mg/kg	230				NS	NS	255,000	N	NMED		9.02E-04
Beryllium	7440-41-7	mg/kg	1.1				313,000	N	2,580	N	NMED	3.51E-11	4.26E-04
Cadmium	7440-43-9	mg/kg	0.5				417,000	N	1,110	N	NMED	1.20E-11	4.50E-04
Calcium	7440-70-2	mg/kg	13,000	J			NS	NS	32,400,000	N	NMED		4.01E-04
Chromium (Total) (3)	7440-47-3	mg/kg	13				505	N	314,000	N	NMED	2.57E-07	4.14E-05
Cobalt	7440-48-4	mg/kg	4.1				83,400	N	388	N	NMED	4.92E-10	1.06E-02
Copper	7440-50-8	mg/kg	58				NS	NS	51,900	N	NMED		1.12E-03
Iron	7439-89-6	mg/kg	10,000				NS	NS	908,000	N	NMED		1.10E-02
Lead	7439-92-1	mg/kg	14				NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	7,600				NS	NS	5,680,000	N	NMED		1.34E-03
Manganese	7439-96-5	mg/kg	300				NS	NS	160,000	N	NMED		1.88E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.054	J			NS	NS	112	N	NMED		4.82E-04
Nickel	7440-02-0	mg/kg	10				2,890,000	N	25,700	N	NMED	3.46E-11	3.89E-04
Potassium	7440-09-7	mg/kg	1,400				NS	NS	76,200,000	N	NMED		1.84E-05
Selenium	7782-49-2	mg/kg	1.4				NS	NS	6,490	N	NMED		2.16E-04
Silver	7440-22-4	mg/kg	0.08	J			NS	NS	6,490	N	NMED		1.23E-05
Sodium	7440-23-5	mg/kg	23				NS	NS	37,300,000	N	NMED		6.17E-07
Thallium	7440-28-0	mg/kg	0.052	J			NS	NS	13	N	NMED		4.00E-03
Vanadium	7440-62-2	mg/kg	19				NS	NS	6,530	N	NMED		2.91E-03
Zinc	7440-66-6	mg/kg	47				NS	NS	38,900	N	NMED		1.21E-03

TABLE D1-AP17-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP17
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.35	U			NS	NS	63	N	NMED		
Nitrate	14797-55-8	mg/kg	4.2	J			NS	NS	2,080,000	N	NMED		2.02E-06
Perchlorate	14797-73-0	mg/kg	0.0022	UJ			NS	NS	908	N	NMED		
										Cumulative Risk/Hazard		**6E-07**	**0.06**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den Berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update)

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper tolerance limit

TABLE D1-AP17-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP17
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Background Value (1)	Exceeds Background (Y/N)	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)																
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0032	U			NA	NA	659	N	10,600	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0032	U			NA	NA	NS	NS	13,600	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0032	U			NA	NA	197	N	7,080	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0032	U			NA	NA	4,300	N	2	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0032	U			NA	NA	1,820	N	70,800	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0032	U			NA	NA	NS	NS	424	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0032	U			NA	NA	781	N	130	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0032	U			NA	NA	NS	NS	283	N	NMED[C]			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.008	U			NA	NA	8	N	6	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0032	U			NA	NA	8,540	N	79	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0032	U			NA	NA	NS	NS	492	N	NMED[C]			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.008	U			NA	NA	6	N	8	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0032	U			NA	NA	16	N	140	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0032	U			NA	NA	NS	NS	2,500	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0032	U			NA	NA	195	N	54	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0032	U			NA	NA	415	N	25	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0032	U			NA	NA	NS	NS	422	N	NMED[C]			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0032	U			NA	NA	45,900	N	24,800	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0032	U			NA	NA	NS	NS	7,080	N	NMED[C]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0032	U			NA	NA	45,900	N	24,800	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0032	U			NA	NA	415	N	25	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.0048	U			NA	NA	NS	NS	90,700	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0032	U			NA	NA	NS	NS	7,080	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.0032	U			NA	NA	NS	NS	599	N	NMED[C]			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0032	U			NA	NA	NS	NS	7,080	N	NMED[C]			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0032	U			NA	NA	NS	NS	20,400	N	NMED[C]			
Acetone	67-64-1	mg/kg	0.008	U			NA	NA	NS	NS	242,000	N	NMED			
Benzene	71-43-2	mg/kg	0.0032	U			NA	NA	423	N	142	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.0032	U			NA	NA	NS	NS	538	N	NMED[C]			
Bromochloromethane	74-97-5	mg/kg	0.0032	U			NA	NA	NS	NS	296	N	NMED[C]			
Bromodichloromethane	75-27-4	mg/kg	0.0032	U			NA	NA	143	N	7,080	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0032	U			NA	NA	23,700	N	5,380	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0032	U			NA	NA	NS	NS	18	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.0032	U			NA	NA	NS	NS	1,620	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0032	U			NA	NA	252	N	202	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0032	U			NA	NA	NS	NS	412	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0032	U			NA	NA	NS	NS	16,600	N	NMED			
Chloroform	67-66-3	mg/kg	0.0032	U			NA	NA	134	N	391	N	NMED			
Chloromethane	74-87-3	mg/kg	0.008	U			NA	NA	956	N	235	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0032	U			NA	NA	NS	NS	708	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0032	U			NA	NA	781	N	130	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0032	U			NA	NA	340	N	5,380	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0032	U			NA	NA	NS	NS	54	N	NMED			

TABLE D1-AP17-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP17
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Background Value (1)	Exceeds Background (Y/N)	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued																
Dichlorodifluoromethane	75-71-8	mg/kg	0.0032	U			NA	NA	NS	NS	161	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.0032	U			NA	NA	1,770	N	5,800	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0032	U			NA	NA	2,400	N	269	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0032	U			NA	NA	NS	NS	2,740	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.008	U			NA	NA	NS	NS	696	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0032	U			NA	NA	24,200	N	33,100	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.016	U			NA	NA	89,600	N	1,210	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0032	U			NA	NA	NS	NS	17,700	N	NMED[C]			
n-Propylbenzene	103-65-1	mg/kg	0.0032	U			NA	NA	NS	NS	6,730	N	NMED[C]			
Naphthalene	91-20-3	mg/kg	0.0032	U			NA	NA	633	N	159	N	NMED			
o-Xylene	95-47-6	mg/kg	0.004	U			NA	NA	NS	NS	736	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.0032	U			NA	NA	NS	NS	2,740	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.0032	U			NA	NA	NS	NS	35,400	N	NMED[C]			
Styrene	100-42-5	mg/kg	0.0032	U			NA	NA	NS	NS	10,200	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0032	U			NA	NA	NS	NS	35,400	N	NMED[C]			
Tetrachloroethene	127-18-4	mg/kg	0.0032	U			NA	NA	7,910	N	120	N	NMED			
Toluene	108-88-3	mg/kg	0.0032	U			NA	NA	NS	NS	14,000	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0032	U			NA	NA	NS	NS	206	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0032	U			NA	NA	781	N	130	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0032	U			NA	NA	5,370	N	7	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0032	U			NA	NA	NS	NS	1,130	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0032	U			NA	NA	161	N	162	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)																
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.19	U			NA	NA	8,540	N	79	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.19	U			NA	NA	NS	NS	2,500	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.19	U			NA	NA	45,900	N	24,800	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.19	U			NA	NA	45,900	N	24,800	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.19	U			NA	NA	NS	NS	26,900	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.19	U			NA	NA	17,000	N	269	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.19	U			NA	NA	NS	NS	807	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.19	U			NA	NA	NS	NS	5,380	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.19	U			NA	NA	NS	NS	538	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.19	U			NA	NA	600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.19	U			NA	NA	165	N	81	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.19	U			NA	NA	NS	NS	28,300	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.19	U			NA	NA	NS	NS	1,770	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.19	U			NA	NA	NS	NS	1,000	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.19	U			NA	NA	NS	NS	13,500	N	NMED[C]			
2-Nitroaniline	88-74-4	mg/kg	0.19	U			NA	NA	NS	NS	2,690	N	NMED[C]			
2-Nitrophenol	88-75-5	mg/kg	0.19	U			NA	NA	NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.19	U			NA	NA	410	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.19	U			NA	NA	135	N	1,080	N	NMED[SC]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.19	U			NA	NA	NS	NS	22	N	NMED			

TABLE D1-AP17-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP17
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Background Value (1)	Exceeds Background (Y/N)	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued																
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.19	U			NA	NA	NS	NS	NS	NS	NS			
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.19	U			NA	NA	NS	NS	26,900	N	NMED[C]			
4-Chloroaniline	106-47-8	mg/kg	0.19	U			NA	NA	14	N	135	N	NMED[C]			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.19	U			NA	NA	NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.19	U			NA	NA	135	N	1,080	N	NMED[C]			
4-Nitrophenol	100-02-7	mg/kg	0.19	U			NA	NA	NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.19	U			NA	NA	NS	NS	15,100	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.19	U			NA	NA	NS	NS	7,530	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.19	U			NA	NA	NS	NS	75,300	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.19	U			NA	NA	240	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			NA	NA	173	N	15	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.19	U			NA	NA	240	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.19	U			NA	NA	NS	NS	7,530	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.19	U			NA	NA	2,310	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.19	U			NA	NA	NS	NS	1,080,000	N	NMED[C]			
Benzyl Alcohol	100-51-6	mg/kg	0.19	U			NA	NA	NS	NS	26,900	N	NMED[C]			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.19	U			NA	NA	NS	NS	807	N	NMED[C]			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.19	U			NA	NA	2	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.19	U			NA	NA	3,540	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.19	U			NA	NA	13,400	N	5,380	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.19	U			NA	NA	1,420	N	53,800	N	NMED[C]			
Carbazole	86-74-8	mg/kg	0.19	U			NA	NA	NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.19	U			NA	NA	23,100	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.19	U			NA	NA	NS	NS	26,900	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.19	U			NA	NA	NS	NS	2,690	N	NMED[C]			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			NA	NA	24	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.19	U			NA	NA	NS	NS	269	N	NMED[C]			
Diethylphthalate	84-66-2	mg/kg	0.19	U			NA	NA	NS	NS	215,000	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.19	U			NA	NA	NS	NS	269,000	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.19	U			NA	NA	NS	NS	10,000	N	NMED			
Fluorene	86-73-7	mg/kg	0.19	U			NA	NA	NS	NS	10,000	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.19	U			NA	NA	117	N	215	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.19	U			NA	NA	2,400	N	269	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.19	U			NA	NA	4,670	N	188	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.19	U			NA	NA	240	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.19	U			NA	NA	198,000	N	53,700	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.19	U			NA	NA	0.38	N	NA	N	NMED[C]			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.022	U			NA	NA	4	N	2	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.19	U			NA	NA	37,900	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.19	U			NA	NA	633	N	159	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.19	U			NA	NA	1,350	N	353	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.19	U			NA	NA	346	N	989	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.19	U			NA	NA	NS	NS	8,070	N	NMED			
Phenol	108-95-2	mg/kg	0.19	U			NA	NA	NS	NS	77,400	N	NMED			
Pyrene	129-00-0	mg/kg	0.19	U			NA	NA	NS	NS	7,530	N	NMED			

TABLE D1-AP17-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP17
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Background Value (1)	Exceeds Background (Y/N)	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)																
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NA	NA	NS	NS	8,070	N	NMED[C]			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NA	NA	NS	NS	27	N	NMED[C]			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			NA	NA	7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			NA	NA	600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			NA	NA	165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NA	NA	NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			NA	NA	1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NA	NA	NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U			NA	NA	NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			NA	NA	11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U			NA	NA	2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U			NA	NA	NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U			NA	NA	1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U			NA	NA	11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NA	NA	NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			NA	NA	626	N	2,420	N	NMED[C]			
POLYCHLORINATED BIPHENYLS (mg/kg)																
Aroclor 1016	12674-11-2	mg/kg	0.022	U			NA	NA	2,440	N	17	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.022	U			NA	NA	55	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.011	U			NA	NA	58	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.011	U			NA	NA	85	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.011	U			NA	NA	85	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.011	U			NA	NA	85	N	5	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.011	U			NA	NA	85	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (3)																
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg	0.00000000023	J	0.00000075	0.0003	NA	NA	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000045	J	0.000015	0.0003	NA	NA	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000024	0.01	NA	NA	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.000000032	J	0.0000032	0.01	NA	NA	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.000000061	0.01	NA	NA	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000093	0.1	NA	NA	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000058	0.1	NA	NA	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000092	0.1	NA	NA	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000069	0.1	NA	NA	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.00000011	0.1	NA	NA	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.000000096	0.1	NA	NA	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000016	0.03	NA	NA	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.00000014	1	NA	NA	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg	0.000000017	J	0.00000017	0.1	NA	NA	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000013	0.3	NA	NA	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000048	0.1	NA	NA	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.00000012	1	NA	NA	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.000000054				NA	NA	0.00172	N	0.000226	N	NMED	3.12E-10	2.38E-04	

TABLE D1-AP17-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP17
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Background Value (1)	Exceeds Background (Y/N)	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)																
Aluminum	7429-90-5	mg/kg	19,000					NA	NS	NS	41,400	N	NMED		4.59E-01	Nervous
Antimony	7440-36-0	mg/kg	0.16	J				NA	NS	NS	142	N	NMED		1.13E-03	
Arsenic	7440-38-2	mg/kg	1.2					NA	216	N	41	N	NMED		2.91E-02	
Barium	7440-39-3	mg/kg	230					NA	NS	NS	4,390	N	NMED		5.24E-02	
Beryllium	7440-41-7	mg/kg	1.1					NA	2,710	N	148	N	NMED		7.43E-03	
Cadmium	7440-43-9	mg/kg	0.5					NA	3,610	N	72	N	NMED		6.93E-03	
Calcium	7440-70-2	mg/kg	13,000	J				NA	NS	NS	8,850,000	N	NMED		1.47E-03	
Chromium (Total) (4)	7440-47-3	mg/kg	13					NA	468	N	134	N	NMED		9.70E-02	
Cobalt	7440-48-4	mg/kg	4.1					NA	722	N	37	N	NMED		1.12E-01	Endocrine
Copper	7440-50-8	mg/kg	58					NA	NS	NS	14,200	N	NMED		4.08E-03	
Iron	7439-89-6	mg/kg	10,000					NA	NS	NS	248,000	N	NMED		4.03E-02	
Lead	7439-92-1	mg/kg	14					NA	NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	7,600					NA	NS	NS	1,550,000	N	NMED		4.90E-03	
Manganese	7439-96-5	mg/kg	300					NA	NS	NS	464	N	NMED		6.47E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.054	J				NA	NS	NS	21	N	NMED		2.61E-03	
Nickel	7440-02-0	mg/kg	10					NA	20,500	N	753	N	NMED		1.33E-02	
Potassium	7440-09-7	mg/kg	1,400					NA	NS	NS	20,800,000	N	NMED		6.73E-05	
Selenium	7782-49-2	mg/kg	1.4					NA	NS	NS	1,750	N	NMED		8.00E-04	
Silver	7440-22-4	mg/kg	0.08	J				NA	NS	NS	1,770	N	NMED		4.52E-05	
Sodium	7440-23-5	mg/kg	23					NA	NS	NS	10,200,000	N	NMED		2.25E-06	
Thallium	7440-28-0	mg/kg	0.052	J				NA	NS	NS	4	N	NMED		1.47E-02	
Vanadium	7440-62-2	mg/kg	19					NA	NS	NS	614	N	NMED		3.09E-02	
Zinc	7440-66-6	mg/kg	47					NA	NS	NS	106,000	N	NMED		4.43E-04	

TABLE D1-AP17-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP17
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Background Value (1)	Exceeds Background (Y/N)	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)																
Cyanide	57-12-5	mg/kg	0.35	U			NA	NA	NS	NS	12	N	NMED			
Nitrate	14797-55-8	mg/kg	4.2	J			NA	NA	NS	NS	566,000	N	NMED		7.42E-06	
Perchlorate	14797-73-0	mg/kg	0.0022	UJ			NA	NA	NS	NS	248	N	NMED			
												Cumulative Risk/Hazard		**3E-10**	**1.5**	
												Exceeds Target Level		**N**	Y	

System	Hazard Quotient
Nervous	1.1
Endocrine	0.11
All Others	0.31

Notes:

[s] = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update).

2) NMED[C] = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

3) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

4) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service

DL = Detection limit

J = Estimated

LOD = Limit of detection

LOQ = Limit of quantitation

mg/kg = milligrams per kilogram

NS = No Standard

U = Nondetect

UJ = Estimated Nondetect

UTL = Upper tolerance limit

TABLE D1-AP18-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AP18
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0022	U			28.1	N	2,350	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0022	U			NS	NS	14,400	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0022	U			7.98	N	1,560	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0022	U			18.8	N	2.61	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0022	U			78.6	N	15,600	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0022	U			NS	NS	440	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0022	U			29.3	N	141	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0022	U			NS	NS	63	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0054	U			0.051	N	7.09	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0022	U			240	N	82.9	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0022	U			NS	NS	300	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0054	U			0.0858	N	5.88	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0022	U			0.672	N	135	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0022	U			NS	NS	2,150	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0022	U			8.32	N	55.6	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0022	U			17.8	N	29	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0022	U			NS	NS	270	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0022	U			1,290	N	5,480	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0022	U			NS	NS	1,600	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0022	U			1,290	N	5,480	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0022	U			17.8	N	29	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0032	U			NS	NS	37,400	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0022	U			NS	NS	1,560	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0022	U			NS	NS	200	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0022	U			NS	NS	1,600	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0022	U			NS	NS	5,810	N	RSL		
Acetone	67-64-1	mg/kg	0.28				NS	NS	66,300	N	NMED		4.22E-06
Benzene	71-43-2	mg/kg	0.0022	U			17.8	N	114	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0022	U			NS	NS	290	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0022	U			NS	NS	150	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0022	U			6.19	N	1,560	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0022	U			674	N	1,230	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0022	U			NS	NS	17.7	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0022	U			NS	NS	1,550	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0022	U			10.7	N	144	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0022	U			NS	NS	378	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0022	U			NS	NS	19,000	N	NMED		
Chloroform	67-66-3	mg/kg	0.0022	U			5.9	N	306	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0054	U			41.1	N	268	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0022	U			NS	NS	156	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0022	U			29.3	N	141	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0022	U			13.9	N	1,230	N	NMED		
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0022	U			NS	NS	57.9	N	NMED		

TABLE D1-AP18-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AP18
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dichlorodifluoromethane	75-71-8	mg/kg	0.0022	U			NS	NS	182	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0022	U			75.1	N	3,930	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0022	U			68.3	N	61.6	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0022	U			NS	NS	2,360	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0054	U			NS	NS	764	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0022	U			975	N	37,800	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.011	U			766	N	409	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0022	U			NS	NS	3,900	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0022	U			NS	NS	3,800	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0022	U			22.6	N	162	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0027	U			NS	NS	805	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0022	U			NS	NS	2,360	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0022	U			NS	NS	7,800	N	RSL		
Styrene	100-42-5	mg/kg	0.0022	U			NS	NS	7,260	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0022	U			NS	NS	7,800	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0022	U			337	N	111	N	NMED		
Toluene	108-88-3	mg/kg	0.0022	U			NS	NS	5,230	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0022	U			NS	NS	210	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0022	U			29.3	N	141	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0022	U			15.5	N	6.77	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0022	U			NS	NS	1,230	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0022	U			0.742	N	113	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.18	U			240	N	82.9	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.18	U			NS	NS	2,150	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.18	U			1,290	N	5,480	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.18	U			1,290	N	5,480	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.18	U			NS	NS	6,160	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.18	U			484	N	61.6	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.18	U			NS	NS	185	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.18	U			NS	NS	1,230	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.18	U			NS	NS	123	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.18	U			17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.18	U			3.56	N	18.5	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.18	U			NS	NS	6,260	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.18	U			NS	NS	391	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.18	U			NS	NS	232	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.18	U			NS	NS	3,200	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.18	U			NS	NS	630	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.18	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.18	U			11.8	N	NS	NS	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.18	U			270	N	250	N	RSL[S]		
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.18	U			NS	NS	4.93	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.18	U			NS	NS	NS	NS	NS		

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FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.18	U			NS	NS	6,300	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.18	U			27	N	32	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.18	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.18	U			270	N	250	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.18	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.18	U			NS	NS	3,480	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.18	U			NS	NS	1,740	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.18	U			NS	NS	17,400	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.18	U			1.53	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			1.12	N	17.4	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.18	U			1.53	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.18	U			NS	NS	1,740	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.18	U			15.3	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.18	U			NS	NS	250,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.18	U			NS	NS	6,300	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.18	U			NS	NS	190	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.18	U			3.11	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.18	U			99.3	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.18	U			380	N	1,230	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.18	U			2,900	N	13,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.18	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.18	U			153	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.18	U			NS	NS	6,160	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.18	U			NS	NS	630	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			0.153	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.18	U			NS	NS	78	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.18	U			NS	NS	49,300	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.18	U			NS	NS	61,600	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.18	U			NS	NS	2,320	N	NMED		
Fluorene	86-73-7	mg/kg	0.18	U			NS	NS	2,320	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.18	U			3.33	N	49.3	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.18	U			68.3	N	61.6	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.18	U			133	N	43.1	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.18	U			1.53	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.18	U			5,610	N	12,300	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.18	U			0.78	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.022	UJ			0.0234	N	0.493	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.18	U			1,090	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.18	U			22.6	N	162	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.18	U			60.4	N	131	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.18	U			9.85	N	234	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.18	U			NS	NS	1,740	N	NMED		
Phenol	108-95-2	mg/kg	0.18	U			NS	NS	18,500	N	NMED		
Pyrene	129-00-0	mg/kg	0.18	U			NS	NS	1,740	N	NMED		

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MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U			NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U			83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U			NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U			60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U			313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			1,300	N	570	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.21	U			69.6	N	3.98	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.21	U			1.81	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.11	U			1.86	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.11	U			2.43	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.11	U			2.43	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.11	U			2.43	N	1.14	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.11	U			2.43	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000058	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.000000003	J	0.00001	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg	0.0000000049	J	0.00000049	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.000000022	J	0.0000022	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.000000067	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000076	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000073	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		UJ	0.00000013	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		UJ	0.000000094	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000013	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000011	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000086	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		UJ	0.00000026	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000011	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000033	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000051	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.00000003				0.000049	N	0.0000506	N	NMED	6.10E-09	5.91E-04

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HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AP18
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	11,000				NS	NS	78,000	N	NMED		1.41E-01
Antimony	7440-36-0	mg/kg	0.15	J			NS	NS	31.3	N	NMED		4.79E-03
Arsenic	7440-38-2	mg/kg	1.3				7.07	N	13	N	NMED	1.84E-06	1.00E-01
Barium	7440-39-3	mg/kg	210				NS	NS	15,600	N	NMED		1.35E-02
Beryllium	7440-41-7	mg/kg	0.42	J			64,400	N	156	N	NMED	6.52E-11	2.69E-03
Cadmium	7440-43-9	mg/kg	0.49				85,900	N	70.5	N	NMED	5.70E-11	6.95E-03
Calcium	7440-70-2	mg/kg	3,900				NS	NS	13,000,000	N	NMED		3.00E-04
Chromium (Total) (3)	7440-47-3	mg/kg	9.6				96.6	N	45,200	N	NMED	9.94E-07	2.12E-04
Cobalt	7440-48-4	mg/kg	3.7				17,200	N	23.4	N	NMED	2.15E-09	1.58E-01
Copper	7440-50-8	mg/kg	72				NS	NS	3,130	N	NMED		2.30E-02
Iron	7439-89-6	mg/kg	8,100				NS	NS	54,800	N	NMED		1.48E-01
Lead	7439-92-1	mg/kg	14				NS	NS	200	N	RSL		
Magnesium	7439-95-4	mg/kg	4,900				NS	NS	15,600,000	N	NMED		3.14E-04
Manganese	7439-96-5	mg/kg	270				NS	NS	10,500	N	NMED		2.57E-02
Mercury (Elemental)	7439-97-6	mg/kg	0.04	J			NS	NS	23.8	N	NMED		1.68E-03
Nickel	7440-02-0	mg/kg	6.7				595,000	N	1,560	N	NMED	1.13E-10	4.29E-03
Potassium	7440-09-7	mg/kg	950				NS	NS	15,600,000	N	NMED		6.09E-05
Selenium	7782-49-2	mg/kg	0.96				NS	NS	391	N	NMED		2.46E-03
Silver	7440-22-4	mg/kg	0.075	J			NS	NS	391	N	NMED		1.92E-04
Sodium	7440-23-5	mg/kg	63				NS	NS	7,820,000	N	NMED		8.06E-06
Thallium	7440-28-0	mg/kg	0.15				NS	NS	0.782	N	NMED		1.92E-01
Vanadium	7440-62-2	mg/kg	17				NS	NS	394	N	NMED		4.31E-02
Zinc	7440-66-6	mg/kg	37				NS	NS	23,500	N	NMED		1.57E-03

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HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AP18
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.35	U			NS	NS	11.2	N	NMED		
Nitrate	14797-55-8	mg/kg	8.9	J			NS	NS	125,000	N	NMED		7.12E-05
Perchlorate	14797-73-0	mg/kg	0.0022	U			NS	NS	54.8	N	NMED		
										Cumulative Risk/Hazard		**3E-06**	**0.9**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of Quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper Tolerance Limit

TABLE D1-AP18-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP18
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0022	U			137	N	39,400	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0022	U			NS	NS	72,500	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0022	U			39	N	26,000	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0022	U			92	N	12	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0022	U			383	N	260,000	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0022	U			NS	NS	2,260	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0022	U			146	N	695	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0022	U			NS	NS	930	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0054	U			1	N	34	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0022	U			1,250	N	423	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0022	U			NS	NS	1,800	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0054	U			1	N	41	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0022	U			3	N	738	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0022	U			NS	NS	13,000	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0022	U			41	N	286	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0022	U			87	N	137	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0022	U			NS	NS	1,500	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0022	U			6,730	N	90,800	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0022	U			NS	NS	23,000	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0022	U			6,730	N	90,800	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0022	U			87	N	137	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0032	U			NS	NS	411,000	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0022	U			NS	NS	26,000	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0022	U			NS	NS	1,300	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0022	U			NS	NS	23,000	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0022	U			NS	NS	81,600	N	RSL		
Acetone	67-64-1	mg/kg	0.28				NS	NS	960,000	N	NMED		2.92E-07
Benzene	71-43-2	mg/kg	0.0022	U			87	N	729	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0022	U			NS	NS	1,800	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0022	U			NS	NS	630	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0022	U			30	N	26,000	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0022	U			1,760	N	18,300	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0022	U			NS	NS	95	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0022	U			NS	NS	8,540	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0022	U			53	N	1,020	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0022	U			NS	NS	2,160	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0022	U			NS	NS	89,500	N	NMED		
Chloroform	67-66-3	mg/kg	0.0022	U			29	N	2,000	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0054	U			201	N	1,260	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0022	U			NS	NS	2,600	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0022	U			146	N	695	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0022	U			67	N	18,300	N	NMED		

TABLE D1-AP18-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP18
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0022	U			NS	NS	288	N	NMED		
Dichlorodifluoromethane	75-71-8	mg/kg	0.0022	U			NS	NS	865	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0022	U			29,000	N	368	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0022	U			52	N	916	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0022	U			NS	NS	14,200	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0054	U			NS	NS	3,730	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0022	U			4,820	N	178,000	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.011	U			14,400	N	5,130	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0022	U			NS	NS	58,000	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0022	U			NS	NS	24,000	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0022	U			108	N	843	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0027	U			NS	NS	3,940	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0022	U			NS	NS	14,200	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0022	U			NS	NS	120,000	N	RSL		
Styrene	100-42-5	mg/kg	0.0022	U			NS	NS	51,300	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0022	U			NS	NS	120,000	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0022	U			1,650	N	629	N	NMED		
Toluene	108-88-3	mg/kg	0.0022	U			NS	NS	61,300	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0022	U			NS	NS	1,100	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0022	U			146	N	695	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0022	U			112	N	37	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0022	U			NS	NS	6,030	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0022	U			28	N	46	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.18	U			1,250	N	423	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.18	U			NS	NS	13,000	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.18	U			6,730	N	90,800	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.18	U			6,730	N	90,800	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.18	U			NS	NS	91,600	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.18	U			2,330	N	916	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.18	U			NS	NS	2,750	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.18	U			NS	NS	18,300	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.18	U			NS	NS	1,830	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.18	U			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.18	U			17	N	276	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.18	U			NS	NS	104,000	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.18	U			NS	NS	6,490	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.18	U			NS	NS	3,370	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.18	U			NS	NS	41,000	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.18	U			NS	NS	8,000	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.18	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.18	U			NS	NS	410	N	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.18	U			1,100	N	3,300	N	RSL[S]		

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CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP18
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.18	U			NS	NS	73	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.18	U			NS	NS	NS	NS	NS		
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.18	U			NS	NS	82,000	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.18	U			110	N	410	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.18	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.18	U			1,100	N	3,300	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.18	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.18	U			NS	NS	50,500	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.18	U			NS	NS	25,300	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.18	U			NS	NS	253,000	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.18	U			32	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			24	N	251	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.18	U			32	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.18	U			NS	NS	25,300	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.18	U			323	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.18	U			NS	NS	3,300,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.18	U			NS	NS	82,000	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.18	U			NS	NS	2,500	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.18	U			16	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.18	U			519	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.18	U			1,830	N	18,300	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.18	U			12,000	N	160,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.18	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.18	U			3,230	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.18	U			NS	NS	91,600	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.18	U			NS	NS	8,200	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			3	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.18	U			NS	NS	1,200	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.18	U			NS	NS	733,000	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.18	U			NS	NS	916,000	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.18	U			NS	NS	33,700	N	NMED		
Fluorene	86-73-7	mg/kg	0.18	U			NS	NS	33,700	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.18	U			16	N	733	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.18	U			52	N	916	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.18	U			641	N	641	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.18	U			32	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.18	U			27,000	N	183,000	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.18	U			3	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.022	UJ			1	N	7	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.18	U			5,240	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.18	U			108	N	843	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.18	U			293	N	1,540	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.18	U			45	N	3,180	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.18	U			NS	NS	27,500	N	NMED		
Phenol	108-95-2	mg/kg	0.18	U			NS	NS	275,000	N	NMED		
Pyrene	129-00-0	mg/kg	0.18	U			NS	NS	25,300	N	NMED		

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CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP18
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U			NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U			428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U			NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U			293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U			1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			5,300	N	7,400	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.21	U			304	N	57	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.21	U			9	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.11	U			9	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.11	U			11	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.11	U			11	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.11	U			11	N	16	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.11	U			11	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000058	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.000000003	J	0.00001	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg	0.0000000049	J	0.00000049	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.000000022	J	0.0000022	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.000000067	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000076	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000073	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		UJ	0.00000013	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		UJ	0.000000094	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000013	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000011	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000086	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		UJ	0.00000026	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000011	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000033	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000051	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.00000003				0.000238	N	0.000808	N	NMED	1.26E-09	3.70E-05

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MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	11,000				NS	NS	1,290,000	N	NMED		8.53E-03
Antimony	7440-36-0	mg/kg	0.15	J			NS	NS	519	N	NMED		2.89E-04
Arsenic	7440-38-2	mg/kg	1.3				36	N	208	N	NMED	3.62E-07	6.25E-03
Barium	7440-39-3	mg/kg	210				NS	NS	255,000	N	NMED		8.24E-04
Beryllium	7440-41-7	mg/kg	0.42	J			313,000	N	2,580	N	NMED	1.34E-11	1.63E-04
Cadmium	7440-43-9	mg/kg	0.49				417,000	N	1,110	N	NMED	1.18E-11	4.41E-04
Calcium	7440-70-2	mg/kg	3,900				NS	NS	32,400,000	N	NMED		1.20E-04
Chromium (Total) (3)	7440-47-3	mg/kg	9.6				505	N	314,000	N	NMED	1.90E-07	3.06E-05
Cobalt	7440-48-4	mg/kg	3.7				83,400	N	388	N	NMED	4.44E-10	9.54E-03
Copper	7440-50-8	mg/kg	72				NS	NS	51,900	N	NMED		1.39E-03
Iron	7439-89-6	mg/kg	8,100				NS	NS	908,000	N	NMED		8.92E-03
Lead	7439-92-1	mg/kg	14				NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	4,900				NS	NS	5,680,000	N	NMED		8.63E-04
Manganese	7439-96-5	mg/kg	270				NS	NS	160,000	N	NMED		1.69E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.04	J			NS	NS	112	N	NMED		3.57E-04
Nickel	7440-02-0	mg/kg	6.7				2,890,000	N	25,700	N	NMED	2.32E-11	2.61E-04
Potassium	7440-09-7	mg/kg	950				NS	NS	76,200,000	N	NMED		1.25E-05
Selenium	7782-49-2	mg/kg	0.96				NS	NS	6,490	N	NMED		1.48E-04
Silver	7440-22-4	mg/kg	0.075	J			NS	NS	6,490	N	NMED		1.16E-05
Sodium	7440-23-5	mg/kg	63				NS	NS	37,300,000	N	NMED		1.69E-06
Thallium	7440-28-0	mg/kg	0.15				NS	NS	13	N	NMED		1.15E-02
Vanadium	7440-62-2	mg/kg	17				NS	NS	6,530	N	NMED		2.60E-03
Zinc	7440-66-6	mg/kg	37				NS	NS	38,900	N	NMED		9.51E-04

TABLE D1-AP18-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP18
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.17	U			NS	NS	63	N	NMED		
Nitrate	14797-55-8	mg/kg	8.9	J			NS	NS	2,080,000	N	NMED		4.28E-06
Perchlorate	14797-73-0	mg/kg	0.0011	U			NS	NS	908	N	NMED		
										Cumulative Risk/Hazard		**6E-07**	**0.05**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper tolerance limit

TABLE D1-AP18-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP18
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0022	U			659	N	10,600	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0022	U			NS	NS	13,600	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0022	U			197	N	7,080	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0022	U			4,300	N	2	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0022	U			1,820	N	70,800	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0022	U			NS	NS	424	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0022	U			781	N	130	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0022	U			NS	NS	283	N	NMED[C]			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0054	U			8	N	6	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0022	U			8,540	N	79	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0022	U			NS	NS	492	N	NMED[C]			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0054	U			6	N	8	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0022	U			16	N	140	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0022	U			NS	NS	2,500	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0022	U			195	N	54	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0022	U			415	N	25	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0022	U			NS	NS	422	N	NMED[C]			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0022	U			45,900	N	24,800	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0022	U			NS	NS	7,080	N	NMED[C]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0022	U			45,900	N	24,800	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0022	U			415	N	25	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.0032	U			NS	NS	90,700	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0022	U			NS	NS	7,080	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.0022	U			NS	NS	599	N	NMED[C]			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0022	U			NS	NS	7,080	N	NMED[C]			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0022	U			NS	NS	20,400	N	NMED[C]			
Acetone	67-64-1	mg/kg	0.28				NS	NS	242,000	N	NMED		1.16E-06	
Benzene	71-43-2	mg/kg	0.0022	U			423	N	142	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.0022	U			NS	NS	538	N	NMED[C]			
Bromochloromethane	74-97-5	mg/kg	0.0022	U			NS	NS	296	N	NMED[C]			
Bromodichloromethane	75-27-4	mg/kg	0.0022	U			143	N	7,080	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0022	U			23,700	N	5,380	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0022	U			NS	NS	18	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.0022	U			NS	NS	1,620	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0022	U			252	N	202	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0022	U			NS	NS	412	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0022	U			NS	NS	16,600	N	NMED			
Chloroform	67-66-3	mg/kg	0.0022	U			134	N	391	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0054	U			956	N	235	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0022	U			NS	NS	708	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0022	U			781	N	130	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0022	U			340	N	5,380	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0022	U			NS	NS	54	N	NMED			

TABLE D1-AP18-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP18
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Dichlorodifluoromethane	75-71-8	mg/kg	0.0022	U			NS	NS	161	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.0022	U			1,770	N	5,800	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0022	U			2,400	N	269	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0022	U			NS	NS	2,740	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0054	U			NS	NS	696	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0022	U			24,200	N	33,100	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.011	U			89,600	N	1,210	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0022	U			NS	NS	17,700	N	NMED[C]			
n-Propylbenzene	103-65-1	mg/kg	0.0022	U			NS	NS	6,730	N	NMED[C]			
Naphthalene	91-20-3	mg/kg	0.0022	U			633	N	159	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0027	U			NS	NS	736	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.0022	U			NS	NS	2,740	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.0022	U			NS	NS	35,400	N	NMED[C]			
Styrene	100-42-5	mg/kg	0.0022	U			NS	NS	10,200	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0022	U			NS	NS	35,400	N	NMED[C]			
Tetrachloroethene	127-18-4	mg/kg	0.0022	U			7,910	N	120	N	NMED			
Toluene	108-88-3	mg/kg	0.0022	U			NS	NS	14,000	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0022	U			NS	NS	206	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0022	U			781	N	130	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0022	U			5,370	N	7	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0022	U			NS	NS	1,130	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0022	U			161	N	162	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.18	U			8,540	N	79	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.18	U			NS	NS	2,500	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.18	U			45,900	N	24,800	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.18	U			45,900	N	24,800	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.18	U			NS	NS	26,900	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.18	U			17,000	N	269	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.18	U			NS	NS	807	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.18	U			NS	NS	5,380	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.18	U			NS	NS	538	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.18	U			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.18	U			165	N	81	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.18	U			NS	NS	28,300	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.18	U			NS	NS	1,770	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.18	U			NS	NS	1,000	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.18	U			NS	NS	13,500	N	NMED[C]			
2-Nitroaniline	88-74-4	mg/kg	0.18	U			NS	NS	2,690	N	NMED[C]			
2-Nitrophenol	88-75-5	mg/kg	0.18	U			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.18	U			410	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.18	U			135	N	1,080	N	NMED[SC]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.18	U			NS	NS	22	N	NMED			

TABLE D1-AP18-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP18
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.18	U			NS	NS	NS	NS	NS			
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.18	U			NS	NS	26,900	N	NMED[C]			
4-Chloroaniline	106-47-8	mg/kg	0.18	U			14	N	135	N	NMED[C]			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.18	U			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.18	U			135	N	1,080	N	NMED[C]			
4-Nitrophenol	100-02-7	mg/kg	0.18	U			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.18	U			NS	NS	15,100	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.18	U			NS	NS	7,530	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.18	U			NS	NS	75,300	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.18	U			240	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			173	N	15	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.18	U			240	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.18	U			NS	NS	7,530	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.18	U			2,310	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.18	U			NS	NS	1,080,000	N	NMED[C]			
Benzyl Alcohol	100-51-6	mg/kg	0.18	U			NS	NS	26,900	N	NMED[C]			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.18	U			NS	NS	807	N	NMED[C]			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.18	U			2	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.18	U			3,540	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.18	U			13,400	N	5,380	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.18	U			1,420	N	53,800	N	NMED[C]			
Carbazole	86-74-8	mg/kg	0.18	U			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.18	U			23,100	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.18	U			NS	NS	26,900	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.18	U			NS	NS	2,690	N	NMED[C]			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			24	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.18	U			NS	NS	269	N	NMED[C]			
Diethylphthalate	84-66-2	mg/kg	0.18	U			NS	NS	215,000	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.18	U			NS	NS	269,000	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.18	U			NS	NS	10,000	N	NMED			
Fluorene	86-73-7	mg/kg	0.18	U			NS	NS	10,000	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.18	U			117	N	215	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.18	U			2,400	N	269	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.18	U			4,670	N	188	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.18	U			240	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.18	U			198,000	N	53,700	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.18	U			0.38	N	NA	N	NMED[C]			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.022	UJ			4	N	2	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.18	U			37,900	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.18	U			633	N	159	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.18	U			1,350	N	353	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.18	U			346	N	989	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.18	U			NS	NS	8,070	N	NMED			
Phenol	108-95-2	mg/kg	0.18	U			NS	NS	77,400	N	NMED			
Pyrene	129-00-0	mg/kg	0.18	U			NS	NS	7,530	N	NMED			

TABLE D1-AP18-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP18
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	8,070	N	NMED[C]			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	27	N	NMED[C]			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U			NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U			2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U			NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U			1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U			11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			626	N	2,420	N	NMED[C]			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.21	U			2,440	N	17	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.21	U			55	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.11	U			58	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.11	U			85	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.11	U			85	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.11	U			85	N	5	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.11	U			85	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (3)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000058	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.000000003	J	0.00001	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg	0.0000000049	J	0.00000049	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.000000022	J	0.0000022	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.000000067	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000076	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000073	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		UJ	0.00000013	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		UJ	0.000000094	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000013	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000011	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000086	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		UJ	0.00000026	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000011	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000033	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000051	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.000000030				0.00172	N	0.000226	N	NMED	1.74E-10	1.32E-04	

TABLE D1-AP18-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP18
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	11,000				NS	NS	41,400	N	NMED		2.66E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	J			NS	NS	142	N	NMED		1.06E-03	
Arsenic	7440-38-2	mg/kg	1.3				216	N	41	N	NMED	6.02E-08	3.16E-02	
Barium	7440-39-3	mg/kg	210				NS	NS	4,390	N	NMED		4.78E-02	
Beryllium	7440-41-7	mg/kg	0.42	J			2,710	N	148	N	NMED	1.55E-09	2.84E-03	
Cadmium	7440-43-9	mg/kg	0.49				3,610	N	72	N	NMED	1.36E-09	6.80E-03	
Calcium	7440-70-2	mg/kg	3,900				NS	NS	8,850,000	N	NMED		4.41E-04	
Chromium (Total) (4)	7440-47-3	mg/kg	9.6				468	N	134	N	NMED	2.05E-07	7.16E-02	
Cobalt	7440-48-4	mg/kg	3.7				722	N	37	N	NMED	5.12E-08	1.01E-01	Endocrine
Copper	7440-50-8	mg/kg	72				NS	NS	14,200	N	NMED		5.07E-03	
Iron	7439-89-6	mg/kg	8,100				NS	NS	248,000	N	NMED		3.27E-02	
Lead	7439-92-1	mg/kg	14				NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	4,900				NS	NS	1,550,000	N	NMED		3.16E-03	
Manganese	7439-96-5	mg/kg	270				NS	NS	464	N	NMED		5.82E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.04	J			NS	NS	21	N	NMED		1.93E-03	
Nickel	7440-02-0	mg/kg	6.7				20,500	N	753	N	NMED	3.27E-09	8.90E-03	
Potassium	7440-09-7	mg/kg	950				NS	NS	20,800,000	N	NMED		4.57E-05	
Selenium	7782-49-2	mg/kg	0.96				NS	NS	1,750	N	NMED		5.49E-04	
Silver	7440-22-4	mg/kg	0.075	J			NS	NS	1,770	N	NMED		4.24E-05	
Sodium	7440-23-5	mg/kg	63				NS	NS	10,200,000	N	NMED		6.18E-06	
Thallium	7440-28-0	mg/kg	0.15				NS	NS	4	N	NMED		4.24E-02	
Vanadium	7440-62-2	mg/kg	17				NS	NS	614	N	NMED		2.77E-02	
Zinc	7440-66-6	mg/kg	37				NS	NS	106,000	N	NMED		3.49E-04	

TABLE D1-AP18-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP18
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.35	U			NS	NS	12	N	NMED			
Nitrate	14797-55-8	mg/kg	8.9	J			NS	NS	566,000	N	NMED		1.57E-05	
Perchlorate	14797-73-0	mg/kg	0.0022	U			NS	NS	248	N	NMED			
										Cumulative Risk/Hazard		**3E-07**	**1.2**	
										Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	0.85
Endocrine	0.10
All Others	0.29

Notes:

[s] = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update).

2) NMED[C] = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

3) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

4) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper tolerance limit

TABLE D1-AP19-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AP19
INNER FENCE
FORT WINGATE DEPOT ACTIVITY

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0027	U			28.1	N	2,350	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0027	U			NS	NS	14,400	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0027	U			7.98	N	1,560	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0027	U			18.8	N	2.61	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0027	U			78.6	N	15,600	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0027	U			NS	NS	440	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0027	U			29.3	N	141	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0027	U			NS	NS	63	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0069	U			0.051	N	7.09	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0027	U			240	N	82.9	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0027	U			NS	NS	300	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0069	U			0.0858	N	5.88	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0027	U			0.672	N	135	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0027	U			NS	NS	2,150	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0027	U			8.32	N	55.6	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0027	U			17.8	N	29	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0027	U			NS	NS	270	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0027	U			1,290	N	5,480	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0027	U			NS	NS	1,600	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0027	U			1,290	N	5,480	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0027	U			17.8	N	29	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0041	U			NS	NS	37,400	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0027	U			NS	NS	1,560	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0027	U			NS	NS	200	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0027	U			NS	NS	1,600	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0027	U			NS	NS	5,810	N	RSL		
Acetone	67-64-1	mg/kg	1.1	J			NS	NS	66,300	N	NMED		1.66E-05
Benzene	71-43-2	mg/kg	0.0027	U			17.8	N	114	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0027	U			NS	NS	290	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0027	U			NS	NS	150	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0027	U			6.19	N	1,560	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0027	U			674	N	1,230	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0027	U			NS	NS	17.7	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0027	U			NS	NS	1,550	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0027	U			10.7	N	144	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0027	U			NS	NS	378	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0027	U			NS	NS	19,000	N	NMED		
Chloroform	67-66-3	mg/kg	0.0027	U			5.9	N	306	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0069	U			41.1	N	268	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0027	U			NS	NS	156	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0027	U			29.3	N	141	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0027	U			13.9	N	1,230	N	NMED		
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0027	U			NS	NS	57.9	N	NMED		

TABLE D1-AP19-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AP19
INNER FENCE
FORT WINGATE DEPOT ACTIVITY

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dichlorodifluoromethane	75-71-8	mg/kg	0.0027	U			NS	NS	182	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0027	U			75.1	N	3,930	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0027	U			68.3	N	61.6	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0027	U			NS	NS	2,360	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0069	U			NS	NS	764	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0027	U			975	N	37,800	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.014	U			766	N	409	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0027	U			NS	NS	3,900	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0027	U			NS	NS	3,800	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0027	U			22.6	N	162	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0034	U			NS	NS	805	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0027	U			NS	NS	2,360	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0027	U			NS	NS	7,800	N	RSL		
Styrene	100-42-5	mg/kg	0.0027	U			NS	NS	7,260	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0027	U			NS	NS	7,800	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0027	U			337	N	111	N	NMED		
Toluene	108-88-3	mg/kg	0.016				NS	NS	5,230	N	NMED		3.06E-06
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0027	U			NS	NS	210	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0027	U			29.3	N	141	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0027	U			15.5	N	6.77	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0027	U			NS	NS	1,230	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0027	U			0.742	N	113	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	U			240	N	82.9	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	U			NS	NS	2,150	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	U			1,290	N	5,480	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	U			1,290	N	5,480	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	U			NS	NS	6,160	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	U			484	N	61.6	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	U			NS	NS	185	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	U			NS	NS	1,230	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	U			NS	NS	123	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	U			17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	U			3.56	N	18.5	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	U			NS	NS	6,260	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.17	U			NS	NS	391	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.17	U			NS	NS	232	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	U			NS	NS	3,200	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.17	U			NS	NS	630	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.17	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	U			11.8	N	NS	NS	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.17	U			270	N	250	N	RSL[S]		
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	U			NS	NS	4.93	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	U			NS	NS	NS	NS	NS		

TABLE D1-AP19-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AP19
INNER FENCE
FORT WINGATE DEPOT ACTIVITY

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	U			NS	NS	6,300	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.17	U			27	N	32	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.17	U			270	N	250	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.17	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.17	U			NS	NS	3,480	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.17	U			NS	NS	1,740	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.17	U			NS	NS	17,400	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.17	U			1.53	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.13	U			1.12	N	17.4	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	U			1.53	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	U			NS	NS	1,740	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	U			15.3	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.17	U			NS	NS	250,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.17	U			NS	NS	6,300	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	U			NS	NS	190	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	U			3.11	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	U			99.3	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	U			380	N	1,230	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.17	U			2,900	N	13,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.17	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.17	U			153	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.17	U			NS	NS	6,160	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.17	U			NS	NS	630	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	U			0.153	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.17	U			NS	NS	78	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.17	U			NS	NS	49,300	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.17	U			NS	NS	61,600	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.17	U			NS	NS	2,320	N	NMED		
Fluorene	86-73-7	mg/kg	0.17	U			NS	NS	2,320	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.17	U			3.33	N	49.3	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	U			68.3	N	61.6	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.17	U			133	N	43.1	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	U			1.53	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.17	U			5,610	N	12,300	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	U			0.78	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	UJ			0.0234	N	0.493	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	U			1,090	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.17	U			22.6	N	162	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.17	U			60.4	N	131	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.17	U			9.85	N	234	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.17	U			NS	NS	1,740	N	NMED		
Phenol	108-95-2	mg/kg	0.17	U			NS	NS	18,500	N	NMED		
Pyrene	129-00-0	mg/kg	0.17	U			NS	NS	1,740	N	NMED		

TABLE D1-AP19-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AP19
INNER FENCE
FORT WINGATE DEPOT ACTIVITY

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U			NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U			83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U			NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U			60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U			313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			1,300	N	570	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.2	U			69.6	N	3.98	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.2	U			1.81	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.1	U			1.86	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.1	U			2.43	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.1	U			2.43	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.1	U			2.43	N	1.14	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.1	U			2.43	N	NS	NS	NMED		

TABLE D1-AP19-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AP19
INNER FENCE
FORT WINGATE DEPOT ACTIVITY

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg	0.00000000042	J	0.0000014	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000051	J	0.000017	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg	0.0000000089	J	0.00000089	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.00000003	J	0.000003	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000015	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.00000017	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000023	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.00000016	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		UJ	0.00000023	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		UJ	0.00000021	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000031	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000012	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.00000009	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		UJ	0.00000029	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000013	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000018	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000072	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.000000044				0.000049	N	0.0000506	N	NMED	9.07E-09	8.78E-04
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	12,000				NS	NS	78,000	N	NMED		1.54E-01
Antimony	7440-36-0	mg/kg	0.099	J			NS	NS	31.3	N	NMED		3.16E-03
Arsenic	7440-38-2	mg/kg	1.2				7.07	N	13	N	NMED	1.70E-06	9.23E-02
Barium	7440-39-3	mg/kg	170				NS	NS	15,600	N	NMED		1.09E-02
Beryllium	7440-41-7	mg/kg	0.42	J			64,400	N	156	N	NMED	6.52E-11	2.69E-03
Cadmium	7440-43-9	mg/kg	0.44				85,900	N	70.5	N	NMED	5.12E-11	6.24E-03
Calcium	7440-70-2	mg/kg	2,900				NS	NS	13,000,000	N	NMED		2.23E-04
Chromium (Total) (3)	7440-47-3	mg/kg	10				96.6	N	45,200	N	NMED	1.04E-06	2.21E-04
Cobalt	7440-48-4	mg/kg	4				17,200	N	23.4	N	NMED	2.33E-09	1.71E-01
Copper	7440-50-8	mg/kg	62				NS	NS	3,130	N	NMED		1.98E-02
Iron	7439-89-6	mg/kg	8,100				NS	NS	54,800	N	NMED		1.48E-01
Lead	7439-92-1	mg/kg	14				NS	NS	200	N	RSL		
Magnesium	7439-95-4	mg/kg	5,500				NS	NS	15,600,000	N	NMED		3.53E-04
Manganese	7439-96-5	mg/kg	270				NS	NS	10,500	N	NMED		2.57E-02
Mercury (Elemental)	7439-97-6	mg/kg	1.9	J			NS	NS	23.8	N	NMED		7.98E-02
Nickel	7440-02-0	mg/kg	6.9				595,000	N	1,560	N	NMED	1.16E-10	4.42E-03
Potassium	7440-09-7	mg/kg	760				NS	NS	15,600,000	N	NMED		4.87E-05
Selenium	7782-49-2	mg/kg	1				NS	NS	391	N	NMED		2.56E-03
Silver	7440-22-4	mg/kg	0.063	J			NS	NS	391	N	NMED		1.61E-04
Sodium	7440-23-5	mg/kg	59				NS	NS	7,820,000	N	NMED		7.54E-06
Thallium	7440-28-0	mg/kg	0.069	J			NS	NS	0.782	N	NMED		8.82E-02
Vanadium	7440-62-2	mg/kg	21				NS	NS	394	N	NMED		5.33E-02
Zinc	7440-66-6	mg/kg	36				NS	NS	23,500	N	NMED		1.53E-03

TABLE D1-AP19-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AP19
INNER FENCE
FORT WINGATE DEPOT ACTIVITY

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.33	U			NS	NS	11.2	N	NMED		
Nitrate	14797-55-8	mg/kg	7.4	J			NS	NS	125,000	N	NMED		5.92E-05
Perchlorate	14797-73-0	mg/kg	0.002	U			NS	NS	54.8	N	NMED		
										Cumulative Risk/Hazard		**3E-06**	**0.9**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of Quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper Tolerance Limit

TABLE D1-AP19-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP19
INNER FENCE
FORT WINGATE DEPOT ACTIVITY

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0027	U			137	N	39,400	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0027	U			NS	NS	72,500	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0027	U			39	N	26,000	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0027	U			92	N	12	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0027	U			383	N	260,000	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0027	U			NS	NS	2,260	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0027	U			146	N	695	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0027	U			NS	NS	930	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0069	U			1	N	34	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0027	U			1,250	N	423	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0027	U			NS	NS	1,800	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0069	U			1	N	41	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0027	U			3	N	738	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0027	U			NS	NS	13,000	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0027	U			41	N	286	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0027	U			87	N	137	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0027	U			NS	NS	1,500	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0027	U			6,730	N	90,800	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0027	U			NS	NS	23,000	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0027	U			6,730	N	90,800	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0027	U			87	N	137	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0041	U			NS	NS	411,000	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0027	U			NS	NS	26,000	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0027	U			NS	NS	1,300	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0027	U			NS	NS	23,000	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0027	U			NS	NS	81,600	N	RSL		
Acetone	67-64-1	mg/kg	1.1	J			NS	NS	960,000	N	NMED		1.15E-06
Benzene	71-43-2	mg/kg	0.0027	U			87	N	729	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0027	U			NS	NS	1,800	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0027	U			NS	NS	630	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0027	U			30	N	26,000	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0027	U			1,760	N	18,300	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0027	U			NS	NS	95	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0027	U			NS	NS	8,540	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0027	U			53	N	1,020	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0027	U			NS	NS	2,160	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0027	U			NS	NS	89,500	N	NMED		
Chloroform	67-66-3	mg/kg	0.0027	U			29	N	2,000	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0069	U			201	N	1,260	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0027	U			NS	NS	2,600	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0027	U			146	N	695	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0027	U			67	N	18,300	N	NMED		

TABLE D1-AP19-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP19
INNER FENCE
FORT WINGATE DEPOT ACTIVITY

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0027	U			NS	NS	288	N	NMED		
Dichlorodifluoromethane	75-71-8	mg/kg	0.0027	U			NS	NS	865	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0027	U			29,000	N	368	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0027	U			52	N	916	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0027	U			NS	NS	14,200	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0069	U			NS	NS	3,730	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0027	U			4,820	N	178,000	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.014	U			14,400	N	5,130	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0027	U			NS	NS	58,000	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0027	U			NS	NS	24,000	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0027	U			108	N	843	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0034	U			NS	NS	3,940	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0027	U			NS	NS	14,200	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0027	U			NS	NS	120,000	N	RSL		
Styrene	100-42-5	mg/kg	0.0027	U			NS	NS	51,300	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0027	U			NS	NS	120,000	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0027	U			1,650	N	629	N	NMED		
Toluene	108-88-3	mg/kg	0.016				NS	NS	61,300	N	NMED		2.61E-07
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0027	U			NS	NS	1,100	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0027	U			146	N	695	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0027	U			112	N	37	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0027	U			NS	NS	6,030	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0027	U			28	N	46	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	U			1,250	N	423	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	U			NS	NS	13,000	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	U			6,730	N	90,800	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	U			6,730	N	90,800	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	U			NS	NS	91,600	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	U			2,330	N	916	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	U			NS	NS	2,750	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	U			NS	NS	18,300	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	U			NS	NS	1,830	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	U			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	U			17	N	276	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	U			NS	NS	104,000	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.17	U			NS	NS	6,490	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.17	U			NS	NS	3,370	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	U			NS	NS	41,000	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.17	U			NS	NS	8,000	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.17	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	U			NS	NS	410	N	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.17	U			1,100	N	3,300	N	RSL[S]		

TABLE D1-AP19-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP19
INNER FENCE
FORT WINGATE DEPOT ACTIVITY

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	U			NS	NS	73	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	U			NS	NS	NS	NS	NS		
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	U			NS	NS	82,000	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.17	U			110	N	410	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.17	U			1,100	N	3,300	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.17	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.17	U			NS	NS	50,500	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.17	U			NS	NS	25,300	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.17	U			NS	NS	253,000	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.17	U			32	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.13	U			24	N	251	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	U			32	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	U			NS	NS	25,300	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	U			323	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.17	U			NS	NS	3,300,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.17	U			NS	NS	82,000	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	U			NS	NS	2,500	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	U			16	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	U			519	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	U			1,830	N	18,300	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.17	U			12,000	N	160,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.17	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.17	U			3,230	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.17	U			NS	NS	91,600	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.17	U			NS	NS	8,200	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	U			3	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.17	U			NS	NS	1,200	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.17	U			NS	NS	733,000	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.17	U			NS	NS	916,000	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.17	U			NS	NS	33,700	N	NMED		
Fluorene	86-73-7	mg/kg	0.17	U			NS	NS	33,700	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.17	U			16	N	733	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	U			52	N	916	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.17	U			641	N	641	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	U			32	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.17	U			27,000	N	183,000	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	U			3	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	UJ			1	N	7	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	U			5,240	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.17	U			108	N	843	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.17	U			293	N	1,540	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.17	U			45	N	3,180	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.17	U			NS	NS	27,500	N	NMED		
Phenol	108-95-2	mg/kg	0.17	U			NS	NS	275,000	N	NMED		
Pyrene	129-00-0	mg/kg	0.17	U			NS	NS	25,300	N	NMED		

TABLE D1-AP19-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP19
INNER FENCE
FORT WINGATE DEPOT ACTIVITY

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U			NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U			428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U			NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U			293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U			1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			5,300	N	7,400	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.2	U			304	N	57	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.2	U			9	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.1	U			9	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.1	U			11	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.1	U			11	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.1	U			11	N	16	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.1	U			11	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg	0.00000000042	J	0.0000014	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000051	J	0.000017	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg	0.0000000089	J	0.00000089	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.00000003	J	0.000003	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000015	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.00000017	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000023	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.00000016	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		UJ	0.00000023	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		UJ	0.00000021	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000031	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000012	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.00000009	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		UJ	0.00000029	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000013	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000018	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000072	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.000000044				0.000238	N	0.000808	N	NMED	1.87E-09	5.50E-05

TABLE D1-AP19-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP19
INNER FENCE
FORT WINGATE DEPOT ACTIVITY

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	12,000				NS	NS	1,290,000	N	NMED		9.30E-03
Antimony	7440-36-0	mg/kg	0.099	J			NS	NS	519	N	NMED		1.91E-04
Arsenic	7440-38-2	mg/kg	1.2				36	N	208	N	NMED	3.34E-07	5.77E-03
Barium	7440-39-3	mg/kg	170				NS	NS	255,000	N	NMED		6.67E-04
Beryllium	7440-41-7	mg/kg	0.42	J			313,000	N	2,580	N	NMED	1.34E-11	1.63E-04
Cadmium	7440-43-9	mg/kg	0.44				417,000	N	1,110	N	NMED	1.06E-11	3.96E-04
Calcium	7440-70-2	mg/kg	2,900				NS	NS	32,400,000	N	NMED		8.95E-05
Chromium (Total) (3)	7440-47-3	mg/kg	10				505	N	314,000	N	NMED	1.98E-07	3.18E-05
Cobalt	7440-48-4	mg/kg	4				83,400	N	388	N	NMED	4.80E-10	1.03E-02
Copper	7440-50-8	mg/kg	62				NS	NS	51,900	N	NMED		1.19E-03
Iron	7439-89-6	mg/kg	8,100				NS	NS	908,000	N	NMED		8.92E-03
Lead	7439-92-1	mg/kg	14				NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	5,500				NS	NS	5,680,000	N	NMED		9.68E-04
Manganese	7439-96-5	mg/kg	270				NS	NS	160,000	N	NMED		1.69E-03
Mercury (Elemental)	7439-97-6	mg/kg	1.9	J			NS	NS	112	N	NMED		1.70E-02
Nickel	7440-02-0	mg/kg	6.9				2,890,000	N	25,700	N	NMED	2.39E-11	2.68E-04
Potassium	7440-09-7	mg/kg	760				NS	NS	76,200,000	N	NMED		9.97E-06
Selenium	7782-49-2	mg/kg	1				NS	NS	6,490	N	NMED		1.54E-04
Silver	7440-22-4	mg/kg	0.063	J			NS	NS	6,490	N	NMED		9.71E-06
Sodium	7440-23-5	mg/kg	59				NS	NS	37,300,000	N	NMED		1.58E-06
Thallium	7440-28-0	mg/kg	0.069	J			NS	NS	13	N	NMED		5.31E-03
Vanadium	7440-62-2	mg/kg	21				NS	NS	6,530	N	NMED		3.22E-03
Zinc	7440-66-6	mg/kg	36				NS	NS	38,900	N	NMED		9.25E-04

TABLE D1-AP19-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP19
INNER FENCE
FORT WINGATE DEPOT ACTIVITY

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.33	U			NS	NS	63	N	NMED		
Nitrate	14797-55-8	mg/kg	7.4	J			NS	NS	2,080,000	N	NMED		3.56E-06
Perchlorate	14797-73-0	mg/kg	0.002	U			NS	NS	908	N	NMED		
										Cumulative Risk/Hazard		**5E-07**	**0.07**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service

DL = Detection limit

J = Estimated

LOD = Limit of detection

LOQ = Limit of quantitation

mg/kg = milligrams per kilogram

NS = No Standard

U = Nondetect

UJ = Estimated Nondetect

UTL = Upper tolerance limit

TABLE D1-AP19-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP19
INNER FENCE
FORT WINGATE DEPOT ACTIVITY

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0027	U			659	N	10,600	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0027	U			NS	NS	13,600	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0027	U			197	N	7,080	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0027	U			4,300	N	2	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0027	U			1,820	N	70,800	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0027	U			NS	NS	424	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0027	U			781	N	130	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0027	U			NS	NS	283	N	NMED[C]			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0069	U			8	N	6	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0027	U			8,540	N	79	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0027	U			NS	NS	492	N	NMED[C]			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0069	U			6	N	8	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0027	U			16	N	140	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0027	U			NS	NS	2,500	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0027	U			195	N	54	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0027	U			415	N	25	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0027	U			NS	NS	422	N	NMED[C]			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0027	U			45,900	N	24,800	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0027	U			NS	NS	7,080	N	NMED[C]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0027	U			45,900	N	24,800	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0027	U			415	N	25	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.0041	U			NS	NS	90,700	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0027	U			NS	NS	7,080	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.0027	U			NS	NS	599	N	NMED[C]			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0027	U			NS	NS	7,080	N	NMED[C]			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0027	U			NS	NS	20,400	N	NMED[C]			
Acetone	67-64-1	mg/kg	1.1	J			NS	NS	242,000	N	NMED		4.55E-06	
Benzene	71-43-2	mg/kg	0.0027	U			423	N	142	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.0027	U			NS	NS	538	N	NMED[C]			
Bromochloromethane	74-97-5	mg/kg	0.0027	U			NS	NS	296	N	NMED[C]			
Bromodichloromethane	75-27-4	mg/kg	0.0027	U			143	N	7,080	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0027	U			23,700	N	5,380	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0027	U			NS	NS	18	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.0027	U			NS	NS	1,620	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0027	U			252	N	202	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0027	U			NS	NS	412	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0027	U			NS	NS	16,600	N	NMED			
Chloroform	67-66-3	mg/kg	0.0027	U			134	N	391	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0069	U			956	N	235	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0027	U			NS	NS	708	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0027	U			781	N	130	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0027	U			340	N	5,380	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0027	U			NS	NS	54	N	NMED			

TABLE D1-AP19-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP19
INNER FENCE
FORT WINGATE DEPOT ACTIVITY

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Dichlorodifluoromethane	75-71-8	mg/kg	0.0027	U			NS	NS	161	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.0027	U			1,770	N	5,800	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0027	U			2,400	N	269	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0027	U			NS	NS	2,740	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0069	U			NS	NS	696	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0027	U			24,200	N	33,100	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.014	U			89,600	N	1,210	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0027	U			NS	NS	17,700	N	NMED[C]			
n-Propylbenzene	103-65-1	mg/kg	0.0027	U			NS	NS	6,730	N	NMED[C]			
Naphthalene	91-20-3	mg/kg	0.0027	U			633	N	159	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0034	U			NS	NS	736	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.0027	U			NS	NS	2,740	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.0027	U			NS	NS	35,400	N	NMED[C]			
Styrene	100-42-5	mg/kg	0.0027	U			NS	NS	10,200	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0027	U			NS	NS	35,400	N	NMED[C]			
Tetrachloroethene	127-18-4	mg/kg	0.0027	U			7,910	N	120	N	NMED			
Toluene	108-88-3	mg/kg	0.016				NS	NS	14,000	N	NMED		1.14E-06	
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0027	U			NS	NS	206	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0027	U			781	N	130	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0027	U			5,370	N	7	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0027	U			NS	NS	1,130	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0027	U			161	N	162	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	U			8,540	N	79	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	U			NS	NS	2,500	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	U			45,900	N	24,800	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	U			45,900	N	24,800	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	U			NS	NS	26,900	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	U			17,000	N	269	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	U			NS	NS	807	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	U			NS	NS	5,380	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	U			NS	NS	538	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	U			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	U			165	N	81	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	U			NS	NS	28,300	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.17	U			NS	NS	1,770	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.17	U			NS	NS	1,000	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	U			NS	NS	13,500	N	NMED[C]			
2-Nitroaniline	88-74-4	mg/kg	0.17	U			NS	NS	2,690	N	NMED[C]			
2-Nitrophenol	88-75-5	mg/kg	0.17	U			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	U			410	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.17	U			135	N	1,080	N	NMED[SC]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	U			NS	NS	22	N	NMED			

TABLE D1-AP19-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP19
INNER FENCE
FORT WINGATE DEPOT ACTIVITY

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	U			NS	NS	NS	NS	NS			
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	U			NS	NS	26,900	N	NMED[C]			
4-Chloroaniline	106-47-8	mg/kg	0.17	U			14	N	135	N	NMED[C]			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	U			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.17	U			135	N	1,080	N	NMED[C]			
4-Nitrophenol	100-02-7	mg/kg	0.17	U			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.17	U			NS	NS	15,100	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.17	U			NS	NS	7,530	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.17	U			NS	NS	75,300	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.17	U			240	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.13	U			173	N	15	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	U			240	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	U			NS	NS	7,530	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	U			2,310	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.17	U			NS	NS	1,080,000	N	NMED[C]			
Benzyl Alcohol	100-51-6	mg/kg	0.17	U			NS	NS	26,900	N	NMED[C]			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	U			NS	NS	807	N	NMED[C]			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	U			2	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	U			3,540	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	U			13,400	N	5,380	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.17	U			1,420	N	53,800	N	NMED[C]			
Carbazole	86-74-8	mg/kg	0.17	U			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.17	U			23,100	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.17	U			NS	NS	26,900	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.17	U			NS	NS	2,690	N	NMED[C]			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	U			24	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.17	U			NS	NS	269	N	NMED[C]			
Diethylphthalate	84-66-2	mg/kg	0.17	U			NS	NS	215,000	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.17	U			NS	NS	269,000	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.17	U			NS	NS	10,000	N	NMED			
Fluorene	86-73-7	mg/kg	0.17	U			NS	NS	10,000	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.17	U			117	N	215	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	U			2,400	N	269	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.17	U			4,670	N	188	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	U			240	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.17	U			198,000	N	53,700	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	U			0.38	N	NA	N	NMED[C]			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	UJ			4	N	2	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	U			37,900	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.17	U			633	N	159	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.17	U			1,350	N	353	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.17	U			346	N	989	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.17	U			NS	NS	8,070	N	NMED			
Phenol	108-95-2	mg/kg	0.17	U			NS	NS	77,400	N	NMED			
Pyrene	129-00-0	mg/kg	0.17	U			NS	NS	7,530	N	NMED			

TABLE D1-AP19-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP19
INNER FENCE
FORT WINGATE DEPOT ACTIVITY

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	8,070	N	NMED[C]			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	27	N	NMED[C]			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U			NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U			2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U			NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U			1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U			11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			626	N	2,420	N	NMED[C]			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.2	U			2,440	N	17	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.2	U			55	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.1	U			58	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.1	U			85	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.1	U			85	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.1	U			85	N	5	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.1	U			85	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (3)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg	0.00000000042	J	0.0000014	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000051	J	0.000017	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg	0.0000000089	J	0.00000089	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.00000003	J	0.000003	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000015	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.00000017	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000023	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.00000016	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		UJ	0.00000023	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		UJ	0.00000021	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000031	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000012	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.00000009	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		UJ	0.00000029	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000013	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000018	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000072	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.000000044				0.00172	N	0.000226	N	NMED	2.58E-10	1.97E-04	

TABLE D1-AP19-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP19
INNER FENCE
FORT WINGATE DEPOT ACTIVITY

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	12,000				NS	NS	41,400	N	NMED		2.90E-01	Nervous
Antimony	7440-36-0	mg/kg	0.099	J			NS	NS	142	N	NMED		6.97E-04	
Arsenic	7440-38-2	mg/kg	1.2				216	N	41	N	NMED	5.56E-08	2.91E-02	
Barium	7440-39-3	mg/kg	170				NS	NS	4,390	N	NMED		3.87E-02	
Beryllium	7440-41-7	mg/kg	0.42	J			2,710	N	148	N	NMED	1.55E-09	2.84E-03	
Cadmium	7440-43-9	mg/kg	0.44				3,610	N	72	N	NMED	1.22E-09	6.10E-03	
Calcium	7440-70-2	mg/kg	2,900				NS	NS	8,850,000	N	NMED		3.28E-04	
Chromium (Total) (4)	7440-47-3	mg/kg	10				468	N	134	N	NMED	2.14E-07	7.46E-02	
Cobalt	7440-48-4	mg/kg	4				722	N	37	N	NMED	5.54E-08	1.09E-01	Endocrine
Copper	7440-50-8	mg/kg	62				NS	NS	14,200	N	NMED		4.37E-03	
Iron	7439-89-6	mg/kg	8,100				NS	NS	248,000	N	NMED		3.27E-02	
Lead	7439-92-1	mg/kg	14				NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	5,500				NS	NS	1,550,000	N	NMED		3.55E-03	
Manganese	7439-96-5	mg/kg	270				NS	NS	464	N	NMED		5.82E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	1.9	J			NS	NS	21	N	NMED		9.18E-02	
Nickel	7440-02-0	mg/kg	6.9				20,500	N	753	N	NMED	3.37E-09	9.16E-03	
Potassium	7440-09-7	mg/kg	760				NS	NS	20,800,000	N	NMED		3.65E-05	
Selenium	7782-49-2	mg/kg	1				NS	NS	1,750	N	NMED		5.71E-04	
Silver	7440-22-4	mg/kg	0.063	J			NS	NS	1,770	N	NMED		3.56E-05	
Sodium	7440-23-5	mg/kg	59				NS	NS	10,200,000	N	NMED		5.78E-06	
Thallium	7440-28-0	mg/kg	0.069	J			NS	NS	4	N	NMED		1.95E-02	
Vanadium	7440-62-2	mg/kg	21				NS	NS	614	N	NMED		3.42E-02	
Zinc	7440-66-6	mg/kg	36				NS	NS	106,000	N	NMED		3.40E-04	

TABLE D1-AP19-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP19
INNER FENCE
FORT WINGATE DEPOT ACTIVITY

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.33	U			NS	NS	12	N	NMED			
Nitrate	14797-55-8	mg/kg	7.4	J			NS	NS	566,000	N	NMED		1.31E-05	
Perchlorate	14797-73-0	mg/kg	0.002	U			NS	NS	248	N	NMED			
										Cumulative Risk/Hazard		**3E-07**	**1.3**	
										Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	0.87
Endocrine	0.11
All Others	0.35

Notes:

[s] = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update).

2) NMED[C] = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

3) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

4) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper tolerance limit

TABLE D1-AP20-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AP20
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0032	U			28.1	N	2,350	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0032	U			NS	NS	14,400	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0032	U			7.98	N	1,560	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0032	U			18.8	N	2.61	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0032	U			78.6	N	15,600	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0032	U			NS	NS	440	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0032	U			29.3	N	141	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0032	U			NS	NS	63	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.008	U			0.051	N	7.09	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0032	U			240	N	82.9	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0032	U			NS	NS	300	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.008	U			0.0858	N	5.88	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0032	U			0.672	N	135	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0032	U			NS	NS	2,150	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0032	U			8.32	N	55.6	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0032	U			17.8	N	29	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0032	U			NS	NS	270	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0032	U			1,290	N	5,480	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0032	U			NS	NS	1,600	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0032	U			1,290	N	5,480	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0032	U			17.8	N	29	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0048	U			NS	NS	37,400	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0032	U			NS	NS	1,560	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0032	U			NS	NS	200	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0032	U			NS	NS	1,600	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0032	U			NS	NS	5,810	N	RSL		
Acetone	67-64-1	mg/kg	1.5	J			NS	NS	66,300	N	NMED		2.26E-05
Benzene	71-43-2	mg/kg	0.0032	U			17.8	N	114	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0032	U			NS	NS	290	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0032	U			NS	NS	150	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0032	U			6.19	N	1,560	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0032	U			674	N	1,230	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0069	J			NS	NS	17.7	N	NMED		3.90E-04
Carbon Disulfide	75-15-0	mg/kg	0.0032	U			NS	NS	1,550	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0032	U			10.7	N	144	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0032	U			NS	NS	378	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0032	U			NS	NS	19,000	N	NMED		
Chloroform	67-66-3	mg/kg	0.0032	U			5.9	N	306	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0081	J			41.1	N	268	N	NMED	1.97E-09	3.02E-05
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0032	U			NS	NS	156	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0032	U			29.3	N	141	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0032	U			13.9	N	1,230	N	NMED		
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0032	U			NS	NS	57.9	N	NMED		

TABLE D1-AP20-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AP20
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dichlorodifluoromethane	75-71-8	mg/kg	0.0032	U			NS	NS	182	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0032	U			75.1	N	3,930	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0032	U			68.3	N	61.6	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0032	U			NS	NS	2,360	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.008	U			NS	NS	764	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0032	U			975	N	37,800	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.016	U			766	N	409	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0032	U			NS	NS	3,900	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0032	U			NS	NS	3,800	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0032	U			22.6	N	162	N	NMED		
o-Xylene	95-47-6	mg/kg	0.004	U			NS	NS	805	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0032	U			NS	NS	2,360	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0032	U			NS	NS	7,800	N	RSL		
Styrene	100-42-5	mg/kg	0.0032	U			NS	NS	7,260	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0032	U			NS	NS	7,800	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0032	U			337	N	111	N	NMED		
Toluene	108-88-3	mg/kg	0.021	J			NS	NS	5,230	N	NMED		4.02E-06
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0032	U			NS	NS	210	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0032	U			29.3	N	141	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0032	U			15.5	N	6.77	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0032	U			NS	NS	1,230	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0032	U			0.742	N	113	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.36	U			240	N	82.9	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.36	U			NS	NS	2,150	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.36	U			1,290	N	5,480	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.36	U			1,290	N	5,480	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.36	U			NS	NS	6,160	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.36	U			484	N	61.6	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.36	U			NS	NS	185	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.36	U			NS	NS	1,230	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.36	U			NS	NS	123	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.36	U			17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.36	U			3.56	N	18.5	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.36	U			NS	NS	6,260	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.36	U			NS	NS	391	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.36	U			NS	NS	232	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.36	U			NS	NS	3,200	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.36	U			NS	NS	630	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.36	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.36	U			11.8	N	NS	NS	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.36	U			270	N	250	N	RSL[S]		
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.36	U			NS	NS	4.93	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.36	U			NS	NS	NS	NS	NS		

TABLE D1-AP20-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AP20
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.36	U			NS	NS	6,300	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.36	U			27	N	32	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.36	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.36	U			270	N	250	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.36	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.36	U			NS	NS	3,480	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.36	U			NS	NS	1,740	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.36	U			NS	NS	17,400	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.36	U			1.53	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.28	U			1.12	N	17.4	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.36	U			1.53	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.36	U			NS	NS	1,740	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.36	U			15.3	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.36	U			NS	NS	250,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.36	U			NS	NS	6,300	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.36	U			NS	NS	190	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.36	U			3.11	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.36	U			99.3	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.36	U			380	N	1,230	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.36	U			2,900	N	13,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.36	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.36	U			153	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.36	U			NS	NS	6,160	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.36	U			NS	NS	630	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.28	U			0.153	Y	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.36	U			NS	NS	78	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.36	U			NS	NS	49,300	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.36	U			NS	NS	61,600	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.36	U			NS	NS	2,320	N	NMED		
Fluorene	86-73-7	mg/kg	0.36	U			NS	NS	2,320	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.36	U			3.33	N	49.3	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.36	U			68.3	N	61.6	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.36	U			133	N	43.1	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.36	U			1.53	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.36	U			5,610	N	12,300	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.36	U			0.78	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.043	UJ			0.0234	Y	0.493	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.36	U			1,090	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.36	U			22.6	N	162	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.36	U			60.4	N	131	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.36	U			9.85	N	234	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.36	U			NS	NS	1,740	N	NMED		
Phenol	108-95-2	mg/kg	0.36	U			NS	NS	18,500	N	NMED		
Pyrene	129-00-0	mg/kg	0.36	U			NS	NS	1,740	N	NMED		

TABLE D1-AP20-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AP20
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U			NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U			83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U			NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U			60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U			313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			1,300	N	570	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.21	U			69.6	N	3.98	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.21	U			1.81	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.11	U			1.86	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.11	U			2.43	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.11	U			2.43	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.11	U			2.43	N	1.14	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.11	U			2.43	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.0000012	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000039		0.000013	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg	0.000000012	J	0.0000012	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.000000054	J	0.0000054	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000021	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.00000014	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000021	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.00000014	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		UJ	0.00000021	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		UJ	0.00000018	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000021	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000015	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000097	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		UJ	0.00000045	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000015	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000031	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000099	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.00000007				0.000049	N	0.0000506	N	NMED	1.43E-08	1.38E-03

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HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AP20
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	14,000				NS	NS	78,000	N	NMED		1.79E-01
Antimony	7440-36-0	mg/kg	0.27				NS	NS	31.3	N	NMED		8.63E-03
Arsenic	7440-38-2	mg/kg	1.2				7.07	N	13	N	NMED	1.70E-06	9.23E-02
Barium	7440-39-3	mg/kg	170				NS	NS	15,600	N	NMED		1.09E-02
Beryllium	7440-41-7	mg/kg	0.47	J			64,400	N	156	N	NMED	7.30E-11	3.01E-03
Cadmium	7440-43-9	mg/kg	0.59	J			85,900	N	70.5	N	NMED	6.87E-11	8.37E-03
Calcium	7440-70-2	mg/kg	2,700				NS	NS	13,000,000	N	NMED		2.08E-04
Chromium (Total) (3)	7440-47-3	mg/kg	11				96.6	N	45,200	N	NMED	1.14E-06	2.43E-04
Cobalt	7440-48-4	mg/kg	4.3				17,200	N	23.4	N	NMED	2.50E-09	1.84E-01
Copper	7440-50-8	mg/kg	55				NS	NS	3,130	N	NMED		1.76E-02
Iron	7439-89-6	mg/kg	8,900				NS	NS	54,800	N	NMED		1.62E-01
Lead	7439-92-1	mg/kg	15				NS	NS	200	N	RSL		
Magnesium	7439-95-4	mg/kg	6,100				NS	NS	15,600,000	N	NMED		3.91E-04
Manganese	7439-96-5	mg/kg	310				NS	NS	10,500	N	NMED		2.95E-02
Mercury (Elemental)	7439-97-6	mg/kg	0.069	J			NS	NS	23.8	N	NMED		2.90E-03
Nickel	7440-02-0	mg/kg	7.2				595,000	N	1,560	N	NMED	1.21E-10	4.62E-03
Potassium	7440-09-7	mg/kg	1,000				NS	NS	15,600,000	N	NMED		6.41E-05
Selenium	7782-49-2	mg/kg	0.97				NS	NS	391	N	NMED		2.48E-03
Silver	7440-22-4	mg/kg	0.07	J			NS	NS	391	N	NMED		1.79E-04
Sodium	7440-23-5	mg/kg	55				NS	NS	7,820,000	N	NMED		7.03E-06
Thallium	7440-28-0	mg/kg	0.06	J			NS	NS	0.782	N	NMED		7.67E-02
Vanadium	7440-62-2	mg/kg	20				NS	NS	394	N	NMED		5.08E-02
Zinc	7440-66-6	mg/kg	39				NS	NS	23,500	N	NMED		1.66E-03

TABLE D1-AP20-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AP20
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.34	U			NS	NS	11.2	N	NMED		
Nitrate	14797-55-8	mg/kg	11				NS	NS	125,000	N	NMED		8.80E-05
Perchlorate	14797-73-0	mg/kg	0.0043	U			NS	NS	54.8	N	NMED		
										Cumulative Risk/Hazard		**3E-06**	**0.8**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of Quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper Tolerance Limit

TABLE D1-AP20-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP20
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0032	U			137	N	39,400	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0032	U			NS	NS	72,500	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0032	U			39	N	26,000	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0032	U			92	N	12	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0032	U			383	N	260,000	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0032	U			NS	NS	2,260	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0032	U			146	N	695	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0032	U			NS	NS	930	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.008	U			1	N	34	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0032	U			1,250	N	423	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0032	U			NS	NS	1,800	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.008	U			1	N	41	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0032	U			3	N	738	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0032	U			NS	NS	13,000	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0032	U			41	N	286	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0032	U			87	N	137	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0032	U			NS	NS	1,500	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0032	U			6,730	N	90,800	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0032	U			NS	NS	23,000	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0032	U			6,730	N	90,800	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0032	U			87	N	137	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0048	U			NS	NS	411,000	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0032	U			NS	NS	26,000	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0032	U			NS	NS	1,300	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0032	U			NS	NS	23,000	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0032	U			NS	NS	81,600	N	RSL		
Acetone	67-64-1	mg/kg	1.5	J			NS	NS	960,000	N	NMED		1.56E-06
Benzene	71-43-2	mg/kg	0.0032	U			87	N	729	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0032	U			NS	NS	1,800	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0032	U			NS	NS	630	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0032	U			30	N	26,000	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0032	U			1,760	N	18,300	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0069	J			NS	NS	95	N	NMED		7.30E-05
Carbon Disulfide	75-15-0	mg/kg	0.0032	U			NS	NS	8,540	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0032	U			53	N	1,020	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0032	U			NS	NS	2,160	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0032	U			NS	NS	89,500	N	NMED		
Chloroform	67-66-3	mg/kg	0.0032	U			29	N	2,000	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0081	J			201	N	1,260	N	NMED	4.03E-10	6.43E-06
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0032	U			NS	NS	2,600	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0032	U			146	N	695	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0032	U			67	N	18,300	N	NMED		

TABLE D1-AP20-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP20
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0032	U			NS	NS	288	N	NMED		
Dichlorodifluoromethane	75-71-8	mg/kg	0.0032	U			NS	NS	865	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0032	U			29,000	N	368	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0032	U			52	N	916	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0032	U			NS	NS	14,200	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.008	U			NS	NS	3,730	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0032	U			4,820	N	178,000	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.016	U			14,400	N	5,130	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0032	U			NS	NS	58,000	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0032	U			NS	NS	24,000	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0032	U			108	N	843	N	NMED		
o-Xylene	95-47-6	mg/kg	0.004	U			NS	NS	3,940	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0032	U			NS	NS	14,200	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0032	U			NS	NS	120,000	N	RSL		
Styrene	100-42-5	mg/kg	0.0032	U			NS	NS	51,300	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0032	U			NS	NS	120,000	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0032	U			1,650	N	629	N	NMED		
Toluene	108-88-3	mg/kg	0.021	J			NS	NS	61,300	N	NMED		3.43E-07
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0032	U			NS	NS	1,100	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0032	U			146	N	695	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0032	U			112	N	37	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0032	U			NS	NS	6,030	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0032	U			28	N	46	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.36	U			1,250	N	423	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.36	U			NS	NS	13,000	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.36	U			6,730	N	90,800	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.36	U			6,730	N	90,800	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.36	U			NS	NS	91,600	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.36	U			2,330	N	916	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.36	U			NS	NS	2,750	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.36	U			NS	NS	18,300	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.36	U			NS	NS	1,830	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.36	U			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.36	U			17	N	276	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.36	U			NS	NS	104,000	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.36	U			NS	NS	6,490	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.36	U			NS	NS	3,370	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.36	U			NS	NS	41,000	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.36	U			NS	NS	8,000	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.36	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.36	U			NS	NS	410	N	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.36	U			1,100	N	3,300	N	RSL[S]		

TABLE D1-AP20-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP20
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.36	U			NS	NS	73	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.36	U			NS	NS	NS	NS	NS		
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.36	U			NS	NS	82,000	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.36	U			110	N	410	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.36	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.36	U			1,100	N	3,300	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.36	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.36	U			NS	NS	50,500	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.36	U			NS	NS	25,300	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.36	U			NS	NS	253,000	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.36	U			32	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.28	U			24	N	251	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.36	U			32	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.36	U			NS	NS	25,300	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.36	U			323	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.36	U			NS	NS	3,300,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.36	U			NS	NS	82,000	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.36	U			NS	NS	2,500	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.36	U			16	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.36	U			519	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.36	U			1,830	N	18,300	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.36	U			12,000	N	160,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.36	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.36	U			3,230	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.36	U			NS	NS	91,600	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.36	U			NS	NS	8,200	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.28	U			3	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.36	U			NS	NS	1,200	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.36	U			NS	NS	733,000	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.36	U			NS	NS	916,000	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.36	U			NS	NS	33,700	N	NMED		
Fluorene	86-73-7	mg/kg	0.36	U			NS	NS	33,700	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.36	U			16	N	733	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.36	U			52	N	916	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.36	U			641	N	641	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.36	U			32	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.36	U			27,000	N	183,000	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.36	U			3	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.043	UJ			1	N	7	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.36	U			5,240	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.36	U			108	N	843	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.36	U			293	N	1,540	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.36	U			45	N	3,180	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.36	U			NS	NS	27,500	N	NMED		
Phenol	108-95-2	mg/kg	0.36	U			NS	NS	275,000	N	NMED		
Pyrene	129-00-0	mg/kg	0.36	U			NS	NS	25,300	N	NMED		

TABLE D1-AP20-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP20
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U			NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U			428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U			NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U			293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U			1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			5,300	N	7,400	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.21	U			304	N	57	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.21	U			9	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.11	U			9	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.11	U			11	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.11	U			11	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.11	U			11	N	16	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.11	U			11	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.0000012	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000039		0.000013	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg	0.000000012	J	0.0000012	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.000000054	J	0.0000054	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000021	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.00000014	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000021	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.00000014	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		UJ	0.00000021	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		UJ	0.00000018	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000021	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000015	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000097	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		UJ	0.00000045	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000015	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000031	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000099	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.00000007				0.000238	N	0.000808	N	NMED	2.94E-09	8.65E-05

TABLE D1-AP20-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP20
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MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	14,000				NS	NS	1,290,000	N	NMED		1.09E-02
Antimony	7440-36-0	mg/kg	0.27				NS	NS	519	N	NMED		5.20E-04
Arsenic	7440-38-2	mg/kg	1.2				36	N	208	N	NMED	3.34E-07	5.77E-03
Barium	7440-39-3	mg/kg	170				NS	NS	255,000	N	NMED		6.67E-04
Beryllium	7440-41-7	mg/kg	0.47	J			313,000	N	2,580	N	NMED	1.50E-11	1.82E-04
Cadmium	7440-43-9	mg/kg	0.59	J			417,000	N	1,110	N	NMED	1.41E-11	5.32E-04
Calcium	7440-70-2	mg/kg	2,700				NS	NS	32,400,000	N	NMED		8.33E-05
Chromium (Total) (3)	7440-47-3	mg/kg	11				505	N	314,000	N	NMED	2.99E-07	3.50E-05
Cobalt	7440-48-4	mg/kg	4.3				83,400	N	388	N	NMED	2.99E-07	1.11E-02
Copper	7440-50-8	mg/kg	55				NS	NS	51,900	N	NMED		1.06E-03
Iron	7439-89-6	mg/kg	8,900				NS	NS	908,000	N	NMED		9.80E-03
Lead	7439-92-1	mg/kg	15				NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	6,100				NS	NS	5,680,000	N	NMED		1.07E-03
Manganese	7439-96-5	mg/kg	310				NS	NS	160,000	N	NMED		1.94E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.069	J			NS	NS	112	N	NMED		6.16E-04
Nickel	7440-02-0	mg/kg	7.2				2,890,000	N	25,700	N	NMED	2.49E-11	2.80E-04
Potassium	7440-09-7	mg/kg	1,000				NS	NS	76,200,000	N	NMED		1.31E-05
Selenium	7782-49-2	mg/kg	0.97				NS	NS	6,490	N	NMED		1.49E-04
Silver	7440-22-4	mg/kg	0.07	J			NS	NS	6,490	N	NMED		1.08E-05
Sodium	7440-23-5	mg/kg	55				NS	NS	37,300,000	N	NMED		1.47E-06
Thallium	7440-28-0	mg/kg	0.06	J			NS	NS	13	N	NMED		4.62E-03
Vanadium	7440-62-2	mg/kg	20				NS	NS	6,530	N	NMED		3.06E-03
Zinc	7440-66-6	mg/kg	39				NS	NS	38,900	N	NMED		1.00E-03

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CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP20
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MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.34	U			NS	NS	63	N	NMED		
Nitrate	14797-55-8	mg/kg	11				NS	NS	2,080,000	N	NMED		5.29E-06
Perchlorate	14797-73-0	mg/kg	0.0043	U			NS	NS	908	N	NMED		
										Cumulative Risk/Hazard		**9E-07**	**0.05**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper tolerance limit

TABLE D1-AP20-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP20
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0032	U			659	N	10,600	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0032	U			NS	NS	13,600	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0032	U			197	N	7,080	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0032	U			4,300	N	2	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0032	U			1,820	N	70,800	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0032	U			NS	NS	424	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0032	U			781	N	130	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0032	U			NS	NS	283	N	NMED[C]			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.008	U			8	N	6	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0032	U			8,540	N	79	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0032	U			NS	NS	492	N	NMED[C]			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.008	U			6	N	8	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0032	U			16	N	140	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0032	U			NS	NS	2,500	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0032	U			195	N	54	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0032	U			415	N	25	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0032	U			NS	NS	422	N	NMED[C]			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0032	U			45,900	N	24,800	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0032	U			NS	NS	7,080	N	NMED[C]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0032	U			45,900	N	24,800	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0032	U			415	N	25	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.0048	U			NS	NS	90,700	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0032	U			NS	NS	7,080	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.0032	U			NS	NS	599	N	NMED[C]			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0032	U			NS	NS	7,080	N	NMED[C]			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0032	U			NS	NS	20,400	N	NMED[C]			
Acetone	67-64-1	mg/kg	1.5	J			NS	NS	242,000	N	NMED		6.20E-06	
Benzene	71-43-2	mg/kg	0.0032	U			423	N	142	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.0032	U			NS	NS	538	N	NMED[C]			
Bromochloromethane	74-97-5	mg/kg	0.0032	U			NS	NS	296	N	NMED[C]			
Bromodichloromethane	75-27-4	mg/kg	0.0032	U			143	N	7,080	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0032	U			23,700	N	5,380	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0069	J			NS	NS	18	N	NMED		3.85E-04	
Carbon Disulfide	75-15-0	mg/kg	0.0032	U			NS	NS	1,620	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0032	U			252	N	202	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0032	U			NS	NS	412	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0032	U			NS	NS	16,600	N	NMED			
Chloroform	67-66-3	mg/kg	0.0032	U			134	N	391	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0081	J			956	N	235	N	NMED	8.47E-11	3.45E-05	
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0032	U			NS	NS	708	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0032	U			781	N	130	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0032	U			340	N	5,380	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0032	U			NS	NS	54	N	NMED			

TABLE D1-AP20-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP20
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Dichlorodifluoromethane	75-71-8	mg/kg	0.0032	U			NS	NS	161	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.0032	U			1,770	N	5,800	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0032	U			2,400	N	269	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0032	U			NS	NS	2,740	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.008	U			NS	NS	696	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0032	U			24,200	N	33,100	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.016	U			89,600	N	1,210	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0032	U			NS	NS	17,700	N	NMED[C]			
n-Propylbenzene	103-65-1	mg/kg	0.0032	U			NS	NS	6,730	N	NMED[C]			
Naphthalene	91-20-3	mg/kg	0.0032	U			633	N	159	N	NMED			
o-Xylene	95-47-6	mg/kg	0.004	U			NS	NS	736	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.0032	U			NS	NS	2,740	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.0032	U			NS	NS	35,400	N	NMED[C]			
Styrene	100-42-5	mg/kg	0.0032	U			NS	NS	10,200	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0032	U			NS	NS	35,400	N	NMED[C]			
Tetrachloroethene	127-18-4	mg/kg	0.0032	U			7,910	N	120	N	NMED			
Toluene	108-88-3	mg/kg	0.021	J			NS	NS	14,000	N	NMED		1.50E-06	
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0032	U			NS	NS	206	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0032	U			781	N	130	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0032	U			5,370	N	7	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0032	U			NS	NS	1,130	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0032	U			161	N	162	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.36	U			8,540	N	79	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.36	U			NS	NS	2,500	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.36	U			45,900	N	24,800	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.36	U			45,900	N	24,800	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.36	U			NS	NS	26,900	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.36	U			17,000	N	269	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.36	U			NS	NS	807	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.36	U			NS	NS	5,380	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.36	U			NS	NS	538	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.36	U			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.36	U			165	N	81	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.36	U			NS	NS	28,300	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.36	U			NS	NS	1,770	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.36	U			NS	NS	1,000	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.36	U			NS	NS	13,500	N	NMED[C]			
2-Nitroaniline	88-74-4	mg/kg	0.36	U			NS	NS	2,690	N	NMED[C]			
2-Nitrophenol	88-75-5	mg/kg	0.36	U			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.36	U			410	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.36	U			135	N	1,080	N	NMED[SC]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.36	U			NS	NS	22	N	NMED			

TABLE D1-AP20-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP20
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.36	U			NS	NS	NS	NS	NS			
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.36	U			NS	NS	26,900	N	NMED[C]			
4-Chloroaniline	106-47-8	mg/kg	0.36	U			14	N	135	N	NMED[C]			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.36	U			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.36	U			135	N	1,080	N	NMED[C]			
4-Nitrophenol	100-02-7	mg/kg	0.36	U			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.36	U			NS	NS	15,100	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.36	U			NS	NS	7,530	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.36	U			NS	NS	75,300	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.36	U			240	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.28	U			173	N	15	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.36	U			240	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.36	U			NS	NS	7,530	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.36	U			2,310	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.36	U			NS	NS	1,080,000	N	NMED[C]			
Benzyl Alcohol	100-51-6	mg/kg	0.36	U			NS	NS	26,900	N	NMED[C]			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.36	U			NS	NS	807	N	NMED[C]			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.36	U			2	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.36	U			3,540	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.36	U			13,400	N	5,380	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.36	U			1,420	N	53,800	N	NMED[C]			
Carbazole	86-74-8	mg/kg	0.36	U			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.36	U			23,100	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.36	U			NS	NS	26,900	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.36	U			NS	NS	2,690	N	NMED[C]			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.28	U			24	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.36	U			NS	NS	269	N	NMED[C]			
Diethylphthalate	84-66-2	mg/kg	0.36	U			NS	NS	215,000	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.36	U			NS	NS	269,000	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.36	U			NS	NS	10,000	N	NMED			
Fluorene	86-73-7	mg/kg	0.36	U			NS	NS	10,000	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.36	U			117	N	215	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.36	U			2,400	N	269	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.36	U			4,670	N	188	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.36	U			240	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.36	U			198,000	N	53,700	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.36	U			0.38	N	NA	N	NMED[C]			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.043	UJ			4	N	2	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.36	U			37,900	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.36	U			633	N	159	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.36	U			1,350	N	353	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.36	U			346	N	989	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.36	U			NS	NS	8,070	N	NMED			
Phenol	108-95-2	mg/kg	0.36	U			NS	NS	77,400	N	NMED			
Pyrene	129-00-0	mg/kg	0.36	U			NS	NS	7,530	N	NMED			

TABLE D1-AP20-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP20
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	8,070	N	NMED[C]			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	27	N	NMED[C]			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U			NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U			2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U			NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U			1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U			11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			626	N	2,420	N	NMED[C]			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.21	U			2,440	N	17	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.21	U			55	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.11	U			58	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.11	U			85	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.11	U			85	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.11	U			85	N	5	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.11	U			85	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (3)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.0000012	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000039		0.000013	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg	0.000000012	J	0.0000012	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.000000054	J	0.0000054	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000021	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.00000014	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000021	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.00000014	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		UJ	0.00000021	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		UJ	0.00000018	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000021	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000015	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000097	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		UJ	0.00000045	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000015	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000031	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000099	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.00000007				0.00172	N	0.000226	N	NMED	4.06E-10	3.09E-04	

TABLE D1-AP20-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP20
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	14,000				NS	NS	41,400	N	NMED		3.38E-01	Nervous
Antimony	7440-36-0	mg/kg	0.27				NS	NS	142	N	NMED		1.90E-03	
Arsenic	7440-38-2	mg/kg	1.2				216	N	41	N	NMED		2.91E-02	
Barium	7440-39-3	mg/kg	170				NS	NS	4,390	N	NMED		3.87E-02	
Beryllium	7440-41-7	mg/kg	0.47	J			2,710	N	148	N	NMED		3.18E-03	
Cadmium	7440-43-9	mg/kg	0.59	J			3,610	N	72	N	NMED		8.18E-03	
Calcium	7440-70-2	mg/kg	2,700				NS	NS	8,850,000	N	NMED		3.05E-04	
Chromium (Total) (4)	7440-47-3	mg/kg	11				468	N	134	N	NMED		8.21E-02	
Cobalt	7440-48-4	mg/kg	4.3				722	N	37	N	NMED		1.17E-01	Endocrine
Copper	7440-50-8	mg/kg	55				NS	NS	14,200	N	NMED		3.87E-03	
Iron	7439-89-6	mg/kg	8,900				NS	NS	248,000	N	NMED		3.59E-02	
Lead	7439-92-1	mg/kg	15				NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	6,100				NS	NS	1,550,000	N	NMED		3.94E-03	
Manganese	7439-96-5	mg/kg	310				NS	NS	464	N	NMED		6.68E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.069	J			NS	NS	21	N	NMED		3.33E-03	
Nickel	7440-02-0	mg/kg	7.2				20,500	N	753	N	NMED		9.56E-03	
Potassium	7440-09-7	mg/kg	1,000				NS	NS	20,800,000	N	NMED		4.81E-05	
Selenium	7782-49-2	mg/kg	0.97				NS	NS	1,750	N	NMED		5.54E-04	
Silver	7440-22-4	mg/kg	0.07	J			NS	NS	1,770	N	NMED		3.95E-05	
Sodium	7440-23-5	mg/kg	55				NS	NS	10,200,000	N	NMED		5.39E-06	
Thallium	7440-28-0	mg/kg	0.06	J			NS	NS	4	N	NMED		1.69E-02	
Vanadium	7440-62-2	mg/kg	20				NS	NS	614	N	NMED		3.26E-02	
Zinc	7440-66-6	mg/kg	39				NS	NS	106,000	N	NMED		3.68E-04	

TABLE D1-AP20-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP20
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.34	U			NS	NS	12	N	NMED			
Nitrate	14797-55-8	mg/kg	11				NS	NS	566,000	N	NMED		1.94E-05	
Perchlorate	14797-73-0	mg/kg	0.0043	U			NS	NS	248	N	NMED			
										Cumulative Risk/Hazard		**5E-10**	**1.4**	
										Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	1.0
Endocrine	0.12
All Others	0.27

Notes:

[s] = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update).

2) NMED[C] = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

3) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

4) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service

DL = Detection limit

J = Estimated

LOD = Limit of detection

LOQ = Limit of quantitation

mg/kg = milligrams per kilogram

NS = No Standard

U = Nondetect

UJ = Estimated Nondetect

UTL = Upper tolerance limit

TABLE D1-AP21-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AP21
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0027	U			28.1	N	2,350	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0027	U			NS	NS	14,400	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0027	U			7.98	N	1,560	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0027	U			18.8	N	2.61	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0027	U			78.6	N	15,600	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0027	U			NS	NS	440	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0027	U			29.3	N	141	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0027	U			NS	NS	63	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0068	U			0.051	N	7.09	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0027	U			240	N	82.9	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0027	U			NS	NS	300	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0068	U			0.0858	N	5.88	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0027	U			0.672	N	135	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0027	U			NS	NS	2,150	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0027	U			8.32	N	55.6	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0027	U			17.8	N	29	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0027	U			NS	NS	270	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0027	U			1,290	N	5,480	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0027	U			NS	NS	1,600	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0027	U			1,290	N	5,480	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0027	U			17.8	N	29	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0041	U			NS	NS	37,400	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0027	U			NS	NS	1,560	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0027	U			NS	NS	200	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0027	U			NS	NS	1,600	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0027	U			NS	NS	5,810	N	RSL		
Acetone	67-64-1	mg/kg	0.99	J			NS	NS	66,300	N	NMED		1.49E-05
Benzene	71-43-2	mg/kg	0.0027	U			17.8	N	114	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0027	U			NS	NS	290	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0027	U			NS	NS	150	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0027	U			6.19	N	1,560	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0027	U			674	N	1,230	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0027	U			NS	NS	17.7	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0027	U			NS	NS	1,550	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0027	U			10.7	N	144	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0027	U			NS	NS	378	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0027	U			NS	NS	19,000	N	NMED		
Chloroform	67-66-3	mg/kg	0.0027	U			5.9	N	306	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0068	U			41.1	N	268	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0027	U			NS	NS	156	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0027	U			29.3	N	141	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0027	U			13.9	N	1,230	N	NMED		
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0027	U			NS	NS	57.9	N	NMED		

TABLE D1-AP21-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AP21
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dichlorodifluoromethane	75-71-8	mg/kg	0.0027	U			NS	NS	182	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0027	U			75.1	N	3,930	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0027	U			68.3	N	61.6	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0027	U			NS	NS	2,360	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0068	U			NS	NS	764	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0027	U			975	N	37,800	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.014	U			766	N	409	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0027	U			NS	NS	3,900	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0027	U			NS	NS	3,800	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0027	U			22.6	N	162	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0034	U			NS	NS	805	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0027	U			NS	NS	2,360	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0027	U			NS	NS	7,800	N	RSL		
Styrene	100-42-5	mg/kg	0.0027	U			NS	NS	7,260	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0027	U			NS	NS	7,800	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0027	U			337	N	111	N	NMED		
Toluene	108-88-3	mg/kg	0.014				NS	NS	5,230	N	NMED		2.68E-06
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0027	U			NS	NS	210	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0027	U			29.3	N	141	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0027	U			15.5	N	6.77	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0027	U			NS	NS	1,230	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0027	U			0.742	N	113	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.18	U			240	N	82.9	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.18	U			NS	NS	2,150	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.18	U			1,290	N	5,480	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.18	U			1,290	N	5,480	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.18	U			NS	NS	6,160	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.18	U			484	N	61.6	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.18	U			NS	NS	185	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.18	U			NS	NS	1,230	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.18	U			NS	NS	123	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.18	U			17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.18	U			3.56	N	18.5	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.18	U			NS	NS	6,260	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.18	U			NS	NS	391	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.18	U			NS	NS	232	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.18	U			NS	NS	3,200	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.18	U			NS	NS	630	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.18	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.18	U			11.8	N	NS	NS	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.18	U			270	N	250	N	RSL[S]		
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.18	U			NS	NS	4.93	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.18	U			NS	NS	NS	NS	NS		

TABLE D1-AP21-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AP21
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.18	U			NS	NS	6,300	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.18	U			27	N	32	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.18	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.18	U			270	N	250	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.18	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.18	U			NS	NS	3,480	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.18	U			NS	NS	1,740	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.18	U			NS	NS	17,400	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.18	U			1.53	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			1.12	N	17.4	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.18	U			1.53	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.18	U			NS	NS	1,740	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.18	U			15.3	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.18	U			NS	NS	250,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.18	U			NS	NS	6,300	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.18	U			NS	NS	190	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.18	U			3.11	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.18	U			99.3	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.18	U			380	N	1,230	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.18	U			2,900	N	13,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.18	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.18	U			153	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.18	U			NS	NS	6,160	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.18	U			NS	NS	630	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			0.153	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.18	U			NS	NS	78	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.18	U			NS	NS	49,300	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.18	U			NS	NS	61,600	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.18	U			NS	NS	2,320	N	NMED		
Fluorene	86-73-7	mg/kg	0.18	U			NS	NS	2,320	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.18	U			3.33	N	49.3	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.18	U			68.3	N	61.6	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.18	U			133	N	43.1	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.18	U			1.53	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.18	U			5,610	N	12,300	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.18	U			0.78	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.022	UJ			0.0234	N	0.493	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.18	U			1,090	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.18	U			22.6	N	162	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.18	U			60.4	N	131	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.18	U			9.85	N	234	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.18	U			NS	NS	1,740	N	NMED		
Phenol	108-95-2	mg/kg	0.18	U			NS	NS	18,500	N	NMED		
Pyrene	129-00-0	mg/kg	0.18	U			NS	NS	1,740	N	NMED		

TABLE D1-AP21-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AP21
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U			NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U			83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U			NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U			60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U			313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			1,300	N	570	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.22	U			69.6	N	3.98	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.22	U			1.81	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.11	U			1.86	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.11	U			2.43	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.11	U			2.43	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.11	U			2.43	N	1.14	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.11	U			2.43	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg	0.00000000045	J	0.0000015	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.000000012		0.000041	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg	0.00000001	J	0.000001	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.000000093	J	0.0000093	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.0000001	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.0000001	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg	0.000000017	J	0.00000017	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000098	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		UJ	0.00000021	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		UJ	0.00000012	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000016	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.000000075	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000077	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		UJ	0.00000011	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.000000077	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.000005	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.00000007	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.00000013				0.000049	N	0.0000506	N	NMED	2.71E-08	2.62E-03

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HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AP21
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	12,000				NS	NS	78,000	N	NMED		1.54E-01
Antimony	7440-36-0	mg/kg	0.14	J			NS	NS	31.3	N	NMED		4.47E-03
Arsenic	7440-38-2	mg/kg	0.98				7.07	N	13	N	NMED	1.39E-06	7.54E-02
Barium	7440-39-3	mg/kg	190				NS	NS	15,600	N	NMED		1.22E-02
Beryllium	7440-41-7	mg/kg	0.41	J			64,400	N	156	N	NMED	6.37E-11	2.63E-03
Cadmium	7440-43-9	mg/kg	0.43				85,900	N	70.5	N	NMED	5.01E-11	6.10E-03
Calcium	7440-70-2	mg/kg	2,600				NS	NS	13,000,000	N	NMED		2.00E-04
Chromium (Total) (3)	7440-47-3	mg/kg	10				96.6	N	45,200	N	NMED	1.04E-06	2.21E-04
Cobalt	7440-48-4	mg/kg	3.7				17,200	N	23.4	N	NMED	2.15E-09	1.58E-01
Copper	7440-50-8	mg/kg	59				NS	NS	3,130	N	NMED		1.88E-02
Iron	7439-89-6	mg/kg	7,300				NS	NS	54,800	N	NMED		1.33E-01
Lead	7439-92-1	mg/kg	14				NS	NS	200	N	RSL		
Magnesium	7439-95-4	mg/kg	5,300				NS	NS	15,600,000	N	NMED		3.40E-04
Manganese	7439-96-5	mg/kg	270				NS	NS	10,500	N	NMED		2.57E-02
Mercury (Elemental)	7439-97-6	mg/kg	0.04	J			NS	NS	23.8	N	NMED		1.68E-03
Nickel	7440-02-0	mg/kg	6.4				595,000	N	1,560	N	NMED	1.08E-10	4.10E-03
Potassium	7440-09-7	mg/kg	890				NS	NS	15,600,000	N	NMED		5.71E-05
Selenium	7782-49-2	mg/kg	0.81				NS	NS	391	N	NMED		2.07E-03
Silver	7440-22-4	mg/kg	0.069	J			NS	NS	391	N	NMED		1.76E-04
Sodium	7440-23-5	mg/kg	51				NS	NS	7,820,000	N	NMED		6.52E-06
Thallium	7440-28-0	mg/kg	0.034	J			NS	NS	0.782	N	NMED		4.35E-02
Vanadium	7440-62-2	mg/kg	16				NS	NS	394	N	NMED		4.06E-02
Zinc	7440-66-6	mg/kg	57	J			NS	NS	23,500	N	NMED		2.43E-03

TABLE D1-AP21-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AP21
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.35	U			NS	NS	11.2	N	NMED		
Nitrate	14797-55-8	mg/kg	6.7	J			NS	NS	125,000	N	NMED		5.36E-05
Perchlorate	14797-73-0	mg/kg	0.002	U			NS	NS	54.8	N	NMED		
										Cumulative Risk/Hazard		**2E-06**	**0.7**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of Quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper Tolerance Limit

TABLE D1-AP21-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP21
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0027	U			137	N	39,400	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0027	U			NS	NS	72,500	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0027	U			39	N	26,000	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0027	U			92	N	12	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0027	U			383	N	260,000	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0027	U			NS	NS	2,260	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0027	U			146	N	695	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0027	U			NS	NS	930	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0068	U			1	N	34	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0027	U			1,250	N	423	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0027	U			NS	NS	1,800	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0068	U			1	N	41	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0027	U			3	N	738	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0027	U			NS	NS	13,000	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0027	U			41	N	286	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0027	U			87	N	137	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0027	U			NS	NS	1,500	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0027	U			6,730	N	90,800	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0027	U			NS	NS	23,000	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0027	U			6,730	N	90,800	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0027	U			87	N	137	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0041	U			NS	NS	411,000	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0027	U			NS	NS	26,000	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0027	U			NS	NS	1,300	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0027	U			NS	NS	23,000	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0027	U			NS	NS	81,600	N	RSL		
Acetone	67-64-1	mg/kg	0.99	J			NS	NS	960,000	N	NMED		1.03E-06
Benzene	71-43-2	mg/kg	0.0027	U			87	N	729	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0027	U			NS	NS	1,800	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0027	U			NS	NS	630	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0027	U			30	N	26,000	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0027	U			1,760	N	18,300	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0027	U			NS	NS	95	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0027	U			NS	NS	8,540	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0027	U			53	N	1,020	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0027	U			NS	NS	2,160	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0027	U			NS	NS	89,500	N	NMED		
Chloroform	67-66-3	mg/kg	0.0027	U			29	N	2,000	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0068	U			201	N	1,260	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0027	U			NS	NS	2,600	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0027	U			146	N	695	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0027	U			67	N	18,300	N	NMED		

TABLE D1-AP21-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP21
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0027	U			NS	NS	288	N	NMED		
Dichlorodifluoromethane	75-71-8	mg/kg	0.0027	U			NS	NS	865	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0027	U			29,000	N	368	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0027	U			52	N	916	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0027	U			NS	NS	14,200	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0068	U			NS	NS	3,730	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0027	U			4,820	N	178,000	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.014	U			14,400	N	5,130	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0027	U			NS	NS	58,000	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0027	U			NS	NS	24,000	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0027	U			108	N	843	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0034	U			NS	NS	3,940	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0027	U			NS	NS	14,200	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0027	U			NS	NS	120,000	N	RSL		
Styrene	100-42-5	mg/kg	0.0027	U			NS	NS	51,300	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0027	U			NS	NS	120,000	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0027	U			1,650	N	629	N	NMED		
Toluene	108-88-3	mg/kg	0.014				NS	NS	61,300	N	NMED		2.28E-07
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0027	U			NS	NS	1,100	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0027	U			146	N	695	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0027	U			112	N	37	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0027	U			NS	NS	6,030	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0027	U			28	N	46	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.18	U			1,250	N	423	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.18	U			NS	NS	13,000	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.18	U			6,730	N	90,800	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.18	U			6,730	N	90,800	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.18	U			NS	NS	91,600	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.18	U			2,330	N	916	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.18	U			NS	NS	2,750	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.18	U			NS	NS	18,300	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.18	U			NS	NS	1,830	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.18	U			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.18	U			17	N	276	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.18	U			NS	NS	104,000	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.18	U			NS	NS	6,490	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.18	U			NS	NS	3,370	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.18	U			NS	NS	41,000	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.18	U			NS	NS	8,000	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.18	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.18	U			NS	NS	410	N	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.18	U			1,100	N	3,300	N	RSL[S]		

TABLE D1-AP21-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP21
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.18	U			NS	NS	73	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.18	U			NS	NS	NS	NS	NS		
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.18	U			NS	NS	82,000	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.18	U			110	N	410	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.18	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.18	U			1,100	N	3,300	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.18	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.18	U			NS	NS	50,500	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.18	U			NS	NS	25,300	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.18	U			NS	NS	253,000	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.18	U			32	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			24	N	251	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.18	U			32	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.18	U			NS	NS	25,300	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.18	U			323	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.18	U			NS	NS	3,300,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.18	U			NS	NS	82,000	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.18	U			NS	NS	2,500	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.18	U			16	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.18	U			519	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.18	U			1,830	N	18,300	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.18	U			12,000	N	160,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.18	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.18	U			3,230	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.18	U			NS	NS	91,600	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.18	U			NS	NS	8,200	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			3	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.18	U			NS	NS	1,200	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.18	U			NS	NS	733,000	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.18	U			NS	NS	916,000	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.18	U			NS	NS	33,700	N	NMED		
Fluorene	86-73-7	mg/kg	0.18	U			NS	NS	33,700	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.18	U			16	N	733	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.18	U			52	N	916	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.18	U			641	N	641	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.18	U			32	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.18	U			27,000	N	183,000	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.18	U			3	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.022	UJ			1	N	7	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.18	U			5,240	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.18	U			108	N	843	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.18	U			293	N	1,540	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.18	U			45	N	3,180	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.18	U			NS	NS	27,500	N	NMED		
Phenol	108-95-2	mg/kg	0.18	U			NS	NS	275,000	N	NMED		
Pyrene	129-00-0	mg/kg	0.18	U			NS	NS	25,300	N	NMED		

TABLE D1-AP21-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP21
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U			NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U			428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U			NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U			293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U			1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			5,300	N	7,400	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.22	U			304	N	57	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.22	U			9	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.11	U			9	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.11	U			11	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.11	U			11	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.11	U			11	N	16	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.11	U			11	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg	0.00000000045	J	0.0000015	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.000000012		0.000041	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg	0.00000001	J	0.000001	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.000000093	J	0.0000093	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.0000001	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.0000001	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg	0.000000017	J	0.00000017	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000098	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		UJ	0.00000021	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		UJ	0.00000012	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000016	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.000000075	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000077	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		UJ	0.00000011	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.000000077	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.000005	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.00000007	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.00000013				0.000238	N	0.000808	N	NMED	5.58E-09	1.64E-04

TABLE D1-AP21-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP21
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	12,000				NS	NS	1,290,000	N	NMED		9.30E-03
Antimony	7440-36-0	mg/kg	0.14	J			NS	NS	519	N	NMED		2.70E-04
Arsenic	7440-38-2	mg/kg	0.98				36	N	208	N	NMED	2.73E-07	4.71E-03
Barium	7440-39-3	mg/kg	190				NS	NS	255,000	N	NMED		7.45E-04
Beryllium	7440-41-7	mg/kg	0.41	J			313,000	N	2,580	N	NMED	1.31E-11	1.59E-04
Cadmium	7440-43-9	mg/kg	0.43				417,000	N	1,110	N	NMED	1.03E-11	3.87E-04
Calcium	7440-70-2	mg/kg	2,600				NS	NS	32,400,000	N	NMED		8.02E-05
Chromium (Total) (3)	7440-47-3	mg/kg	10				505	N	314,000	N	NMED	1.98E-07	3.18E-05
Cobalt	7440-48-4	mg/kg	3.7				83,400	N	388	N	NMED	4.44E-10	9.54E-03
Copper	7440-50-8	mg/kg	59				NS	NS	51,900	N	NMED		1.14E-03
Iron	7439-89-6	mg/kg	7,300				NS	NS	908,000	N	NMED		8.04E-03
Lead	7439-92-1	mg/kg	14				NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	5,300				NS	NS	5,680,000	N	NMED		9.33E-04
Manganese	7439-96-5	mg/kg	270				NS	NS	160,000	N	NMED		1.69E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.04	J			NS	NS	112	N	NMED		3.57E-04
Nickel	7440-02-0	mg/kg	6.4				2,890,000	N	25,700	N	NMED	2.21E-11	2.49E-04
Potassium	7440-09-7	mg/kg	890				NS	NS	76,200,000	N	NMED		1.17E-05
Selenium	7782-49-2	mg/kg	0.81				NS	NS	6,490	N	NMED		1.25E-04
Silver	7440-22-4	mg/kg	0.069	J			NS	NS	6,490	N	NMED		1.06E-05
Sodium	7440-23-5	mg/kg	51				NS	NS	37,300,000	N	NMED		1.37E-06
Thallium	7440-28-0	mg/kg	0.034	J			NS	NS	13	N	NMED		2.62E-03
Vanadium	7440-62-2	mg/kg	16				NS	NS	6,530	N	NMED		2.45E-03
Zinc	7440-66-6	mg/kg	57	J			NS	NS	38,900	N	NMED		1.47E-03

TABLE D1-AP21-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP21
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.35	U			NS	NS	63	N	NMED		
Nitrate	14797-55-8	mg/kg	6.7	J			NS	NS	2,080,000	N	NMED		3.22E-06
Perchlorate	14797-73-0	mg/kg	0.002	U			NS	NS	908	N	NMED		
										Cumulative Risk/Hazard		**5E-07**	**0.04**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper tolerance limit

TABLE D1-AP21-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP21
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0027	U			659	N	10,600	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0027	U			NS	NS	13,600	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0027	U			197	N	7,080	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0027	U			4,300	N	2	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0027	U			1,820	N	70,800	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0027	U			NS	NS	424	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0027	U			781	N	130	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0027	U			NS	NS	283	N	NMED[C]			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0068	U			8	N	6	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0027	U			8,540	N	79	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0027	U			NS	NS	492	N	NMED[C]			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0068	U			6	N	8	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0027	U			16	N	140	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0027	U			NS	NS	2,500	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0027	U			195	N	54	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0027	U			415	N	25	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0027	U			NS	NS	422	N	NMED[C]			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0027	U			45,900	N	24,800	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0027	U			NS	NS	7,080	N	NMED[C]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0027	U			45,900	N	24,800	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0027	U			415	N	25	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.0041	U			NS	NS	90,700	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0027	U			NS	NS	7,080	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.0027	U			NS	NS	599	N	NMED[C]			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0027	U			NS	NS	7,080	N	NMED[C]			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0027	U			NS	NS	20,400	N	NMED[C]			
Acetone	67-64-1	mg/kg	0.99	J			NS	NS	242,000	N	NMED		4.09E-06	
Benzene	71-43-2	mg/kg	0.0027	U			423	N	142	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.0027	U			NS	NS	538	N	NMED[C]			
Bromochloromethane	74-97-5	mg/kg	0.0027	U			NS	NS	296	N	NMED[C]			
Bromodichloromethane	75-27-4	mg/kg	0.0027	U			143	N	7,080	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0027	U			23,700	N	5,380	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0027	U			NS	NS	18	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.0027	U			NS	NS	1,620	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0027	U			252	N	202	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0027	U			NS	NS	412	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0027	U			NS	NS	16,600	N	NMED			
Chloroform	67-66-3	mg/kg	0.0027	U			134	N	391	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0068	U			956	N	235	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0027	U			NS	NS	708	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0027	U			781	N	130	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0027	U			340	N	5,380	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0027	U			NS	NS	54	N	NMED			
Dichlorodifluoromethane	75-71-8	mg/kg	0.0027	U			NS	NS	161	N	NMED			

TABLE D1-AP21-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP21
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Ethylbenzene	100-41-4	mg/kg	0.0027	U			1,770	N	5,800	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0027	U			2,400	N	269	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0027	U			NS	NS	2,740	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0068	U			NS	NS	696	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0027	U			24,200	N	33,100	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.014	U			89,600	N	1,210	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0027	U			NS	NS	17,700	N	NMED[C]			
n-Propylbenzene	103-65-1	mg/kg	0.0027	U			NS	NS	6,730	N	NMED[C]			
Naphthalene	91-20-3	mg/kg	0.0027	U			633	N	159	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0034	U			NS	NS	736	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.0027	U			NS	NS	2,740	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.0027	U			NS	NS	35,400	N	NMED[C]			
Styrene	100-42-5	mg/kg	0.0027	U			NS	NS	10,200	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0027	U			NS	NS	35,400	N	NMED[C]			
Tetrachloroethene	127-18-4	mg/kg	0.0027	U			7,910	N	120	N	NMED			
Toluene	108-88-3	mg/kg	0.014				NS	NS	14,000	N	NMED		1.00E-06	
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0027	U			NS	NS	206	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0027	U			781	N	130	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0027	U			5,370	N	7	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0027	U			NS	NS	1,130	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0027	U			161	N	162	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.18	U			8,540	N	79	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.18	U			NS	NS	2,500	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.18	U			45,900	N	24,800	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.18	U			45,900	N	24,800	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.18	U			NS	NS	26,900	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.18	U			17,000	N	269	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.18	U			NS	NS	807	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.18	U			NS	NS	5,380	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.18	U			NS	NS	538	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.18	U			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.18	U			165	N	81	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.18	U			NS	NS	28,300	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.18	U			NS	NS	1,770	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.18	U			NS	NS	1,000	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.18	U			NS	NS	13,500	N	NMED[C]			
2-Nitroaniline	88-74-4	mg/kg	0.18	U			NS	NS	2,690	N	NMED[C]			
2-Nitrophenol	88-75-5	mg/kg	0.18	U			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.18	U			410	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.18	U			135	N	1,080	N	NMED[SC]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.18	U			NS	NS	22	N	NMED			

TABLE D1-AP21-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP21
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.18	U			NS	NS	NS	NS	NS			
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.18	U			NS	NS	26,900	N	NMED[C]			
4-Chloroaniline	106-47-8	mg/kg	0.18	U			14	N	135	N	NMED[C]			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.18	U			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.18	U			135	N	1,080	N	NMED[C]			
4-Nitrophenol	100-02-7	mg/kg	0.18	U			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.18	U			NS	NS	15,100	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.18	U			NS	NS	7,530	N	NMED[$]			
Anthracene	120-12-7	mg/kg	0.18	U			NS	NS	75,300	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.18	U			240	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			173	N	15	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.18	U			240	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.18	U			NS	NS	7,530	N	NMED[$]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.18	U			2,310	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.18	U			NS	NS	1,080,000	N	NMED[C]			
Benzyl Alcohol	100-51-6	mg/kg	0.18	U			NS	NS	26,900	N	NMED[C]			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.18	U			NS	NS	807	N	NMED[C]			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.18	U			2	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.18	U			3,540	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.18	U			13,400	N	5,380	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.18	U			1,420	N	53,800	N	NMED[C]			
Carbazole	86-74-8	mg/kg	0.18	U			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.18	U			23,100	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.18	U			NS	NS	26,900	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.18	U			NS	NS	2,690	N	NMED[C]			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			24	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.18	U			NS	NS	269	N	NMED[C]			
Diethylphthalate	84-66-2	mg/kg	0.18	U			NS	NS	215,000	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.18	U			NS	NS	269,000	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.18	U			NS	NS	10,000	N	NMED			
Fluorene	86-73-7	mg/kg	0.18	U			NS	NS	10,000	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.18	U			117	N	215	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.18	U			2,400	N	269	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.18	U			4,670	N	188	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.18	U			240	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.18	U			198,000	N	53,700	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.18	U			0.38	N	NA	N	NMED[C]			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.022	UJ			4	N	2	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.18	U			37,900	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.18	U			633	N	159	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.18	U			1,350	N	353	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.18	U			346	N	989	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.18	U			NS	NS	8,070	N	NMED			
Phenol	108-95-2	mg/kg	0.18	U			NS	NS	77,400	N	NMED			
Pyrene	129-00-0	mg/kg	0.18	U			NS	NS	7,530	N	NMED			

TABLE D1-AP21-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP21
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	8,070	N	NMED[C]			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	27	N	NMED[C]			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U			NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U			2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U			NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U			1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U			11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			626	N	2,420	N	NMED[C]			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.22	U			2,440	N	17	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.22	U			55	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.11	U			58	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.11	U			85	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.11	U			85	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.11	U			85	N	5	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.11	U			85	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (3)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg	0.00000000045	J	0.0000015	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.000000012		0.000041	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg	0.00000001	J	0.000001	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.000000093	J	0.0000093	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.0000001	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.0000001	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg	0.000000017	J	0.00000017	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000098	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		UJ	0.00000021	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		UJ	0.00000012	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000016	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.000000075	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000077	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		UJ	0.00000011	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.000000077	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.000005	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.00000007	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.00000013				0.00172	N	0.000226	N	NMED	7.72E-10	5.87E-04	

TABLE D1-AP21-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP21
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	12,000				NS	NS	41,400	N	NMED		2.90E-01	Nervous
Antimony	7440-36-0	mg/kg	0.14	J			NS	NS	142	N	NMED		9.86E-04	
Arsenic	7440-38-2	mg/kg	0.98				216	N	41	N	NMED	4.54E-08	2.38E-02	
Barium	7440-39-3	mg/kg	190				NS	NS	4,390	N	NMED		4.33E-02	
Beryllium	7440-41-7	mg/kg	0.41	J			2,710	N	148	N	NMED	1.51E-09	2.77E-03	
Cadmium	7440-43-9	mg/kg	0.43				3,610	N	72	N	NMED	1.19E-09	5.96E-03	
Calcium	7440-70-2	mg/kg	2,600				NS	NS	8,850,000	N	NMED		2.94E-04	
Chromium (Total) (4)	7440-47-3	mg/kg	10				468	N	134	N	NMED	2.14E-07	7.46E-02	
Cobalt	7440-48-4	mg/kg	3.7				722	N	37	N	NMED	5.12E-08	1.01E-01	Endocrine
Copper	7440-50-8	mg/kg	59				NS	NS	14,200	N	NMED		4.15E-03	
Iron	7439-89-6	mg/kg	7,300				NS	NS	248,000	N	NMED		2.94E-02	
Lead	7439-92-1	mg/kg	14				NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	5,300				NS	NS	1,550,000	N	NMED		3.42E-03	
Manganese	7439-96-5	mg/kg	270				NS	NS	464	N	NMED		5.82E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.04	J			NS	NS	21	N	NMED		1.93E-03	
Nickel	7440-02-0	mg/kg	6.4				20,500	N	753	N	NMED	3.12E-09	8.50E-03	
Potassium	7440-09-7	mg/kg	890				NS	NS	20,800,000	N	NMED		4.28E-05	
Selenium	7782-49-2	mg/kg	0.81				NS	NS	1,750	N	NMED		4.63E-04	
Silver	7440-22-4	mg/kg	0.069	J			NS	NS	1,770	N	NMED		3.90E-05	
Sodium	7440-23-5	mg/kg	51				NS	NS	10,200,000	N	NMED		5.00E-06	
Thallium	7440-28-0	mg/kg	0.034	J			NS	NS	4	N	NMED		9.60E-03	
Vanadium	7440-62-2	mg/kg	16				NS	NS	614	N	NMED		2.61E-02	
Zinc	7440-66-6	mg/kg	57	J			NS	NS	106,000	N	NMED		5.38E-04	

TABLE D1-AP21-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP21
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.35	U			NS	NS	12	N	NMED			
Nitrate	14797-55-8	mg/kg	6.7	J			NS	NS	566,000	N	NMED		1.18E-05	
Perchlorate	14797-73-0	mg/kg	0.002	U			NS	NS	248	N	NMED			
										Cumulative Risk/Hazard		**3E-07**	**1.2**	
										Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	0.87
Endocrine	0.10
All Others	0.24

Notes:

[s] = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update).

2) NMED[C] = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

3) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

4) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper tolerance limit

TABLE D1-AP22-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AP22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0022	U			28.1	N	2,350	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0022	U			NS	NS	14,400	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0022	U			7.98	N	1,560	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0022	U			18.8	N	2.61	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0022	U			78.6	N	15,600	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0022	U			NS	NS	440	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0022	U			29.3	N	141	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0022	U			NS	NS	63	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0054	U			0.051	N	7.09	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0022	U			240	N	82.9	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0022	U			NS	NS	300	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0054	U			0.0858	N	5.88	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0022	U			0.672	N	135	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0022	U			NS	NS	2,150	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0022	U			8.32	N	55.6	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0022	U			17.8	N	29	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0022	U			NS	NS	270	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0022	U			1,290	N	5,480	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0022	U			NS	NS	1,600	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0022	U			1,290	N	5,480	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0022	U			17.8	N	29	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0033	U			NS	NS	37,400	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0022	U			NS	NS	1,560	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0022	U			NS	NS	200	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0022	U			NS	NS	1,600	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0022	U			NS	NS	5,810	N	RSL		
Acetone	67-64-1	mg/kg	0.57	J			NS	NS	66,300	N	NMED		8.60E-06
Benzene	71-43-2	mg/kg	0.0022	U			17.8	N	114	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0022	U			NS	NS	290	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0022	U			NS	NS	150	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0022	U			6.19	N	1,560	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0022	U			674	N	1,230	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0022	U			NS	NS	17.7	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0022	U			NS	NS	1,550	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0022	U			10.7	N	144	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0022	U			NS	NS	378	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0022	U			NS	NS	19,000	N	NMED		
Chloroform	67-66-3	mg/kg	0.0022	U			5.9	N	306	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0054	U			41.1	N	268	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0022	U			NS	NS	156	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0022	U			29.3	N	141	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0022	U			13.9	N	1,230	N	NMED		
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0022	U			NS	NS	57.9	N	NMED		

TABLE D1-AP22-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AP22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dichlorodifluoromethane	75-71-8	mg/kg	0.0022	U			NS	NS	182	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0022	U			75.1	N	3,930	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0022	U			68.3	N	61.6	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0022	U			NS	NS	2,360	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0054	U			NS	NS	764	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0022	U			975	N	37,800	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.011	U			766	N	409	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0022	U			NS	NS	3,900	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0022	U			NS	NS	3,800	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0022	U			22.6	N	162	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0027	U			NS	NS	805	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0022	U			NS	NS	2,360	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0022	U			NS	NS	7,800	N	RSL		
Styrene	100-42-5	mg/kg	0.0022	U			NS	NS	7,260	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0022	U			NS	NS	7,800	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0022	U			337	N	111	N	NMED		
Toluene	108-88-3	mg/kg	0.0046	J			NS	NS	5,230	N	NMED		8.80E-07
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0022	U			NS	NS	210	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0022	U			29.3	N	141	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0022	U			15.5	N	6.77	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0022	U			NS	NS	1,230	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0022	U			0.742	N	113	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.18	U			240	N	82.9	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.18	U			NS	NS	2,150	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.18	U			1,290	N	5,480	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.18	U			1,290	N	5,480	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.18	U			NS	NS	6,160	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.18	U			484	N	61.6	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.18	U			NS	NS	185	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.18	U			NS	NS	1,230	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.18	U			NS	NS	123	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.18	U			17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.18	U			3.56	N	18.5	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.18	U			NS	NS	6,260	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.18	U			NS	NS	391	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.18	U			NS	NS	232	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.18	U			NS	NS	3,200	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.18	U			NS	NS	630	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.18	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.18	U			11.8	N	NS	NS	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.18	U			270	N	250	N	RSL[S]		
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.18	U			NS	NS	4.93	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.18	U			NS	NS	NS	NS	NS		

TABLE D1-AP22-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AP22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.18	U			NS	NS	6,300	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.18	U			27	N	32	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.18	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.18	U			270	N	250	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.18	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.18	U			NS	NS	3,480	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.18	U			NS	NS	1,740	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.18	U			NS	NS	17,400	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.18	U			1.53	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			1.12	N	17.4	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.18	U			1.53	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.18	U			NS	NS	1,740	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.18	U			15.3	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.18	U			NS	NS	250,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.18	U			NS	NS	6,300	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.18	U			NS	NS	190	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.18	U			3.11	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.18	U			99.3	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.18	U			380	N	1,230	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.18	U			2,900	N	13,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.18	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.18	U			153	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.18	U			NS	NS	6,160	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.18	U			NS	NS	630	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			0.153	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.18	U			NS	NS	78	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.18	U			NS	NS	49,300	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.18	U			NS	NS	61,600	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.18	U			NS	NS	2,320	N	NMED		
Fluorene	86-73-7	mg/kg	0.18	U			NS	NS	2,320	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.18	U			3.33	N	49.3	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.18	U			68.3	N	61.6	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.18	U			133	N	43.1	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.18	U			1.53	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.18	U			5,610	N	12,300	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.18	U			0.78	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.022	UJ			0.0234	N	0.493	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.18	U			1,090	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.18	U			22.6	N	162	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.18	U			60.4	N	131	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.18	U			9.85	N	234	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.18	U			NS	NS	1,740	N	NMED		
Phenol	108-95-2	mg/kg	0.18	U			NS	NS	18,500	N	NMED		
Pyrene	129-00-0	mg/kg	0.18	U			NS	NS	1,740	N	NMED		

TABLE D1-AP22-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AP22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U			NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U			83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U			NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U			60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U			313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			1,300	N	570	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.21	U			69.6	N	3.98	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.21	U			1.81	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.11	U			1.86	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.11	U			2.43	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.11	U			2.43	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.11	U			2.43	N	1.14	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.11	U			2.43	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg	0.00000000039	J	0.0000013	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000048	J	0.000016	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000088	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.000000026	J	0.0000026	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.000000095	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.00000017	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000098	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.00000016	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		UJ	0.000000098	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		UJ	0.00000021	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000014	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000019	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.00000013	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		UJ	0.0000003	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.0000002	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000027	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.00000013	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.000000031				0.000049	N	0.0000506	N	NMED	6.37E-09	6.16E-04

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HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AP22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	12,000				NS	NS	78,000	N	NMED		1.54E-01
Antimony	7440-36-0	mg/kg	0.21				NS	NS	31.3	N	NMED		6.71E-03
Arsenic	7440-38-2	mg/kg	1				7.07	N	13	N	NMED	1.41E-06	7.69E-02
Barium	7440-39-3	mg/kg	200				NS	NS	15,600	N	NMED		1.28E-02
Beryllium	7440-41-7	mg/kg	0.44	J			64,400	N	156	N	NMED	6.83E-11	2.82E-03
Cadmium	7440-43-9	mg/kg	0.4				85,900	N	70.5	N	NMED	4.66E-11	5.67E-03
Calcium	7440-70-2	mg/kg	2,700				NS	NS	13,000,000	N	NMED		2.08E-04
Chromium (Total) (3)	7440-47-3	mg/kg	9.9				96.6	N	45,200	N	NMED	1.02E-06	2.19E-04
Cobalt	7440-48-4	mg/kg	3.8				17,200	N	23.4	N	NMED	2.21E-09	1.62E-01
Copper	7440-50-8	mg/kg	58				NS	NS	3,130	N	NMED		1.85E-02
Iron	7439-89-6	mg/kg	7,800				NS	NS	54,800	N	NMED		1.42E-01
Lead	7439-92-1	mg/kg	15				NS	NS	200	N	RSL		
Magnesium	7439-95-4	mg/kg	5,400				NS	NS	15,600,000	N	NMED		3.46E-04
Manganese	7439-96-5	mg/kg	270				NS	NS	10,500	N	NMED		2.57E-02
Mercury (Elemental)	7439-97-6	mg/kg	0.029	J			NS	NS	23.8	N	NMED		1.22E-03
Nickel	7440-02-0	mg/kg	6.6				595,000	N	1,560	N	NMED	1.11E-10	4.23E-03
Potassium	7440-09-7	mg/kg	900				NS	NS	15,600,000	N	NMED		5.77E-05
Selenium	7782-49-2	mg/kg	0.95				NS	NS	391	N	NMED		2.43E-03
Silver	7440-22-4	mg/kg	0.084	J			NS	NS	391	N	NMED		2.15E-04
Sodium	7440-23-5	mg/kg	54				NS	NS	7,820,000	N	NMED		6.91E-06
Thallium	7440-28-0	mg/kg	0.04	J			NS	NS	0.782	N	NMED		5.12E-02
Vanadium	7440-62-2	mg/kg	17				NS	NS	394	N	NMED		4.31E-02
Zinc	7440-66-6	mg/kg	35				NS	NS	23,500	N	NMED		1.49E-03

TABLE D1-AP22-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AP22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.21	J			NS	NS	11.2	N	NMED		1.88E-02
Nitrate	14797-55-8	mg/kg	7.2	J			NS	NS	125,000	N	NMED		5.76E-05
Perchlorate	14797-73-0	mg/kg	0.002	U			NS	NS	54.8	N	NMED		
										Cumulative Risk/Hazard		**2E-06**	**0.7**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of Quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper Tolerance Limit

TABLE D1-AP22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0022	U			137	N	39,400	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0022	U			NS	NS	72,500	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0022	U			39	N	26,000	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0022	U			92	N	12	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0022	U			383	N	260,000	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0022	U			NS	NS	2,260	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0022	U			146	N	695	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0022	U			NS	NS	930	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0054	U			1	N	34	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0022	U			1,250	N	423	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0022	U			NS	NS	1,800	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0054	U			1	N	41	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0022	U			3	N	738	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0022	U			NS	NS	13,000	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0022	U			41	N	286	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0022	U			87	N	137	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0022	U			NS	NS	1,500	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0022	U			6,730	N	90,800	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0022	U			NS	NS	23,000	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0022	U			6,730	N	90,800	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0022	U			87	N	137	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0033	U			NS	NS	411,000	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0022	U			NS	NS	26,000	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0022	U			NS	NS	1,300	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0022	U			NS	NS	23,000	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0022	U			NS	NS	81,600	N	RSL		
Acetone	67-64-1	mg/kg	0.57	J			NS	NS	960,000	N	NMED		5.94E-07
Benzene	71-43-2	mg/kg	0.0022	U			87	N	729	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0022	U			NS	NS	1,800	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0022	U			NS	NS	630	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0022	U			30	N	26,000	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0022	U			1,760	N	18,300	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0022	U			NS	NS	95	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0022	U			NS	NS	8,540	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0022	U			53	N	1,020	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0022	U			NS	NS	2,160	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0022	U			NS	NS	89,500	N	NMED		
Chloroform	67-66-3	mg/kg	0.0022	U			29	N	2,000	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0054	U			201	N	1,260	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0022	U			NS	NS	2,600	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0022	U			146	N	695	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0022	U			67	N	18,300	N	NMED		

TABLE D1-AP22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0022	U			NS	NS	288	N	NMED		
Dichlorodifluoromethane	75-71-8	mg/kg	0.0022	U			NS	NS	865	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0022	U			29,000	N	368	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0022	U			52	N	916	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0022	U			NS	NS	14,200	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0054	U			NS	NS	3,730	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0022	U			4,820	N	178,000	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.011	U			14,400	N	5,130	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0022	U			NS	NS	58,000	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0022	U			NS	NS	24,000	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0022	U			108	N	843	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0027	U			NS	NS	3,940	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0022	U			NS	NS	14,200	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0022	U			NS	NS	120,000	N	RSL		
Styrene	100-42-5	mg/kg	0.0022	U			NS	NS	51,300	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0022	U			NS	NS	120,000	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0022	U			1,650	N	629	N	NMED		
Toluene	108-88-3	mg/kg	0.0046	J			NS	NS	61,300	N	NMED		7.50E-08
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0022	U			NS	NS	1,100	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0022	U			146	N	695	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0022	U			112	N	37	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0022	U			NS	NS	6,030	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0022	U			28	N	46	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.18	U			1,250	N	423	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.18	U			NS	NS	13,000	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.18	U			6,730	N	90,800	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.18	U			6,730	N	90,800	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.18	U			NS	NS	91,600	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.18	U			2,330	N	916	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.18	U			NS	NS	2,750	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.18	U			NS	NS	18,300	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.18	U			NS	NS	1,830	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.18	U			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.18	U			17	N	276	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.18	U			NS	NS	104,000	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.18	U			NS	NS	6,490	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.18	U			NS	NS	3,370	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.18	U			NS	NS	41,000	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.18	U			NS	NS	8,000	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.18	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.18	U			NS	NS	410	N	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.18	U			1,100	N	3,300	N	RSL[S]		

TABLE D1-AP22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.18	U			NS	NS	73	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.18	U			NS	NS	NS	NS	NS		
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.18	U			NS	NS	82,000	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.18	U			110	N	410	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.18	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.18	U			1,100	N	3,300	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.18	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.18	U			NS	NS	50,500	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.18	U			NS	NS	25,300	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.18	U			NS	NS	253,000	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.18	U			32	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			24	N	251	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.18	U			32	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.18	U			NS	NS	25,300	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.18	U			323	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.18	U			NS	NS	3,300,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.18	U			NS	NS	82,000	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.18	U			NS	NS	2,500	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.18	U			16	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.18	U			519	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.18	U			1,830	N	18,300	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.18	U			12,000	N	160,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.18	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.18	U			3,230	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.18	U			NS	NS	91,600	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.18	U			NS	NS	8,200	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			3	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.18	U			NS	NS	1,200	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.18	U			NS	NS	733,000	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.18	U			NS	NS	916,000	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.18	U			NS	NS	33,700	N	NMED		
Fluorene	86-73-7	mg/kg	0.18	U			NS	NS	33,700	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.18	U			16	N	733	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.18	U			52	N	916	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.18	U			641	N	641	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.18	U			32	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.18	U			27,000	N	183,000	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.18	U			3	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.022	UJ			1	N	7	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.18	U			5,240	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.18	U			108	N	843	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.18	U			293	N	1,540	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.18	U			45	N	3,180	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.18	U			NS	NS	27,500	N	NMED		
Phenol	108-95-2	mg/kg	0.18	U			NS	NS	275,000	N	NMED		
Pyrene	129-00-0	mg/kg	0.18	U			NS	NS	25,300	N	NMED		

TABLE D1-AP22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U			NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U			428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U			NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U			293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U			1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			5,300	N	7,400	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.21	U			304	N	57	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.21	U			9	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.11	U			9	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.11	U			11	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.11	U			11	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.11	U			11	N	16	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.11	U			11	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg	0.00000000039	J	0.0000013	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000048	J	0.000016	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000088	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.000000026	J	0.0000026	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.000000095	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.00000017	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000098	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.00000016	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		UJ	0.000000098	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		UJ	0.00000021	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000014	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000019	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.00000013	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		UJ	0.0000003	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.0000002	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000027	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.00000013	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.000000031				0.000238	N	0.000808	N	NMED	1.31E-09	3.86E-05

TABLE D1-AP22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	12,000				NS	NS	1,290,000	N	NMED		9.30E-03
Antimony	7440-36-0	mg/kg	0.21				NS	NS	519	N	NMED		4.05E-04
Arsenic	7440-38-2	mg/kg	1				36	N	208	N	NMED	2.79E-07	4.81E-03
Barium	7440-39-3	mg/kg	200				NS	NS	255,000	N	NMED		7.84E-04
Beryllium	7440-41-7	mg/kg	0.44	J			313,000	N	2,580	N	NMED	1.41E-11	1.71E-04
Cadmium	7440-43-9	mg/kg	0.4				417,000	N	1,110	N	NMED	9.59E-12	3.60E-04
Calcium	7440-70-2	mg/kg	2,700				NS	NS	32,400,000	N	NMED		8.33E-05
Chromium (Total) (3)	7440-47-3	mg/kg	9.9				505	N	314,000	N	NMED	1.96E-07	3.15E-05
Cobalt	7440-48-4	mg/kg	3.8				83,400	N	388	N	NMED	4.56E-10	9.79E-03
Copper	7440-50-8	mg/kg	58				NS	NS	51,900	N	NMED		1.12E-03
Iron	7439-89-6	mg/kg	7,800				NS	NS	908,000	N	NMED		8.59E-03
Lead	7439-92-1	mg/kg	15				NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	5,400				NS	NS	5,680,000	N	NMED		9.51E-04
Manganese	7439-96-5	mg/kg	270				NS	NS	160,000	N	NMED		1.69E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.029	J			NS	NS	112	N	NMED		2.59E-04
Nickel	7440-02-0	mg/kg	6.6				2,890,000	N	25,700	N	NMED	2.28E-11	2.57E-04
Potassium	7440-09-7	mg/kg	900				NS	NS	76,200,000	N	NMED		1.18E-05
Selenium	7782-49-2	mg/kg	0.95				NS	NS	6,490	N	NMED		1.46E-04
Silver	7440-22-4	mg/kg	0.084	J			NS	NS	6,490	N	NMED		1.29E-05
Sodium	7440-23-5	mg/kg	54				NS	NS	37,300,000	N	NMED		1.45E-06
Thallium	7440-28-0	mg/kg	0.04	J			NS	NS	13	N	NMED		3.08E-03
Vanadium	7440-62-2	mg/kg	17				NS	NS	6,530	N	NMED		2.60E-03
Zinc	7440-66-6	mg/kg	35				NS	NS	38,900	N	NMED		9.00E-04

TABLE D1-AP22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.21	J			NS	NS	63	N	NMED		3.32E-03
Nitrate	14797-55-8	mg/kg	7.2	J			NS	NS	2,080,000	N	NMED		3.46E-06
Perchlorate	14797-73-0	mg/kg	0.002	U			NS	NS	908	N	NMED		
										Cumulative Risk/Hazard		**5E-07**	**0.05**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper tolerance limit

TABLE D1-AP22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0022	U			659	N	10,600	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0022	U			NS	NS	13,600	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0022	U			197	N	7,080	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0022	U			4,300	N	2	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0022	U			1,820	N	70,800	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0022	U			NS	NS	424	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0022	U			781	N	130	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0022	U			NS	NS	283	N	NMED[C]			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0054	U			8	N	6	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0022	U			8,540	N	79	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0022	U			NS	NS	492	N	NMED[C]			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0054	U			6	N	8	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0022	U			16	N	140	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0022	U			NS	NS	2,500	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0022	U			195	N	54	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0022	U			415	N	25	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0022	U			NS	NS	422	N	NMED[C]			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0022	U			45,900	N	24,800	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0022	U			NS	NS	7,080	N	NMED[C]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0022	U			45,900	N	24,800	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0022	U			415	N	25	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.0033	U			NS	NS	90,700	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0022	U			NS	NS	7,080	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.0022	U			NS	NS	599	N	NMED[C]			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0022	U			NS	NS	7,080	N	NMED[C]			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0022	U			NS	NS	20,400	N	NMED[C]			
Acetone	67-64-1	mg/kg	0.57	J			NS	NS	242,000	N	NMED		2.36E-06	
Benzene	71-43-2	mg/kg	0.0022	U			423	N	142	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.0022	U			NS	NS	538	N	NMED[C]			
Bromochloromethane	74-97-5	mg/kg	0.0022	U			NS	NS	296	N	NMED[C]			
Bromodichloromethane	75-27-4	mg/kg	0.0022	U			143	N	7,080	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0022	U			23,700	N	5,380	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0022	U			NS	NS	18	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.0022	U			NS	NS	1,620	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0022	U			252	N	202	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0022	U			NS	NS	412	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0022	U			NS	NS	16,600	N	NMED			
Chloroform	67-66-3	mg/kg	0.0022	U			134	N	391	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0054	U			956	N	235	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0022	U			NS	NS	708	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0022	U			781	N	130	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0022	U			340	N	5,380	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0022	U			NS	NS	54	N	NMED			

TABLE D1-AP22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Dichlorodifluoromethane	75-71-8	mg/kg	0.0022	U			NS	NS	161	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.0022	U			1,770	N	5,800	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0022	U			2,400	N	269	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0022	U			NS	NS	2,740	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0054	U			NS	NS	696	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0022	U			24,200	N	33,100	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.011	U			89,600	N	1,210	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0022	U			NS	NS	17,700	N	NMED[C]			
n-Propylbenzene	103-65-1	mg/kg	0.0022	U			NS	NS	6,730	N	NMED[C]			
Naphthalene	91-20-3	mg/kg	0.0022	U			633	N	159	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0027	U			NS	NS	736	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.0022	U			NS	NS	2,740	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.0022	U			NS	NS	35,400	N	NMED[C]			
Styrene	100-42-5	mg/kg	0.0022	U			NS	NS	10,200	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0022	U			NS	NS	35,400	N	NMED[C]			
Tetrachloroethene	127-18-4	mg/kg	0.0022	U			7,910	N	120	N	NMED			
Toluene	108-88-3	mg/kg	0.0046	J			NS	NS	14,000	N	NMED		3.29E-07	
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0022	U			NS	NS	206	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0022	U			781	N	130	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0022	U			5,370	N	7	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0022	U			NS	NS	1,130	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0022	U			161	N	162	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.18	U			8,540	N	79	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.18	U			NS	NS	2,500	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.18	U			45,900	N	24,800	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.18	U			45,900	N	24,800	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.18	U			NS	NS	26,900	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.18	U			17,000	N	269	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.18	U			NS	NS	807	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.18	U			NS	NS	5,380	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.18	U			NS	NS	538	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.18	U			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.18	U			165	N	81	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.18	U			NS	NS	28,300	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.18	U			NS	NS	1,770	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.18	U			NS	NS	1,000	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.18	U			NS	NS	13,500	N	NMED[C]			
2-Nitroaniline	88-74-4	mg/kg	0.18	U			NS	NS	2,690	N	NMED[C]			
2-Nitrophenol	88-75-5	mg/kg	0.18	U			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.18	U			410	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.18	U			135	N	1,080	N	NMED[SC]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.18	U			NS	NS	22	N	NMED			

TABLE D1-AP22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.18	U			NS	NS	NS	NS	NS			
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.18	U			NS	NS	26,900	N	NMED[C]			
4-Chloroaniline	106-47-8	mg/kg	0.18	U			14	N	135	N	NMED[C]			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.18	U			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.18	U			135	N	1,080	N	NMED[C]			
4-Nitrophenol	100-02-7	mg/kg	0.18	U			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.18	U			NS	NS	15,100	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.18	U			NS	NS	7,530	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.18	U			NS	NS	75,300	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.18	U			240	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			173	N	15	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.18	U			240	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.18	U			NS	NS	7,530	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.18	U			2,310	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.18	U			NS	NS	1,080,000	N	NMED[C]			
Benzyl Alcohol	100-51-6	mg/kg	0.18	U			NS	NS	26,900	N	NMED[C]			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.18	U			NS	NS	807	N	NMED[C]			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.18	U			2	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.18	U			3,540	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.18	U			13,400	N	5,380	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.18	U			1,420	N	53,800	N	NMED[C]			
Carbazole	86-74-8	mg/kg	0.18	U			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.18	U			23,100	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.18	U			NS	NS	26,900	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.18	U			NS	NS	2,690	N	NMED[C]			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			24	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.18	U			NS	NS	269	N	NMED[C]			
Diethylphthalate	84-66-2	mg/kg	0.18	U			NS	NS	215,000	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.18	U			NS	NS	269,000	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.18	U			NS	NS	10,000	N	NMED			
Fluorene	86-73-7	mg/kg	0.18	U			NS	NS	10,000	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.18	U			117	N	215	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.18	U			2,400	N	269	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.18	U			4,670	N	188	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.18	U			240	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.18	U			198,000	N	53,700	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.18	U			0.38	N	NA	N	NMED[C]			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.022	UJ			4	N	2	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.18	U			37,900	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.18	U			633	N	159	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.18	U			1,350	N	353	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.18	U			346	N	989	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.18	U			NS	NS	8,070	N	NMED			
Phenol	108-95-2	mg/kg	0.18	U			NS	NS	77,400	N	NMED			
Pyrene	129-00-0	mg/kg	0.18	U			NS	NS	7,530	N	NMED			

TABLE D1-AP22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	8,070	N	NMED[C]			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	27	N	NMED[C]			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U			NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U			2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U			NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U			1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U			11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			626	N	2,420	N	NMED[C]			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.21	U			2,440	N	17	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.21	U			55	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.11	U			58	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.11	U			85	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.11	U			85	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.11	U			85	N	5	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.11	U			85	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) 3)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg	0.00000000039	J	0.0000013	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000048	J	0.000016	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000088	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.000000026	J	0.0000026	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.000000095	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.00000017	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000098	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.00000016	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		UJ	0.000000098	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		UJ	0.00000021	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000014	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000019	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.00000013	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		UJ	0.0000003	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.0000002	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000027	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.00000013	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.000000031				0.00172	N	0.000226	N	NMED	1.81E-10	1.38E-04	

TABLE D1-AP22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	12,000				NS	NS	41,400	N	NMED		2.90E-01	Nervous
Antimony	7440-36-0	mg/kg	0.21				NS	NS	142	N	NMED		1.48E-03	
Arsenic	7440-38-2	mg/kg	1				216	N	41	N	NMED	4.63E-08	2.43E-02	
Barium	7440-39-3	mg/kg	200				NS	NS	4,390	N	NMED		4.56E-02	
Beryllium	7440-41-7	mg/kg	0.44	J			2,710	N	148	N	NMED	1.62E-09	2.97E-03	
Cadmium	7440-43-9	mg/kg	0.4				3,610	N	72	N	NMED	1.11E-09	5.55E-03	
Calcium	7440-70-2	mg/kg	2,700				NS	NS	8,850,000	N	NMED		3.05E-04	
Chromium (Total) (4)	7440-47-3	mg/kg	9.9				468	N	134	N	NMED	2.12E-07	7.39E-02	
Cobalt	7440-48-4	mg/kg	3.8				722	N	37	N	NMED	5.26E-08	1.04E-01	Endocrine
Copper	7440-50-8	mg/kg	58				NS	NS	14,200	N	NMED		4.08E-03	
Iron	7439-89-6	mg/kg	7,800				NS	NS	248,000	N	NMED		3.15E-02	
Lead	7439-92-1	mg/kg	15				NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	5,400				NS	NS	1,550,000	N	NMED		3.48E-03	
Manganese	7439-96-5	mg/kg	270				NS	NS	464	N	NMED		5.82E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.029	J			NS	NS	21	N	NMED		1.40E-03	
Nickel	7440-02-0	mg/kg	6.6				20,500	N	753	N	NMED	3.22E-09	8.76E-03	
Potassium	7440-09-7	mg/kg	900				NS	NS	20,800,000	N	NMED		4.33E-05	
Selenium	7782-49-2	mg/kg	0.95				NS	NS	1,750	N	NMED		5.43E-04	
Silver	7440-22-4	mg/kg	0.084	J			NS	NS	1,770	N	NMED		4.75E-05	
Sodium	7440-23-5	mg/kg	54				NS	NS	10,200,000	N	NMED		5.29E-06	
Thallium	7440-28-0	mg/kg	0.04	J			NS	NS	4	N	NMED		1.13E-02	
Vanadium	7440-62-2	mg/kg	17				NS	NS	614	N	NMED		2.77E-02	
Zinc	7440-66-6	mg/kg	35				NS	NS	106,000	N	NMED		3.30E-04	

TABLE D1-AP22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.21	J			NS	NS	12	N	NMED		1.74E-02	
Nitrate	14797-55-8	mg/kg	7.2	J			NS	NS	566,000	N	NMED		1.27E-05	
Perchlorate	14797-73-0	mg/kg	0.002	U			NS	NS	248	N	NMED			
										Cumulative Risk/Hazard		**3E-07**	**1.2**	
										Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	0.87
Endocrine	0.10
All Others	0.26

Notes:

[s] = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update).

2) NMED[C] = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

3) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

4) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper tolerance limit

TABLE D1-AP25-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AP25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.002	UJ			28.1	N	2,350	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.002	UJ			NS	NS	14,400	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.002	U			7.98	N	1,560	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.002	UJ			18.8	N	2.61	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.002	UJ			78.6	N	15,600	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.002	UJ			NS	NS	440	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.002	UJ			29.3	N	141	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.002	U			NS	NS	63	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.005	U			0.051	N	7.09	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.002	U			240	N	82.9	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.002	U			NS	NS	300	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.005	U			0.0858	N	5.88	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.002	UJ			0.672	N	135	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.002	U			NS	NS	2,150	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.002	UJ			8.32	N	55.6	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.002	UJ			17.8	N	29	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.002	U			NS	NS	270	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.002	U			1,290	N	5,480	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.002	UJ			NS	NS	1,600	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.002	U			1,290	N	5,480	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.002	UJ			17.8	N	29	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.003	UJ			NS	NS	37,400	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.002	U			NS	NS	1,560	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.002	UJ			NS	NS	200	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.002	U			NS	NS	1,600	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.002	UJ			NS	NS	5,810	N	RSL		
Acetone	67-64-1	mg/kg	0.1	J			NS	NS	66,300	N	NMED		1.51E-06
Benzene	71-43-2	mg/kg	0.002	UJ			17.8	N	114	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.002	U			NS	NS	290	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.002	UJ			NS	NS	150	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.002	UJ			6.19	N	1,560	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.002	UJ			674	N	1,230	N	NMED		
Bromomethane	74-83-9	mg/kg	0.002	UJ			NS	NS	17.7	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.002	UJ			NS	NS	1,550	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.002	UJ			10.7	N	144	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.002	UJ			NS	NS	378	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.002	UJ			NS	NS	19,000	N	NMED		
Chloroform	67-66-3	mg/kg	0.002	UJ			5.9	N	306	N	NMED		
Chloromethane	74-87-3	mg/kg	0.005	UJ			41.1	N	268	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.002	UJ			NS	NS	156	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.002	UJ			29.3	N	141	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.002	UJ			13.9	N	1,230	N	NMED		
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.002	UJ			NS	NS	57.9	N	NMED		

TABLE D1-AP25-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AP25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dichlorodifluoromethane	75-71-8	mg/kg	0.002	UJ			NS	NS	182	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.002	UJ			75.1	N	3,930	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.002	U			68.3	N	61.6	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.002	U			NS	NS	2,360	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.005	UJ			NS	NS	764	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.002	UJ			975	N	37,800	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.0099	UJ			766	N	409	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.002	U			NS	NS	3,900	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.002	U			NS	NS	3,800	N	RSL		
Naphthalene	91-20-3	mg/kg	0.002	U			22.6	N	162	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0025	UJ			NS	NS	805	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.002	U			NS	NS	2,360	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.002	U			NS	NS	7,800	N	RSL		
Styrene	100-42-5	mg/kg	0.002	UJ			NS	NS	7,260	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.002	U			NS	NS	7,800	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.002	UJ			337	N	111	N	NMED		
Toluene	108-88-3	mg/kg	0.002	UJ			NS	NS	5,230	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.002	UJ			NS	NS	210	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.002	UJ			29.3	N	141	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.002	UJ			15.5	N	6.77	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.002	UJ			NS	NS	1,230	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.002	UJ			0.742	N	113	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	UJ			240	N	82.9	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	UJ			NS	NS	2,150	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	UJ			1,290	N	5,480	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	UJ			1,290	N	5,480	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	UJ			NS	NS	6,160	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	UJ			484	N	61.6	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	UJ			NS	NS	185	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	UJ			NS	NS	1,230	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	UJ			NS	NS	123	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	UJ			17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	UJ			3.56	N	18.5	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	UJ			NS	NS	6,260	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.17	UJ			NS	NS	391	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.17	UJ			NS	NS	232	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	UJ			NS	NS	3,200	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.17	UJ			NS	NS	630	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	UJ			11.8	N	NS	NS	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.17	UJ			270	N	250	N	RSL[S]		
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	UJ			NS	NS	4.93	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	UJ			NS	NS	6,300	N	RSL		

TABLE D1-AP25-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AP25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4-Chloroaniline	106-47-8	mg/kg	0.17	UJ			27	N	32	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.17	UJ			270	N	250	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.17	UJ			NS	NS	3,480	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.17	UJ			NS	NS	1,740	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.17	UJ			NS	NS	17,400	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.17	UJ			1.53	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.13	UJ			1.12	N	17.4	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	UJ			1.53	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	UJ			NS	NS	1,740	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	UJ			15.3	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.17	UJ			NS	NS	250,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.17	UJ			NS	NS	6,300	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	UJ			NS	NS	190	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	UJ			3.11	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	UJ			99.3	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	UJ			380	N	1,230	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.17	UJ			2,900	N	13,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.17	UJ			153	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.17	UJ			NS	NS	6,160	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.17	UJ			NS	NS	630	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	UJ			0.153	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.17	UJ			NS	NS	78	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.17	UJ			NS	NS	49,300	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.17	UJ			NS	NS	61,600	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.17	UJ			NS	NS	2,320	N	NMED		
Fluorene	86-73-7	mg/kg	0.17	UJ			NS	NS	2,320	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.17	UJ			3.33	N	49.3	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	UJ			68.3	N	61.6	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.17	UJ			133	N	43.1	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	UJ			1.53	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.17	UJ			5,610	N	12,300	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	UJ			0.78	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.02	UJ			0.0234	N	0.493	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	UJ			1,090	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.17	UJ			22.6	N	162	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.17	UJ			60.4	N	131	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.17	UJ			9.85	N	234	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.17	UJ			NS	NS	1,740	N	NMED		
Phenol	108-95-2	mg/kg	0.17	UJ			NS	NS	18,500	N	NMED		
Pyrene	129-00-0	mg/kg	0.17	UJ			NS	NS	1,740	N	NMED		

TABLE D1-AP25-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AP25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			1,300	N	570	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.019	U			69.6	N	3.98	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.019	U			1.81	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.0097	U			1.86	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.0097	U			2.43	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.0097	U			2.43	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.0097	U			2.43	N	1.14	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.0097	U			2.43	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000013	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000014	J	0.0000046	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000021	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.0000000076	J	0.00000076	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.000000054	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg	0.0000000097	J	0.000000097	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000005	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000075	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000045	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.000000098	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg	0.000000016	J	0.00000016	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000011	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.00000008	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.000000082	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000011	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000025	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000052	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.000000035				0.000049	N	0.0000506	N	NMED	7.08E-09	6.85E-04

TABLE D1-AP25-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AP25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	14,000				NS	NS	78,000	N	NMED		1.79E-01
Antimony	7440-36-0	mg/kg	0.13	J			NS	NS	31.3	N	NMED		4.15E-03
Arsenic	7440-38-2	mg/kg	1				7.07	N	13	N	NMED	1.41E-06	7.69E-02
Barium	7440-39-3	mg/kg	110				NS	NS	15,600	N	NMED		7.05E-03
Beryllium	7440-41-7	mg/kg	0.29	J			64,400	N	156	N	NMED	4.50E-11	1.86E-03
Cadmium	7440-43-9	mg/kg	0.34				85,900	N	70.5	N	NMED	3.96E-11	4.82E-03
Calcium	7440-70-2	mg/kg	2,000				NS	NS	13,000,000	N	NMED		1.54E-04
Chromium (Total) (3)	7440-47-3	mg/kg	11				96.6	N	45,200	N	NMED	1.14E-06	2.43E-04
Cobalt	7440-48-4	mg/kg	4.2				17,200	N	23.4	N	NMED	2.44E-09	1.79E-01
Copper	7440-50-8	mg/kg	51				NS	NS	3,130	N	NMED		1.63E-02
Iron	7439-89-6	mg/kg	9,300				NS	NS	54,800	N	NMED		1.70E-01
Lead	7439-92-1	mg/kg	13				NS	NS	200	N	RSL		
Magnesium	7439-95-4	mg/kg	6,500				NS	NS	15,600,000	N	NMED		4.17E-04
Manganese	7439-96-5	mg/kg	300				NS	NS	10,500	N	NMED		2.86E-02
Mercury (Elemental)	7439-97-6	mg/kg	0.025	J			NS	NS	23.8	N	NMED		1.05E-03
Nickel	7440-02-0	mg/kg	7				595,000	N	1,560	N	NMED	1.18E-10	4.49E-03
Potassium	7440-09-7	mg/kg	660				NS	NS	15,600,000	N	NMED		4.23E-05
Selenium	7782-49-2	mg/kg	0.8				NS	NS	391	N	NMED		2.05E-03
Silver	7440-22-4	mg/kg	0.079	J			NS	NS	391	N	NMED		2.02E-04
Sodium	7440-23-5	mg/kg	58				NS	NS	7,820,000	N	NMED		7.42E-06
Thallium	7440-28-0	mg/kg	0.036	J			NS	NS	0.782	N	NMED		4.60E-02
Vanadium	7440-62-2	mg/kg	18				NS	NS	394	N	NMED		4.57E-02
Zinc	7440-66-6	mg/kg	31				NS	NS	23,500	N	NMED		1.32E-03

TABLE D1-AP25-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AP25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.31	U			NS	NS	11.2	N	NMED		
Nitrate	14797-55-8	mg/kg	6.2	J			NS	NS	125,000	N	NMED		4.96E-05
Perchlorate	14797-73-0	mg/kg	0.0018	UJ			NS	NS	54.8	N	NMED		
										Cumulative Risk/Hazard		**3E-06**	**0.8**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of Quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper Tolerance Limit

TABLE D1-AP25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.002	UJ			137	N	39,400	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.002	UJ			NS	NS	72,500	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.002	U			39	N	26,000	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.002	UJ			92	N	12	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.002	UJ			383	N	260,000	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.002	UJ			NS	NS	2,260	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.002	UJ			146	N	695	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.002	U			NS	NS	930	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.005	U			1	N	34	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.002	U			1,250	N	423	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.002	U			NS	NS	1,800	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.005	U			1	N	41	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.002	UJ			3	N	738	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.002	U			NS	NS	13,000	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.002	UJ			41	N	286	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.002	UJ			87	N	137	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.002	U			NS	NS	1,500	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.002	U			6,730	N	90,800	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.002	UJ			NS	NS	23,000	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.002	U			6,730	N	90,800	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.002	UJ			87	N	137	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.003	UJ			NS	NS	411,000	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.002	U			NS	NS	26,000	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.002	UJ			NS	NS	1,300	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.002	U			NS	NS	23,000	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.002	UJ			NS	NS	81,600	N	RSL		
Acetone	67-64-1	mg/kg	0.1	J			NS	NS	960,000	N	NMED		1.04E-07
Benzene	71-43-2	mg/kg	0.002	UJ			87	N	729	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.002	U			NS	NS	1,800	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.002	UJ			NS	NS	630	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.002	UJ			30	N	26,000	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.002	UJ			1,760	N	18,300	N	NMED		
Bromomethane	74-83-9	mg/kg	0.002	UJ			NS	NS	95	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.002	UJ			NS	NS	8,540	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.002	UJ			53	N	1,020	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.002	UJ			NS	NS	2,160	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.002	UJ			NS	NS	89,500	N	NMED		
Chloroform	67-66-3	mg/kg	0.002	UJ			29	N	2,000	N	NMED		
Chloromethane	74-87-3	mg/kg	0.005	UJ			201	N	1,260	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.002	UJ			NS	NS	2,600	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.002	UJ			146	N	695	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.002	UJ			67	N	18,300	N	NMED		

TABLE D1-AP25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.002	UJ			NS	NS	288	N	NMED		
Dichlorodifluoromethane	75-71-8	mg/kg	0.002	UJ			NS	NS	865	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.002	UJ			29,000	N	368	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.002	U			52	N	916	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.002	U			NS	NS	14,200	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.005	UJ			NS	NS	3,730	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.002	UJ			4,820	N	178,000	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.0099	UJ			14,400	N	5,130	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.002	U			NS	NS	58,000	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.002	U			NS	NS	24,000	N	RSL		
Naphthalene	91-20-3	mg/kg	0.002	U			108	N	843	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0025	UJ			NS	NS	3,940	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.002	U			NS	NS	14,200	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.002	U			NS	NS	120,000	N	RSL		
Styrene	100-42-5	mg/kg	0.002	UJ			NS	NS	51,300	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.002	U			NS	NS	120,000	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.002	UJ			1,650	N	629	N	NMED		
Toluene	108-88-3	mg/kg	0.002	UJ			NS	NS	61,300	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.002	UJ			NS	NS	1,100	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.002	UJ			146	N	695	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.002	UJ			112	N	37	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.002	UJ			NS	NS	6,030	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.002	UJ			28	N	46	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	UJ			1,250	N	423	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	UJ			NS	NS	13,000	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	UJ			6,730	N	90,800	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	UJ			6,730	N	90,800	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	UJ			NS	NS	91,600	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	UJ			2,330	N	916	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	UJ			NS	NS	2,750	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	UJ			NS	NS	18,300	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	UJ			NS	NS	1,830	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	UJ			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	UJ			17	N	276	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	UJ			NS	NS	104,000	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.17	UJ			NS	NS	6,490	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.17	UJ			NS	NS	3,370	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	UJ			NS	NS	41,000	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.17	UJ			NS	NS	8,000	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	UJ			NS	NS	410	N	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.17	UJ			1,100	N	3,300	N	RSL[S]		

TABLE D1-AP25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	UJ			NS	NS	73	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	UJ			NS	NS	82,000	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.17	UJ			110	N	410	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.17	UJ			1,100	N	3,300	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.17	UJ			NS	NS	50,500	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.17	UJ			NS	NS	25,300	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.17	UJ			NS	NS	253,000	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.17	UJ			32	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.13	UJ			24	N	251	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	UJ			32	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	UJ			NS	NS	25,300	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	UJ			323	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.17	UJ			NS	NS	3,300,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.17	UJ			NS	NS	82,000	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	UJ			NS	NS	2,500	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	UJ			16	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	UJ			519	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	UJ			1,830	N	18,300	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.17	UJ			12,000	N	160,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.17	UJ			3,230	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.17	UJ			NS	NS	91,600	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.17	UJ			NS	NS	8,200	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	UJ			3	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.17	UJ			NS	NS	1,200	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.17	UJ			NS	NS	733,000	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.17	UJ			NS	NS	916,000	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.17	UJ			NS	NS	33,700	N	NMED		
Fluorene	86-73-7	mg/kg	0.17	UJ			NS	NS	33,700	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.17	UJ			16	N	733	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	UJ			52	N	916	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.17	UJ			641	N	641	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	UJ			32	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.17	UJ			27,000	N	183,000	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	UJ			3	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.02	UJ			1	N	7	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	UJ			5,240	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.17	UJ			108	N	843	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.17	UJ			293	N	1,540	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.17	UJ			45	N	3,180	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.17	UJ			NS	NS	27,500	N	NMED		
Phenol	108-95-2	mg/kg	0.17	UJ			NS	NS	275,000	N	NMED		
Pyrene	129-00-0	mg/kg	0.17	UJ			NS	NS	25,300	N	NMED		

TABLE D1-AP25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			5,300	N	7,400	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.019	U			304	N	57	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.019	U			9	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.0097	U			9	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.0097	U			11	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.0097	U			11	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.0097	U			11	N	16	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.0097	U			11	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000013	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000014	J	0.0000046	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000021	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.0000000076	J	0.00000076	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.000000054	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg	0.0000000097	J	0.000000097	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000005	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000075	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000045	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.000000098	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg	0.000000016	J	0.00000016	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000011	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.00000008	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.000000082	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000011	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000025	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000052	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.000000035				0.000238	N	0.000808	N	NMED	1.46E-09	4.29E-05

TABLE D1-AP25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	14,000				NS	NS	1,290,000	N	NMED		1.09E-02
Antimony	7440-36-0	mg/kg	0.13	J			NS	NS	519	N	NMED		2.50E-04
Arsenic	7440-38-2	mg/kg	1				36	N	208	N	NMED	2.79E-07	4.81E-03
Barium	7440-39-3	mg/kg	110				NS	NS	255,000	N	NMED		4.31E-04
Beryllium	7440-41-7	mg/kg	0.29	J			313,000	N	2,580	N	NMED	9.27E-12	1.12E-04
Cadmium	7440-43-9	mg/kg	0.34				417,000	N	1,110	N	NMED	8.15E-12	3.06E-04
Calcium	7440-70-2	mg/kg	2,000				NS	NS	32,400,000	N	NMED		6.17E-05
Chromium (Total) (3)	7440-47-3	mg/kg	11				505	N	314,000	N	NMED	2.18E-07	3.50E-05
Cobalt	7440-48-4	mg/kg	4.2				83,400	N	388	N	NMED	5.04E-10	1.08E-02
Copper	7440-50-8	mg/kg	51				NS	NS	51,900	N	NMED		9.83E-04
Iron	7439-89-6	mg/kg	9,300				NS	NS	908,000	N	NMED		1.02E-02
Lead	7439-92-1	mg/kg	13				NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	6,500				NS	NS	5,680,000	N	NMED		1.14E-03
Manganese	7439-96-5	mg/kg	300				NS	NS	160,000	N	NMED		1.88E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.025	J			NS	NS	112	N	NMED		2.23E-04
Nickel	7440-02-0	mg/kg	7				2,890,000	N	25,700	N	NMED	2.42E-11	2.72E-04
Potassium	7440-09-7	mg/kg	660				NS	NS	76,200,000	N	NMED		8.66E-06
Selenium	7782-49-2	mg/kg	0.8				NS	NS	6,490	N	NMED		1.23E-04
Silver	7440-22-4	mg/kg	0.079	J			NS	NS	6,490	N	NMED		1.22E-05
Sodium	7440-23-5	mg/kg	58				NS	NS	37,300,000	N	NMED		1.55E-06
Thallium	7440-28-0	mg/kg	0.036	J			NS	NS	13	N	NMED		2.77E-03
Vanadium	7440-62-2	mg/kg	18				NS	NS	6,530	N	NMED		2.76E-03
Zinc	7440-66-6	mg/kg	31				NS	NS	38,900	N	NMED		7.97E-04

TABLE D1-AP25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.31	U			NS	NS	63	N	NMED		
Nitrate	14797-55-8	mg/kg	6.2	J			NS	NS	2,080,000	N	NMED		2.98E-06
Perchlorate	14797-73-0	mg/kg	0.0018	UJ			NS	NS	908	N	NMED		
										Cumulative Risk/Hazard		**5E-07**	**0.05**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper tolerance limit

TABLE D1-AP25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.002	UJ			659	N	10,600	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.002	UJ			NS	NS	13,600	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.002	U			197	N	7,080	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.002	UJ			4,300	N	2	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.002	UJ			1,820	N	70,800	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.002	UJ			NS	NS	424	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.002	UJ			781	N	130	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.002	U			NS	NS	283	N	NMED[C]			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.005	U			8	N	6	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.002	U			8,540	N	79	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.002	U			NS	NS	492	N	NMED[C]			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.005	U			6	N	8	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.002	UJ			16	N	140	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.002	U			NS	NS	2,500	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.002	UJ			195	N	54	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.002	UJ			415	N	25	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.002	U			NS	NS	422	N	NMED[C]			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.002	U			45,900	N	24,800	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.002	UJ			NS	NS	7,080	N	NMED[C]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.002	U			45,900	N	24,800	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.002	UJ			415	N	25	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.003	UJ			NS	NS	90,700	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.002	U			NS	NS	7,080	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.002	UJ			NS	NS	599	N	NMED[C]			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.002	U			NS	NS	7,080	N	NMED[C]			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.002	UJ			NS	NS	20,400	N	NMED[C]			
Acetone	67-64-1	mg/kg	0.1	J			NS	NS	242,000	N	NMED		4.13E-07	
Benzene	71-43-2	mg/kg	0.002	UJ			423	N	142	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.002	U			NS	NS	538	N	NMED[C]			
Bromochloromethane	74-97-5	mg/kg	0.002	UJ			NS	NS	296	N	NMED[C]			
Bromodichloromethane	75-27-4	mg/kg	0.002	UJ			143	N	7,080	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.002	UJ			23,700	N	5,380	N	NMED			
Bromomethane	74-83-9	mg/kg	0.002	UJ			NS	NS	18	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.002	UJ			NS	NS	1,620	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.002	UJ			252	N	202	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.002	UJ			NS	NS	412	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.002	UJ			NS	NS	16,600	N	NMED			
Chloroform	67-66-3	mg/kg	0.002	UJ			134	N	391	N	NMED			
Chloromethane	74-87-3	mg/kg	0.005	UJ			956	N	235	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.002	UJ			NS	NS	708	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.002	UJ			781	N	130	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.002	UJ			340	N	5,380	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.002	UJ			NS	NS	54	N	NMED			

TABLE D1-AP25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Dichlorodifluoromethane	75-71-8	mg/kg	0.002	UJ			NS	NS	161	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.002	UJ			1,770	N	5,800	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.002	U			2,400	N	269	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.002	U			NS	NS	2,740	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.005	UJ			NS	NS	696	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.002	UJ			24,200	N	33,100	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.0099	UJ			89,600	N	1,210	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.002	U			NS	NS	17,700	N	NMED[C]			
n-Propylbenzene	103-65-1	mg/kg	0.002	U			NS	NS	6,730	N	NMED[C]			
Naphthalene	91-20-3	mg/kg	0.002	U			633	N	159	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0025	UJ			NS	NS	736	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.002	U			NS	NS	2,740	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.002	U			NS	NS	35,400	N	NMED[C]			
Styrene	100-42-5	mg/kg	0.002	UJ			NS	NS	10,200	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.002	U			NS	NS	35,400	N	NMED[C]			
Tetrachloroethene	127-18-4	mg/kg	0.002	UJ			7,910	N	120	N	NMED			
Toluene	108-88-3	mg/kg	0.002	UJ			NS	NS	14,000	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.002	UJ			NS	NS	206	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.002	UJ			781	N	130	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.002	UJ			5,370	N	7	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.002	UJ			NS	NS	1,130	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.002	UJ			161	N	162	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	UJ			8,540	N	79	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	UJ			NS	NS	2,500	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	UJ			45,900	N	24,800	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	UJ			45,900	N	24,800	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	UJ			NS	NS	26,900	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	UJ			17,000	N	269	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	UJ			NS	NS	807	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	UJ			NS	NS	5,380	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	UJ			NS	NS	538	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	UJ			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	UJ			165	N	81	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	UJ			NS	NS	28,300	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.17	UJ			NS	NS	1,770	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.17	UJ			NS	NS	1,000	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	UJ			NS	NS	13,500	N	NMED[C]			
2-Nitroaniline	88-74-4	mg/kg	0.17	UJ			NS	NS	2,690	N	NMED[C]			
2-Nitrophenol	88-75-5	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	UJ			410	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.17	UJ			135	N	1,080	N	NMED[SC]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	UJ			NS	NS	22	N	NMED			

TABLE D1-AP25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	UJ			NS	NS	26,900	N	NMED[C]			
4-Chloroaniline	106-47-8	mg/kg	0.17	UJ			14	N	135	N	NMED[C]			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.17	UJ			135	N	1,080	N	NMED[C]			
4-Nitrophenol	100-02-7	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.17	UJ			NS	NS	15,100	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.17	UJ			NS	NS	7,530	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.17	UJ			NS	NS	75,300	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.17	UJ			240	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.13	UJ			173	N	15	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	UJ			240	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	UJ			NS	NS	7,530	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	UJ			2,310	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.17	UJ			NS	NS	1,080,000	N	NMED[C]			
Benzyl Alcohol	100-51-6	mg/kg	0.17	UJ			NS	NS	26,900	N	NMED[C]			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	UJ			NS	NS	807	N	NMED[C]			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	UJ			2	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	UJ			3,540	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	UJ			13,400	N	5,380	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.17	UJ			1,420	N	53,800	N	NMED[C]			
Carbazole	86-74-8	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.17	UJ			23,100	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.17	UJ			NS	NS	26,900	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.17	UJ			NS	NS	2,690	N	NMED[C]			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	UJ			24	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.17	UJ			NS	NS	269	N	NMED[C]			
Diethylphthalate	84-66-2	mg/kg	0.17	UJ			NS	NS	215,000	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.17	UJ			NS	NS	269,000	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.17	UJ			NS	NS	10,000	N	NMED			
Fluorene	86-73-7	mg/kg	0.17	UJ			NS	NS	10,000	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.17	UJ			117	N	215	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	UJ			2,400	N	269	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.17	UJ			4,670	N	188	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	UJ			240	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.17	UJ			198,000	N	53,700	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	UJ			0.38	N	NA	N	NMED[C]			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.02	UJ			4	N	2	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	UJ			37,900	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.17	UJ			633	N	159	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.17	UJ			1,350	N	353	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.17	UJ			346	N	989	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.17	UJ			NS	NS	8,070	N	NMED			
Phenol	108-95-2	mg/kg	0.17	UJ			NS	NS	77,400	N	NMED			
Pyrene	129-00-0	mg/kg	0.17	UJ			NS	NS	7,530	N	NMED			

TABLE D1-AP25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	8,070	N	NMED[C]			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	27	N	NMED[C]			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			626	N	2,420	N	NMED[C]			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.019	U			2,440	N	17	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.019	U			55	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.0097	U			58	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.0097	U			85	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.0097	U			85	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.0097	U			85	N	5	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.0097	U			85	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (3)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000013	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000014	J	0.0000046	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000021	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.0000000076	J	0.00000076	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.000000054	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg	0.0000000097	J	0.000000097	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000005	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000075	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000045	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.000000098	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg	0.000000016	J	0.00000016	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000011	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.00000008	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.000000082	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000011	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000025	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000052	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.000000035				0.00172	N	0.000226	N	NMED	2.02E-10	1.53E-04	

TABLE D1-AP25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	14,000				NS	NS	41,400	N	NMED		3.38E-01	Nervous
Antimony	7440-36-0	mg/kg	0.13	J			NS	NS	142	N	NMED		9.15E-04	
Arsenic	7440-38-2	mg/kg	1				216	N	41	N	NMED		2.43E-02	
Barium	7440-39-3	mg/kg	110				NS	NS	4,390	N	NMED		2.51E-02	
Beryllium	7440-41-7	mg/kg	0.29	J			2,710	N	148	N	NMED		1.96E-03	
Cadmium	7440-43-9	mg/kg	0.34				3,610	N	72	N	NMED		4.72E-03	
Calcium	7440-70-2	mg/kg	2,000				NS	NS	8,850,000	N	NMED		2.26E-04	
Chromium (Total) (4)	7440-47-3	mg/kg	11				468	N	134	N	NMED		8.21E-02	
Cobalt	7440-48-4	mg/kg	4.2				722	N	37	N	NMED		1.14E-01	Endocrine
Copper	7440-50-8	mg/kg	51				NS	NS	14,200	N	NMED		3.59E-03	
Iron	7439-89-6	mg/kg	9,300				NS	NS	248,000	N	NMED		3.75E-02	
Lead	7439-92-1	mg/kg	13				NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	6,500				NS	NS	1,550,000	N	NMED		4.19E-03	
Manganese	7439-96-5	mg/kg	300				NS	NS	464	N	NMED		6.47E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.025	J			NS	NS	21	N	NMED		1.21E-03	
Nickel	7440-02-0	mg/kg	7				20,500	N	753	N	NMED		9.30E-03	
Potassium	7440-09-7	mg/kg	660				NS	NS	20,800,000	N	NMED		3.17E-05	
Selenium	7782-49-2	mg/kg	0.8				NS	NS	1,750	N	NMED		4.57E-04	
Silver	7440-22-4	mg/kg	0.079	J			NS	NS	1,770	N	NMED		4.46E-05	
Sodium	7440-23-5	mg/kg	58				NS	NS	10,200,000	N	NMED		5.69E-06	
Thallium	7440-28-0	mg/kg	0.036	J			NS	NS	4	N	NMED		1.02E-02	
Vanadium	7440-62-2	mg/kg	18				NS	NS	614	N	NMED		2.93E-02	
Zinc	7440-66-6	mg/kg	31				NS	NS	106,000	N	NMED		2.92E-04	

TABLE D1-AP25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AP25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.31	U			NS	NS	12	N	NMED			
Nitrate	14797-55-8	mg/kg	6.2	J			NS	NS	566,000	N	NMED		1.10E-05	
Perchlorate	14797-73-0	mg/kg	0.0018	UJ			NS	NS	248	N	NMED			
										Cumulative Risk/Hazard		**2E-10**	**1.3**	
										Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	1.0
Endocrine	0.11
All Others	0.24

Notes:

[s] = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update).

2) NMED[C] = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

3) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

4) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper tolerance limit

TABLE D1-AQ23-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AQ23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0023	U			28.1	N	2,350	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0023	U			NS	NS	14,400	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0023	U			7.98	N	1,560	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0023	U			18.8	N	2.61	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0023	U			78.6	N	15,600	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0023	U			NS	NS	440	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0023	U			29.3	N	141	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0023	U			NS	NS	63	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0058	U			0.051	N	7.09	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0023	U			240	N	82.9	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0023	U			NS	NS	300	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0058	U			0.0858	N	5.88	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0023	U			0.672	N	135	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0023	U			NS	NS	2,150	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0023	U			8.32	N	55.6	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0023	U			17.8	N	29	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0023	U			NS	NS	270	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0023	U			1,290	N	5,480	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0023	U			NS	NS	1,600	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0023	U			1,290	N	5,480	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0023	U			17.8	N	29	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0035	U			NS	NS	37,400	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0023	U			NS	NS	1,560	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0023	U			NS	NS	200	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0023	U			NS	NS	1,600	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0023	U			NS	NS	5,810	N	RSL		
Acetone	67-64-1	mg/kg	0.87	J			NS	NS	66,300	N	NMED		1.31E-05
Benzene	71-43-2	mg/kg	0.0039	J			17.8	N	114	N	NMED	2.19E-09	3.42E-05
Bromobenzene	108-86-1	mg/kg	0.0023	U			NS	NS	290	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0023	U			NS	NS	150	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0023	U			6.19	N	1,560	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0023	U			674	N	1,230	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0023	U			NS	NS	17.7	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0023	U			NS	NS	1,550	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0023	U			10.7	N	144	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0023	U			NS	NS	378	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0023	U			NS	NS	19,000	N	NMED		
Chloroform	67-66-3	mg/kg	0.0023	U			5.9	N	306	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0058	U			41.1	N	268	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0023	U			NS	NS	156	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0023	U			29.3	N	141	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0023	U			13.9	N	1,230	N	NMED		
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0023	U			NS	NS	57.9	N	NMED		

TABLE D1-AQ23-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AQ23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dichlorodifluoromethane	75-71-8	mg/kg	0.0023	U			NS	NS	182	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0023	U			75.1	N	3,930	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0023	U			68.3	N	61.6	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0023	U			NS	NS	2,360	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0058	U			NS	NS	764	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0023	U			975	N	37,800	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.012	U			766	N	409	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0023	U			NS	NS	3,900	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0023	U			NS	NS	3,800	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0023	U			22.6	N	162	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0029	U			NS	NS	805	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0023	U			NS	NS	2,360	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0023	U			NS	NS	7,800	N	RSL		
Styrene	100-42-5	mg/kg	0.0023	U			NS	NS	7,260	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0023	U			NS	NS	7,800	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0023	U			337	N	111	N	NMED		
Toluene	108-88-3	mg/kg	0.0048	J			NS	NS	5,230	N	NMED		9.18E-07
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0023	U			NS	NS	210	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0023	U			29.3	N	141	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0023	U			15.5	N	6.77	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0023	U			NS	NS	1,230	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0023	U			0.742	N	113	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.18	U			240	N	82.9	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.18	U			NS	NS	2,150	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.18	U			1,290	N	5,480	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.18	U			1,290	N	5,480	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.18	U			NS	NS	6,160	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.18	U			484	N	61.6	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.18	U			NS	NS	185	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.18	U			NS	NS	1,230	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.18	U			NS	NS	123	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.18	U			17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.18	U			3.56	N	18.5	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.18	U			NS	NS	6,260	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.18	U			NS	NS	391	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.18	U			NS	NS	232	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.18	U			NS	NS	3,200	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.18	U			NS	NS	630	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.18	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.18	U			11.8	N	NS	NS	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.18	U			270	N	250	N	RSL[S]		
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.18	U			NS	NS	4.93	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.18	U			NS	NS	NS	NS	NS		

TABLE D1-AQ23-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AQ23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.18	U			NS	NS	6,300	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.18	U			27	N	32	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.18	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.18	U			270	N	250	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.18	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.18	U			NS	NS	3,480	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.18	U			NS	NS	1,740	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.18	U			NS	NS	17,400	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.18	U			1.53	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			1.12	N	17.4	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.18	U			1.53	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.18	U			NS	NS	1,740	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.18	U			15.3	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.18	U			NS	NS	250,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.18	U			NS	NS	6,300	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.18	U			NS	NS	190	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.18	U			3.11	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.18	U			99.3	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.18	U			380	N	1,230	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.18	U			2,900	N	13,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.18	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.18	U			153	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.18	U			NS	NS	6,160	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.18	U			NS	NS	630	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			0.153	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.18	U			NS	NS	78	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.18	U			NS	NS	49,300	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.18	U			NS	NS	61,600	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.18	U			NS	NS	2,320	N	NMED		
Fluorene	86-73-7	mg/kg	0.18	U			NS	NS	2,320	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.18	U			3.33	N	49.3	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.18	U			68.3	N	61.6	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.18	U			133	N	43.1	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.18	U			1.53	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.18	U			5,610	N	12,300	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.18	U			0.78	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.022	UJ			0.0234	N	0.493	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.18	U			1,090	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.18	U			22.6	N	162	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.18	U			60.4	N	131	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.18	U			9.85	N	234	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.18	U			NS	NS	1,740	N	NMED		
Phenol	108-95-2	mg/kg	0.18	U			NS	NS	18,500	N	NMED		
Pyrene	129-00-0	mg/kg	0.18	U			NS	NS	1,740	N	NMED		

TABLE D1-AQ23-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AQ23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U			NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U			83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U			NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U			60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U			313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			1,300	N	570	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.21	U			69.6	N	3.98	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.21	U			1.81	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.1	U			1.86	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.1	U			2.43	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.1	U			2.43	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.1	U			2.43	N	1.14	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.1	U			2.43	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000021	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000057	J	0.000019	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000064	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.000003	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.000000071	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000091	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000013	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000088	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		UJ	0.00000013	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		UJ	0.00000011	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000019	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.0000002	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.00000017	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg	0.000000015	J	0.00000015	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000017	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000053	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000079	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.000000021				0.000049	N	0.0000506	N	NMED	4.22E-09	4.09E-04

TABLE D1-AQ23-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AQ23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	14,000				NS	NS	78,000	N	NMED		1.79E-01
Antimony	7440-36-0	mg/kg	0.1	J			NS	NS	31.3	N	NMED		3.19E-03
Arsenic	7440-38-2	mg/kg	0.96				7.07	N	13	N	NMED	1.36E-06	7.38E-02
Barium	7440-39-3	mg/kg	190				NS	NS	15,600	N	NMED		1.22E-02
Beryllium	7440-41-7	mg/kg	0.46	J			64,400	N	156	N	NMED	7.14E-11	2.95E-03
Cadmium	7440-43-9	mg/kg	0.32				85,900	N	70.5	N	NMED	3.73E-11	4.54E-03
Calcium	7440-70-2	mg/kg	2,700				NS	NS	13,000,000	N	NMED		2.08E-04
Chromium (Total) (3)	7440-47-3	mg/kg	11				96.6	N	45,200	N	NMED	1.14E-06	2.43E-04
Cobalt	7440-48-4	mg/kg	4				17,200	N	23.4	N	NMED	2.33E-09	1.71E-01
Copper	7440-50-8	mg/kg	47				NS	NS	3,130	N	NMED		1.50E-02
Iron	7439-89-6	mg/kg	8,400				NS	NS	54,800	N	NMED		1.53E-01
Lead	7439-92-1	mg/kg	13				NS	NS	200	N	RSL		
Magnesium	7439-95-4	mg/kg	6,100				NS	NS	15,600,000	N	NMED		3.91E-04
Manganese	7439-96-5	mg/kg	290				NS	NS	10,500	N	NMED		2.76E-02
Mercury (Elemental)	7439-97-6	mg/kg	0.04	J			NS	NS	23.8	N	NMED		1.68E-03
Nickel	7440-02-0	mg/kg	7.3				595,000	N	1,560	N	NMED		4.68E-03
Potassium	7440-09-7	mg/kg	950				NS	NS	15,600,000	N	NMED		6.09E-05
Selenium	7782-49-2	mg/kg	0.9				NS	NS	391	N	NMED		2.30E-03
Silver	7440-22-4	mg/kg	0.073	J			NS	NS	391	N	NMED		1.87E-04
Sodium	7440-23-5	mg/kg	52				NS	NS	7,820,000	N	NMED		6.65E-06
Thallium	7440-28-0	mg/kg	0.046	J			NS	NS	0.782	N	NMED		5.88E-02
Vanadium	7440-62-2	mg/kg	16				NS	NS	394	N	NMED		4.06E-02
Zinc	7440-66-6	mg/kg	31				NS	NS	23,500	N	NMED		1.32E-03

TABLE D1-AQ23-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AQ23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.33	U			NS	NS	11.2	N	NMED		
Nitrate	14797-55-8	mg/kg	24				NS	NS	125,000	N	NMED		1.92E-04
Perchlorate	14797-73-0	mg/kg	0.0044	U			NS	NS	54.8	N	NMED		
										Cumulative Risk/Hazard		**3E-06**	**0.8**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of Quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper Tolerance Limit

TABLE D1-AQ23-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AQ23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0023	U			137	N	39,400	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0023	U			NS	NS	72,500	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0023	U			39	N	26,000	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0023	U			92	N	12	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0023	U			383	N	260,000	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0023	U			NS	NS	2,260	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0023	U			146	N	695	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0023	U			NS	NS	930	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0058	U			1	N	34	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0023	U			1,250	N	423	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0023	U			NS	NS	1,800	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0058	U			1	N	41	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0023	U			3	N	738	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0023	U			NS	NS	13,000	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0023	U			41	N	286	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0023	U			87	N	137	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0023	U			NS	NS	1,500	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0023	U			6,730	N	90,800	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0023	U			NS	NS	23,000	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0023	U			6,730	N	90,800	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0023	U			87	N	137	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0035	U			NS	NS	411,000	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0023	U			NS	NS	26,000	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0023	U			NS	NS	1,300	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0023	U			NS	NS	23,000	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0023	U			NS	NS	81,600	N	RSL		
Acetone	67-64-1	mg/kg	0.87	J			NS	NS	960,000	N	NMED		9.06E-07
Benzene	71-43-2	mg/kg	0.0039	J			87	N	729	N	NMED	4.47E-10	5.35E-06
Bromobenzene	108-86-1	mg/kg	0.0023	U			NS	NS	1,800	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0023	U			NS	NS	630	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0023	U			30	N	26,000	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0023	U			1,760	N	18,300	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0023	U			NS	NS	95	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0023	U			NS	NS	8,540	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0023	U			53	N	1,020	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0023	U			NS	NS	2,160	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0023	U			NS	NS	89,500	N	NMED		
Chloroform	67-66-3	mg/kg	0.0023	U			29	N	2,000	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0058	U			201	N	1,260	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0023	U			NS	NS	2,600	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0023	U			146	N	695	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0023	U			67	N	18,300	N	NMED		

TABLE D1-AQ23-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AQ23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0023	U			NS	NS	288	N	NMED		
Dichlorodifluoromethane	75-71-8	mg/kg	0.0023	U			NS	NS	865	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0023	U			29,000	N	368	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0023	U			52	N	916	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0023	U			NS	NS	14,200	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0058	U			NS	NS	3,730	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0023	U			4,820	N	178,000	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.012	U			14,400	N	5,130	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0023	U			NS	NS	58,000	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0023	U			NS	NS	24,000	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0023	U			108	N	843	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0029	U			NS	NS	3,940	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0023	U			NS	NS	14,200	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0023	U			NS	NS	120,000	N	RSL		
Styrene	100-42-5	mg/kg	0.0023	U			NS	NS	51,300	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0023	U			NS	NS	120,000	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0023	U			1,650	N	629	N	NMED		
Toluene	108-88-3	mg/kg	0.0048	J			NS	NS	61,300	N	NMED		7.83E-08
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0023	U			NS	NS	1,100	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0023	U			146	N	695	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0023	U			112	N	37	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0023	U			NS	NS	6,030	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0023	U			28	N	46	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.18	U			1,250	N	423	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.18	U			NS	NS	13,000	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.18	U			6,730	N	90,800	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.18	U			6,730	N	90,800	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.18	U			NS	NS	91,600	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.18	U			2,330	N	916	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.18	U			NS	NS	2,750	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.18	U			NS	NS	18,300	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.18	U			NS	NS	1,830	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.18	U			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.18	U			17	N	276	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.18	U			NS	NS	104,000	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.18	U			NS	NS	6,490	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.18	U			NS	NS	3,370	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.18	U			NS	NS	41,000	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.18	U			NS	NS	8,000	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.18	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.18	U			NS	NS	410	N	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.18	U			1,100	N	3,300	N	RSL[S]		

TABLE D1-AQ23-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AQ23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.18	U			NS	NS	73	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.18	U			NS	NS	NS	NS	NS		
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.18	U			NS	NS	82,000	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.18	U			110	N	410	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.18	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.18	U			1,100	N	3,300	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.18	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.18	U			NS	NS	50,500	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.18	U			NS	NS	25,300	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.18	U			NS	NS	253,000	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.18	U			32	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			24	N	251	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.18	U			32	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.18	U			NS	NS	25,300	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.18	U			323	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.18	U			NS	NS	3,300,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.18	U			NS	NS	82,000	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.18	U			NS	NS	2,500	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.18	U			16	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.18	U			519	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.18	U			1,830	N	18,300	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.18	U			12,000	N	160,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.18	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.18	U			3,230	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.18	U			NS	NS	91,600	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.18	U			NS	NS	8,200	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			3	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.18	U			NS	NS	1,200	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.18	U			NS	NS	733,000	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.18	U			NS	NS	916,000	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.18	U			NS	NS	33,700	N	NMED		
Fluorene	86-73-7	mg/kg	0.18	U			NS	NS	33,700	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.18	U			16	N	733	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.18	U			52	N	916	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.18	U			641	N	641	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.18	U			32	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.18	U			27,000	N	183,000	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.18	U			3	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.022	UJ			1	N	7	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.18	U			5,240	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.18	U			108	N	843	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.18	U			293	N	1,540	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.18	U			45	N	3,180	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.18	U			NS	NS	27,500	N	NMED		
Phenol	108-95-2	mg/kg	0.18	U			NS	NS	275,000	N	NMED		
Pyrene	129-00-0	mg/kg	0.18	U			NS	NS	25,300	N	NMED		

TABLE D1-AQ23-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AQ23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U			NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U			428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U			NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U			293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U			1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			5,300	N	7,400	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.21	U			304	N	57	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.21	U			9	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.1	U			9	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.1	U			11	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.1	U			11	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.1	U			11	N	16	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.1	U			11	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000021	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000057	J	0.000019	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000064	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.000003	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.000000071	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000091	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000013	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000088	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		UJ	0.00000013	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		UJ	0.00000011	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000019	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.0000002	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.00000017	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg	0.000000015	J	0.00000015	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000017	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000053	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000079	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.000000021				0.000238	N	0.000808	N	NMED	8.70E-10	2.56E-05

TABLE D1-AQ23-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AQ23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	14,000				NS	NS	1,290,000	N	NMED		1.09E-02
Antimony	7440-36-0	mg/kg	0.1	J			NS	NS	519	N	NMED		1.93E-04
Arsenic	7440-38-2	mg/kg	0.96				36	N	208	N	NMED	2.67E-07	4.62E-03
Barium	7440-39-3	mg/kg	190				NS	NS	255,000	N	NMED		7.45E-04
Beryllium	7440-41-7	mg/kg	0.46	J			313,000	N	2,580	N	NMED	1.47E-11	1.78E-04
Cadmium	7440-43-9	mg/kg	0.32				417,000	N	1,110	N	NMED	7.67E-12	2.88E-04
Calcium	7440-70-2	mg/kg	2,700				NS	NS	32,400,000	N	NMED		8.33E-05
Chromium (Total) (3)	7440-47-3	mg/kg	11				505	N	314,000	N	NMED	2.18E-07	3.50E-05
Cobalt	7440-48-4	mg/kg	4				83,400	N	388	N	NMED	4.80E-10	1.03E-02
Copper	7440-50-8	mg/kg	47				NS	NS	51,900	N	NMED		9.06E-04
Iron	7439-89-6	mg/kg	8,400				NS	NS	908,000	N	NMED		9.25E-03
Lead	7439-92-1	mg/kg	13				NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	6,100				NS	NS	5,680,000	N	NMED		1.07E-03
Manganese	7439-96-5	mg/kg	290				NS	NS	160,000	N	NMED		1.81E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.04	J			NS	NS	112	N	NMED		3.57E-04
Nickel	7440-02-0	mg/kg	7.3				2,890,000	N	25,700	N	NMED	2.53E-11	2.84E-04
Potassium	7440-09-7	mg/kg	950				NS	NS	76,200,000	N	NMED		1.25E-05
Selenium	7782-49-2	mg/kg	0.9				NS	NS	6,490	N	NMED		1.39E-04
Silver	7440-22-4	mg/kg	0.073	J			NS	NS	6,490	N	NMED		1.12E-05
Sodium	7440-23-5	mg/kg	52				NS	NS	37,300,000	N	NMED		1.39E-06
Thallium	7440-28-0	mg/kg	0.046	J			NS	NS	13	N	NMED		3.54E-03
Vanadium	7440-62-2	mg/kg	16				NS	NS	6,530	N	NMED		2.45E-03
Zinc	7440-66-6	mg/kg	31				NS	NS	38,900	N	NMED		7.97E-04

TABLE D1-AQ23-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AQ23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.33	U			NS	NS	63	N	NMED		
Nitrate	14797-55-8	mg/kg	24				NS	NS	2,080,000	N	NMED		1.15E-05
Perchlorate	14797-73-0	mg/kg	0.0044	U			NS	NS	908	N	NMED		
										Cumulative Risk/Hazard		**5E-07**	**0.05**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be disucssed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper tolerance limit

TABLE D1-AQ23-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AQ23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0023	U			659	N	10,600	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0023	U			NS	NS	13,600	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0023	U			197	N	7,080	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0023	U			4,300	N	2	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0023	U			1,820	N	70,800	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0023	U			NS	NS	424	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0023	U			781	N	130	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0023	U			NS	NS	283	N	NMED[C]			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0058	U			8	N	6	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0023	U			8,540	N	79	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0023	U			NS	NS	492	N	NMED[C]			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0058	U			6	N	8	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0023	U			16	N	140	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0023	U			NS	NS	2,500	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0023	U			195	N	54	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0023	U			415	N	25	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0023	U			NS	NS	422	N	NMED[C]			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0023	U			45,900	N	24,800	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0023	U			NS	NS	7,080	N	NMED[C]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0023	U			45,900	N	24,800	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0023	U			415	N	25	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.0035	U			NS	NS	90,700	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0023	U			NS	NS	7,080	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.0023	U			NS	NS	599	N	NMED[C]			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0023	U			NS	NS	7,080	N	NMED[C]			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0023	U			NS	NS	20,400	N	NMED[C]			
Acetone	67-64-1	mg/kg	0.87	J			NS	NS	242,000	N	NMED		3.60E-06	
Benzene	71-43-2	mg/kg	0.0039	J			423	N	142	N	NMED	9.22E-11	2.75E-05	
Bromobenzene	108-86-1	mg/kg	0.0023	U			NS	NS	538	N	NMED[C]			
Bromochloromethane	74-97-5	mg/kg	0.0023	U			NS	NS	296	N	NMED[C]			
Bromodichloromethane	75-27-4	mg/kg	0.0023	U			143	N	7,080	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0023	U			23,700	N	5,380	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0023	U			NS	NS	18	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.0023	U			NS	NS	1,620	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0023	U			252	N	202	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0023	U			NS	NS	412	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0023	U			NS	NS	16,600	N	NMED			
Chloroform	67-66-3	mg/kg	0.0023	U			134	N	391	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0058	U			956	N	235	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0023	U			NS	NS	708	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0023	U			781	N	130	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0023	U			340	N	5,380	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0023	U			NS	NS	54	N	NMED			

TABLE D1-AQ23-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AQ23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Dichlorodifluoromethane	75-71-8	mg/kg	0.0023	U			NS	NS	161	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.0023	U			1,770	N	5,800	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0023	U			2,400	N	269	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0023	U			NS	NS	2,740	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0058	U			NS	NS	696	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0023	U			24,200	N	33,100	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.012	U			89,600	N	1,210	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0023	U			NS	NS	17,700	N	NMED[C]			
n-Propylbenzene	103-65-1	mg/kg	0.0023	U			NS	NS	6,730	N	NMED[C]			
Naphthalene	91-20-3	mg/kg	0.0023	U			633	N	159	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0029	U			NS	NS	736	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.0023	U			NS	NS	2,740	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.0023	U			NS	NS	35,400	N	NMED[C]			
Styrene	100-42-5	mg/kg	0.0023	U			NS	NS	10,200	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0023	U			NS	NS	35,400	N	NMED[C]			
Tetrachloroethene	127-18-4	mg/kg	0.0023	U			7,910	N	120	N	NMED			
Toluene	108-88-3	mg/kg	0.0048	J			NS	NS	14,000	N	NMED		3.43E-07	
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0023	U			NS	NS	206	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0023	U			781	N	130	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0023	U			5,370	N	7	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0023	U			NS	NS	1,130	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0023	U			161	N	162	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.18	U			8,540	N	79	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.18	U			NS	NS	2,500	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.18	U			45,900	N	24,800	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.18	U			45,900	N	24,800	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.18	U			NS	NS	26,900	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.18	U			17,000	N	269	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.18	U			NS	NS	807	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.18	U			NS	NS	5,380	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.18	U			NS	NS	538	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.18	U			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.18	U			165	N	81	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.18	U			NS	NS	28,300	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.18	U			NS	NS	1,770	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.18	U			NS	NS	1,000	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.18	U			NS	NS	13,500	N	NMED[C]			
2-Nitroaniline	88-74-4	mg/kg	0.18	U			NS	NS	2,690	N	NMED[C]			
2-Nitrophenol	88-75-5	mg/kg	0.18	U			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.18	U			410	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.18	U			135	N	1,080	N	NMED[SC]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.18	U			NS	NS	22	N	NMED			

TABLE D1-AQ23-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AQ23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.18	U			NS	NS	NS	NS	NS			
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.18	U			NS	NS	26,900	N	NMED[C]			
4-Chloroaniline	106-47-8	mg/kg	0.18	U			14	N	135	N	NMED[C]			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.18	U			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.18	U			135	N	1,080	N	NMED[C]			
4-Nitrophenol	100-02-7	mg/kg	0.18	U			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.18	U			NS	NS	15,100	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.18	U			NS	NS	7,530	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.18	U			NS	NS	75,300	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.18	U			240	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			173	N	15	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.18	U			240	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.18	U			NS	NS	7,530	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.18	U			2,310	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.18	U			NS	NS	1,080,000	N	NMED[C]			
Benzyl Alcohol	100-51-6	mg/kg	0.18	U			NS	NS	26,900	N	NMED[C]			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.18	U			NS	NS	807	N	NMED[C]			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.18	U			2	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.18	U			3,540	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.18	U			13,400	N	5,380	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.18	U			1,420	N	53,800	N	NMED[C]			
Carbazole	86-74-8	mg/kg	0.18	U			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.18	U			23,100	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.18	U			NS	NS	26,900	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.18	U			NS	NS	2,690	N	NMED[C]			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			24	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.18	U			NS	NS	269	N	NMED[C]			
Diethylphthalate	84-66-2	mg/kg	0.18	U			NS	NS	215,000	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.18	U			NS	NS	269,000	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.18	U			NS	NS	10,000	N	NMED			
Fluorene	86-73-7	mg/kg	0.18	U			NS	NS	10,000	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.18	U			117	N	215	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.18	U			2,400	N	269	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.18	U			4,670	N	188	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.18	U			240	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.18	U			198,000	N	53,700	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.18	U			0.38	N	NA	N	NMED[C]			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.022	UJ			4	N	2	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.18	U			37,900	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.18	U			633	N	159	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.18	U			1,350	N	353	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.18	U			346	N	989	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.18	U			NS	NS	8,070	N	NMED			
Phenol	108-95-2	mg/kg	0.18	U			NS	NS	77,400	N	NMED			
Pyrene	129-00-0	mg/kg	0.18	U			NS	NS	7,530	N	NMED			

TABLE D1-AQ23-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AQ23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	8,070	N	NMED[C]			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	27	N	NMED[C]			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U			NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U			2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U			NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U			1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U			11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			626	N	2,420	N	NMED[C]			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.21	U			2,440	N	17	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.21	U			55	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.1	U			58	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.1	U			85	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.1	U			85	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.1	U			85	N	5	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.1	U			85	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (3)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000021	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000057	J	0.000019	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000064	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.000003	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.000000071	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000091	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000013	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000088	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		UJ	0.00000013	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		UJ	0.00000011	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000019	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.0000002	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.00000017	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg	0.000000015	J	0.00000015	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000017	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000053	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000079	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.000000021				0.00172	N	0.000226	N	NMED	1.20E-10	9.16E-05	

TABLE D1-AQ23-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AQ23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	14,000				NS	NS	41,400	N	NMED		3.38E-01	Nervous
Antimony	7440-36-0	mg/kg	0.1	J			NS	NS	142	N	NMED		7.04E-04	
Arsenic	7440-38-2	mg/kg	0.96				216	N	41	N	NMED	4.44E-08	2.33E-02	
Barium	7440-39-3	mg/kg	190				NS	NS	4,390	N	NMED		4.33E-02	
Beryllium	7440-41-7	mg/kg	0.46	J			2,710	N	148	N	NMED	1.70E-09	3.11E-03	
Cadmium	7440-43-9	mg/kg	0.32				3,610	N	72	N	NMED	8.86E-10	4.44E-03	
Calcium	7440-70-2	mg/kg	2,700				NS	NS	8,850,000	N	NMED		3.05E-04	
Chromium (Total) (4)	7440-47-3	mg/kg	11				468	N	134	N	NMED	2.35E-07	8.21E-02	
Cobalt	7440-48-4	mg/kg	4				722	N	37	N	NMED	5.54E-08	1.09E-01	Endocrine
Copper	7440-50-8	mg/kg	47				NS	NS	14,200	N	NMED		3.31E-03	
Iron	7439-89-6	mg/kg	8,400				NS	NS	248,000	N	NMED		3.39E-02	
Lead	7439-92-1	mg/kg	13				NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	6,100				NS	NS	1,550,000	N	NMED		3.94E-03	
Manganese	7439-96-5	mg/kg	290				NS	NS	464	N	NMED		6.25E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.04	J			NS	NS	21	N	NMED		1.93E-03	
Nickel	7440-02-0	mg/kg	7.3				20,500	N	753	N	NMED	3.56E-09	9.69E-03	
Potassium	7440-09-7	mg/kg	950				NS	NS	20,800,000	N	NMED		4.57E-05	
Selenium	7782-49-2	mg/kg	0.9				NS	NS	1,750	N	NMED		5.14E-04	
Silver	7440-22-4	mg/kg	0.073	J			NS	NS	1,770	N	NMED		4.12E-05	
Sodium	7440-23-5	mg/kg	52				NS	NS	10,200,000	N	NMED		5.10E-06	
Thallium	7440-28-0	mg/kg	0.046	J			NS	NS	4	N	NMED		1.30E-02	
Vanadium	7440-62-2	mg/kg	16				NS	NS	614	N	NMED		2.61E-02	
Zinc	7440-66-6	mg/kg	31				NS	NS	106,000	N	NMED		2.92E-04	

TABLE D1-AQ23-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AQ23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.33	U			NS	NS	12	N	NMED			
Nitrate	14797-55-8	mg/kg	24				NS	NS	566,000	N	NMED		4.24E-05	
Perchlorate	14797-73-0	mg/kg	0.0044	U			NS	NS	248	N	NMED			
										Cumulative Risk/Hazard		**3E-07**	**1.3**	
										Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	0.96
Endocrine	0.11
All Others	0.25

Notes:

[s] = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update).

2) NMED[C] = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

3) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

4) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper tolerance limit

TABLE D1-AQ24-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AQ24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.002	U			28.1	N	2,350	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.002	U			NS	NS	14,400	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.002	U			7.98	N	1,560	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.002	U			18.8	N	2.61	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.002	U			78.6	N	15,600	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.002	U			NS	NS	440	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.002	U			29.3	N	141	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.002	U			NS	NS	63	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.005	U			0.051	N	7.09	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.002	U			240	N	82.9	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.002	U			NS	NS	300	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.005	U			0.0858	N	5.88	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.002	U			0.672	N	135	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.002	U			NS	NS	2,150	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.002	U			8.32	N	55.6	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.002	U			17.8	N	29	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.002	U			NS	NS	270	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.002	U			1,290	N	5,480	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.002	U			NS	NS	1,600	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.002	U			1,290	N	5,480	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.002	U			17.8	N	29	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.003	U			NS	NS	37,400	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.002	U			NS	NS	1,560	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.002	U			NS	NS	200	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.002	U			NS	NS	1,600	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.002	U			NS	NS	5,810	N	RSL		
Acetone	67-64-1	mg/kg	0.35				NS	NS	66,300	N	NMED		5.28E-06
Benzene	71-43-2	mg/kg	0.002	U			17.8	N	114	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.002	U			NS	NS	290	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.002	U			NS	NS	150	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.002	U			6.19	N	1,560	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.002	U			674	N	1,230	N	NMED		
Bromomethane	74-83-9	mg/kg	0.002	U			NS	NS	17.7	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.002	U			NS	NS	1,550	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.002	U			10.7	N	144	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.002	U			NS	NS	378	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.002	U			NS	NS	19,000	N	NMED		
Chloroform	67-66-3	mg/kg	0.002	U			5.9	N	306	N	NMED		
Chloromethane	74-87-3	mg/kg	0.005	U			41.1	N	268	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.002	U			NS	NS	156	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.002	U			29.3	N	141	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.002	U			13.9	N	1,230	N	NMED		
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.002	U			NS	NS	57.9	N	NMED		

TABLE D1-AQ24-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AQ24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dichlorodifluoromethane	75-71-8	mg/kg	0.002	U			NS	NS	182	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.002	U			75.1	N	3,930	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.002	U			68.3	N	61.6	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.002	U			NS	NS	2,360	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.005	U			NS	NS	764	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.002	U			975	N	37,800	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.01	U			766	N	409	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.002	U			NS	NS	3,900	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.002	U			NS	NS	3,800	N	RSL		
Naphthalene	91-20-3	mg/kg	0.002	U			22.6	N	162	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0025	U			NS	NS	805	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.002	U			NS	NS	2,360	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.002	U			NS	NS	7,800	N	RSL		
Styrene	100-42-5	mg/kg	0.002	U			NS	NS	7,260	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.002	U			NS	NS	7,800	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.002	U			337	N	111	N	NMED		
Toluene	108-88-3	mg/kg	0.0024	J			NS	NS	5,230	N	NMED		4.59E-07
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.002	U			NS	NS	210	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.002	U			29.3	N	141	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.002	U			15.5	N	6.77	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.002	U			NS	NS	1,230	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.002	U			0.742	N	113	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.18	U			240	N	82.9	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.18	U			NS	NS	2,150	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.18	U			1,290	N	5,480	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.18	U			1,290	N	5,480	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.18	U			NS	NS	6,160	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.18	U			484	N	61.6	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.18	U			NS	NS	185	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.18	U			NS	NS	1,230	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.18	U			NS	NS	123	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.18	U			17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.18	U			3.56	N	18.5	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.18	U			NS	NS	6,260	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.18	U			NS	NS	391	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.18	U			NS	NS	232	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.18	U			NS	NS	3,200	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.18	U			NS	NS	630	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.18	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.18	U			11.8	N	NS	NS	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.18	U			270	N	250	N	RSL[S]		
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.18	U			NS	NS	4.93	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.18	U			NS	NS	NS	NS	NS		

TABLE D1-AQ24-1
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FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.18	U			NS	NS	6,300	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.18	U			27	N	32	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.18	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.18	U			270	N	250	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.18	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.18	U			NS	NS	3,480	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.18	U			NS	NS	1,740	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.18	U			NS	NS	17,400	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.18	U			1.53	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			1.12	N	17.4	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.18	U			1.53	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.18	U			NS	NS	1,740	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.18	U			15.3	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.18	U			NS	NS	250,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.18	U			NS	NS	6,300	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.18	U			NS	NS	190	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.18	U			3.11	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.18	U			99.3	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.18	U			380	N	1,230	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.18	U			2,900	N	13,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.18	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.18	U			153	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.18	U			NS	NS	6,160	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.18	U			NS	NS	630	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			0.153	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.18	U			NS	NS	78	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.18	U			NS	NS	49,300	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.18	U			NS	NS	61,600	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.18	U			NS	NS	2,320	N	NMED		
Fluorene	86-73-7	mg/kg	0.18	U			NS	NS	2,320	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.18	U			3.33	N	49.3	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.18	U			68.3	N	61.6	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.18	U			133	N	43.1	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.18	U			1.53	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.18	U			5,610	N	12,300	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.18	U			0.78	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	UJ			0.0234	N	0.493	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.18	U			1,090	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.18	U			22.6	N	162	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.18	U			60.4	N	131	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.18	U			9.85	N	234	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.18	U			NS	NS	1,740	N	NMED		
Phenol	108-95-2	mg/kg	0.18	U			NS	NS	18,500	N	NMED		
Pyrene	129-00-0	mg/kg	0.18	U			NS	NS	1,740	N	NMED		

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MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U			NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U			83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U			NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U			60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U			313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			1,300	N	570	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.21	U			69.6	N	3.98	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.21	U			1.81	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.1	U			1.86	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.1	U			2.43	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.1	U			2.43	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.1	U			2.43	N	1.14	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.1	U			2.43	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (3)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.0000003	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000023	J	0.0000077	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg	0.000000006	J	0.0000006	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.0000125	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.000000079	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.00000011	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000042	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.00000011	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		UJ	0.000000043	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		UJ	0.00000015	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000022	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.0000001	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.00000016	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		UJ	0.000000097	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000011	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000031	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000069	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.0000000083				0.000049	N	0.0000506	N	NMED	1.70E-09	1.64E-04

TABLE D1-AQ24-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AQ24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	14,000				NS	NS	78,000	N	NMED		1.79E-01
Antimony	7440-36-0	mg/kg	0.15	U			NS	NS	31.3	N	NMED		
Arsenic	7440-38-2	mg/kg	1.1				7.07	N	13	N	NMED	1.56E-06	8.46E-02
Barium	7440-39-3	mg/kg	190				NS	NS	15,600	N	NMED		1.22E-02
Beryllium	7440-41-7	mg/kg	0.46	J			64,400	N	156	N	NMED	7.14E-11	2.95E-03
Cadmium	7440-43-9	mg/kg	0.33				85,900	N	70.5	N	NMED	3.84E-11	4.68E-03
Calcium	7440-70-2	mg/kg	3,100	J			NS	NS	13,000,000	N	NMED		2.38E-04
Chromium (Total) (4)	7440-47-3	mg/kg	11				96.6	N	45,200	N	NMED	1.14E-06	2.43E-04
Cobalt	7440-48-4	mg/kg	4.1				17,200	N	23.4	N	NMED	2.38E-09	1.75E-01
Copper	7440-50-8	mg/kg	50				NS	NS	3,130	N	NMED		1.60E-02
Iron	7439-89-6	mg/kg	8,100				NS	NS	54,800	N	NMED		1.48E-01
Lead	7439-92-1	mg/kg	13				NS	NS	200	N	RSL		
Magnesium	7439-95-4	mg/kg	6,300				NS	NS	15,600,000	N	NMED		4.04E-04
Manganese	7439-96-5	mg/kg	290				NS	NS	10,500	N	NMED		2.76E-02
Mercury (Elemental)	7439-97-6	mg/kg	0.048	J			NS	NS	23.8	N	NMED		2.02E-03
Nickel	7440-02-0	mg/kg	7				595,000	N	1,560	N	NMED	1.18E-10	4.49E-03
Potassium	7440-09-7	mg/kg	900				NS	NS	15,600,000	N	NMED		5.77E-05
Selenium	7782-49-2	mg/kg	0.91	J			NS	NS	391	N	NMED		2.33E-03
Silver	7440-22-4	mg/kg	0.086	J			NS	NS	391	N	NMED		2.20E-04
Sodium	7440-23-5	mg/kg	58				NS	NS	7,820,000	N	NMED		7.42E-06
Thallium	7440-28-0	mg/kg	0.034	J			NS	NS	0.782	N	NMED		4.35E-02
Vanadium	7440-62-2	mg/kg	16	J			NS	NS	394	N	NMED		4.06E-02
Zinc	7440-66-6	mg/kg	29	J			NS	NS	23,500	N	NMED		1.23E-03

TABLE D1-AQ24-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AQ24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.33	U			NS	NS	11.2	N	NMED		
Nitrate	14797-55-8	mg/kg	11				NS	NS	125,000	N	NMED		8.80E-05
Perchlorate	14797-73-0	mg/kg	0.002	U			NS	NS	54.8	N	NMED		
										Cumulative Risk/Hazard		**3E-06**	**0.7**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of Quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper Tolerance Limit

TABLE D1-AQ24-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AQ24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.002	U			137	N	39,400	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.002	U			NS	NS	72,500	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.002	U			39	N	26,000	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.002	U			92	N	12	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.002	U			383	N	260,000	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.002	U			NS	NS	2,260	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.002	U			146	N	695	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.002	U			NS	NS	930	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.005	U			1	N	34	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.002	U			1,250	N	423	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.002	U			NS	NS	1,800	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.005	U			1	N	41	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.002	U			3	N	738	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.002	U			NS	NS	13,000	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.002	U			41	N	286	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.002	U			87	N	137	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.002	U			NS	NS	1,500	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.002	U			6,730	N	90,800	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.002	U			NS	NS	23,000	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.002	U			6,730	N	90,800	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.002	U			87	N	137	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.003	U			NS	NS	411,000	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.002	U			NS	NS	26,000	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.002	U			NS	NS	1,300	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.002	U			NS	NS	23,000	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.002	U			NS	NS	81,600	N	RSL		
Acetone	67-64-1	mg/kg	0.35				NS	NS	960,000	N	NMED		3.65E-07
Benzene	71-43-2	mg/kg	0.002	U			87	N	729	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.002	U			NS	NS	1,800	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.002	U			NS	NS	630	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.002	U			30	N	26,000	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.002	U			1,760	N	18,300	N	NMED		
Bromomethane	74-83-9	mg/kg	0.002	U			NS	NS	95	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.002	U			NS	NS	8,540	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.002	U			53	N	1,020	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.002	U			NS	NS	2,160	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.002	U			NS	NS	89,500	N	NMED		
Chloroform	67-66-3	mg/kg	0.002	U			29	N	2,000	N	NMED		
Chloromethane	74-87-3	mg/kg	0.005	U			201	N	1,260	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.002	U			NS	NS	2,600	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.002	U			146	N	695	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.002	U			67	N	18,300	N	NMED		

TABLE D1-AQ24-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AQ24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.002	U			NS	NS	288	N	NMED		
Dichlorodifluoromethane	75-71-8	mg/kg	0.002	U			NS	NS	865	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.002	U			29,000	N	368	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.002	U			52	N	916	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.002	U			NS	NS	14,200	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.005	U			NS	NS	3,730	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.002	U			4,820	N	178,000	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.01	U			14,400	N	5,130	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.002	U			NS	NS	58,000	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.002	U			NS	NS	24,000	N	RSL		
Naphthalene	91-20-3	mg/kg	0.002	U			108	N	843	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0025	U			NS	NS	3,940	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.002	U			NS	NS	14,200	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.002	U			NS	NS	120,000	N	RSL		
Styrene	100-42-5	mg/kg	0.002	U			NS	NS	51,300	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.002	U			NS	NS	120,000	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.002	U			1,650	N	629	N	NMED		
Toluene	108-88-3	mg/kg	0.0024	J			NS	NS	61,300	N	NMED		3.92E-08
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.002	U			NS	NS	1,100	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.002	U			146	N	695	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.002	U			112	N	37	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.002	U			NS	NS	6,030	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.002	U			28	N	46	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.18	U			1,250	N	423	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.18	U			NS	NS	13,000	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.18	U			6,730	N	90,800	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.18	U			6,730	N	90,800	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.18	U			NS	NS	91,600	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.18	U			2,330	N	916	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.18	U			NS	NS	2,750	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.18	U			NS	NS	18,300	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.18	U			NS	NS	1,830	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.18	U			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.18	U			17	N	276	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.18	U			NS	NS	104,000	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.18	U			NS	NS	6,490	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.18	U			NS	NS	3,370	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.18	U			NS	NS	41,000	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.18	U			NS	NS	8,000	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.18	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.18	U			NS	NS	410	N	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.18	U			1,100	N	3,300	N	RSL[S]		

TABLE D1-AQ24-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AQ24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.18	U			NS	NS	73	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.18	U			NS	NS	NS	NS	NS		
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.18	U			NS	NS	82,000	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.18	U			110	N	410	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.18	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.18	U			1,100	N	3,300	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.18	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.18	U			NS	NS	50,500	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.18	U			NS	NS	25,300	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.18	U			NS	NS	253,000	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.18	U			32	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			24	N	251	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.18	U			32	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.18	U			NS	NS	25,300	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.18	U			323	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.18	U			NS	NS	3,300,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.18	U			NS	NS	82,000	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.18	U			NS	NS	2,500	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.18	U			16	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.18	U			519	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.18	U			1,830	N	18,300	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.18	U			12,000	N	160,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.18	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.18	U			3,230	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.18	U			NS	NS	91,600	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.18	U			NS	NS	8,200	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			3	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.18	U			NS	NS	1,200	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.18	U			NS	NS	733,000	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.18	U			NS	NS	916,000	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.18	U			NS	NS	33,700	N	NMED		
Fluorene	86-73-7	mg/kg	0.18	U			NS	NS	33,700	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.18	U			16	N	733	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.18	U			52	N	916	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.18	U			641	N	641	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.18	U			32	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.18	U			27,000	N	183,000	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.18	U			3	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	UJ			1	N	7	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.18	U			5,240	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.18	U			108	N	843	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.18	U			293	N	1,540	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.18	U			45	N	3,180	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.18	U			NS	NS	27,500	N	NMED		
Phenol	108-95-2	mg/kg	0.18	U			NS	NS	275,000	N	NMED		
Pyrene	129-00-0	mg/kg	0.18	U			NS	NS	25,300	N	NMED		

TABLE D1-AQ24-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AQ24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U			NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U			428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U			NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U			293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U			1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			5,300	N	7,400	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.21	U			304	N	57	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.21	U			9	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.1	U			9	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.1	U			11	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.1	U			11	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.1	U			11	N	16	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.1	U			11	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (3)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.0000003	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000023	J	0.0000077	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg	0.000000006	J	0.0000006	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.0000125	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.000000079	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.00000011	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000042	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.00000011	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		UJ	0.000000043	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		UJ	0.00000015	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000022	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.0000001	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.00000016	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		UJ	0.000000097	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000011	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000031	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000069	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.0000000083				0.000238	N	0.000808	N	NMED	3.49E-10	1.03E-05

TABLE D1-AQ24-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AQ24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	14,000				NS	NS	1,290,000	N	NMED		1.09E-02
Antimony	7440-36-0	mg/kg	0.15	U			NS	NS	519	N	NMED		
Arsenic	7440-38-2	mg/kg	1.1				36	N	208	N	NMED	3.06E-07	5.29E-03
Barium	7440-39-3	mg/kg	190				NS	NS	255,000	N	NMED		7.45E-04
Beryllium	7440-41-7	mg/kg	0.46	J			313,000	N	2,580	N	NMED	1.47E-11	1.78E-04
Cadmium	7440-43-9	mg/kg	0.33				417,000	N	1,110	N	NMED	7.91E-12	2.97E-04
Calcium	7440-70-2	mg/kg	3,100	J			NS	NS	32,400,000	N	NMED		9.57E-05
Chromium (Total) (4)	7440-47-3	mg/kg	11				505	N	314,000	N	NMED	2.18E-07	3.50E-05
Cobalt	7440-48-4	mg/kg	4.1				83,400	N	388	N	NMED	4.92E-10	1.06E-02
Copper	7440-50-8	mg/kg	50				NS	NS	51,900	N	NMED		9.63E-04
Iron	7439-89-6	mg/kg	8,100				NS	NS	908,000	N	NMED		8.92E-03
Lead	7439-92-1	mg/kg	13				NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	6,300				NS	NS	5,680,000	N	NMED		1.11E-03
Manganese	7439-96-5	mg/kg	290				NS	NS	160,000	N	NMED		1.81E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.048	J			NS	NS	112	N	NMED		4.29E-04
Nickel	7440-02-0	mg/kg	7				2,890,000	N	25,700	N	NMED	2.42E-11	2.72E-04
Potassium	7440-09-7	mg/kg	900				NS	NS	76,200,000	N	NMED		1.18E-05
Selenium	7782-49-2	mg/kg	0.91	J			NS	NS	6,490	N	NMED		1.40E-04
Silver	7440-22-4	mg/kg	0.086	J			NS	NS	6,490	N	NMED		1.33E-05
Sodium	7440-23-5	mg/kg	58				NS	NS	37,300,000	N	NMED		1.55E-06
Thallium	7440-28-0	mg/kg	0.034	J			NS	NS	13	N	NMED		2.62E-03
Vanadium	7440-62-2	mg/kg	16	J			NS	NS	6,530	N	NMED		2.45E-03
Zinc	7440-66-6	mg/kg	29	J			NS	NS	38,900	N	NMED		7.46E-04

TABLE D1-AQ24-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AQ24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.33	U			NS	NS	63	N	NMED		
Nitrate	14797-55-8	mg/kg	11				NS	NS	2,080,000	N	NMED		5.29E-06
Perchlorate	14797-73-0	mg/kg	0.002	U			NS	NS	908	N	NMED		
										Cumulative Risk/Hazard		**5E-07**	**0.05**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper tolerance limit

TABLE D1-AQ24-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AQ24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.002	U			659	N	10,600	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.002	U			NS	NS	13,600	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.002	U			197	N	7,080	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.002	U			4,300	N	2	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.002	U			1,820	N	70,800	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.002	U			NS	NS	424	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.002	U			781	N	130	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.002	U			NS	NS	283	N	NMED[C]			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.005	U			8	N	6	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.002	U			8,540	N	79	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.002	U			NS	NS	492	N	NMED[C]			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.005	U			6	N	8	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.002	U			16	N	140	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.002	U			NS	NS	2,500	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.002	U			195	N	54	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.002	U			415	N	25	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.002	U			NS	NS	422	N	NMED[C]			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.002	U			45,900	N	24,800	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.002	U			NS	NS	7,080	N	NMED[C]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.002	U			45,900	N	24,800	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.002	U			415	N	25	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.003	U			NS	NS	90,700	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.002	U			NS	NS	7,080	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.002	U			NS	NS	599	N	NMED[C]			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.002	U			NS	NS	7,080	N	NMED[C]			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.002	U			NS	NS	20,400	N	NMED[C]			
Acetone	67-64-1	mg/kg	0.35				NS	NS	242,000	N	NMED		1.45E-06	
Benzene	71-43-2	mg/kg	0.002	U			423	N	142	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.002	U			NS	NS	538	N	NMED[C]			
Bromochloromethane	74-97-5	mg/kg	0.002	U			NS	NS	296	N	NMED[C]			
Bromodichloromethane	75-27-4	mg/kg	0.002	U			143	N	7,080	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.002	U			23,700	N	5,380	N	NMED			
Bromomethane	74-83-9	mg/kg	0.002	U			NS	NS	18	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.002	U			NS	NS	1,620	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.002	U			252	N	202	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.002	U			NS	NS	412	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.002	U			NS	NS	16,600	N	NMED			
Chloroform	67-66-3	mg/kg	0.002	U			134	N	391	N	NMED			
Chloromethane	74-87-3	mg/kg	0.005	U			956	N	235	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.002	U			NS	NS	708	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.002	U			781	N	130	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.002	U			340	N	5,380	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.002	U			NS	NS	54	N	NMED			

TABLE D1-AQ24-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AQ24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Dichlorodifluoromethane	75-71-8	mg/kg	0.002	U			NS	NS	161	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.002	U			1,770	N	5,800	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.002	U			2,400	N	269	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.002	U			NS	NS	2,740	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.005	U			NS	NS	696	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.002	U			24,200	N	33,100	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.01	U			89,600	N	1,210	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.002	U			NS	NS	17,700	N	NMED[C]			
n-Propylbenzene	103-65-1	mg/kg	0.002	U			NS	NS	6,730	N	NMED[C]			
Naphthalene	91-20-3	mg/kg	0.002	U			633	N	159	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0025	U			NS	NS	736	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.002	U			NS	NS	2,740	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.002	U			NS	NS	35,400	N	NMED[C]			
Styrene	100-42-5	mg/kg	0.002	U			NS	NS	10,200	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.002	U			NS	NS	35,400	N	NMED[C]			
Tetrachloroethene	127-18-4	mg/kg	0.002	U			7,910	N	120	N	NMED			
Toluene	108-88-3	mg/kg	0.0024	J			NS	NS	14,000	N	NMED		1.71E-07	
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.002	U			NS	NS	206	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.002	U			781	N	130	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.002	U			5,370	N	7	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.002	U			NS	NS	1,130	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.002	U			161	N	162	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.18	U			8,540	N	79	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.18	U			NS	NS	2,500	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.18	U			45,900	N	24,800	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.18	U			45,900	N	24,800	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.18	U			NS	NS	26,900	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.18	U			17,000	N	269	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.18	U			NS	NS	807	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.18	U			NS	NS	5,380	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.18	U			NS	NS	538	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.18	U			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.18	U			165	N	81	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.18	U			NS	NS	28,300	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.18	U			NS	NS	1,770	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.18	U			NS	NS	1,000	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.18	U			NS	NS	13,500	N	NMED[C]			
2-Nitroaniline	88-74-4	mg/kg	0.18	U			NS	NS	2,690	N	NMED[C]			
2-Nitrophenol	88-75-5	mg/kg	0.18	U			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.18	U			410	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.18	U			135	N	1,080	N	NMED[SC]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.18	U			NS	NS	22	N	NMED			

TABLE D1-AQ24-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AQ24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.18	U			NS	NS	NS	NS	NS			
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.18	U			NS	NS	26,900	N	NMED[C]			
4-Chloroaniline	106-47-8	mg/kg	0.18	U			14	N	135	N	NMED[C]			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.18	U			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.18	U			135	N	1,080	N	NMED[C]			
4-Nitrophenol	100-02-7	mg/kg	0.18	U			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.18	U			NS	NS	15,100	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.18	U			NS	NS	7,530	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.18	U			NS	NS	75,300	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.18	U			240	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			173	N	15	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.18	U			240	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.18	U			NS	NS	7,530	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.18	U			2,310	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.18	U			NS	NS	1,080,000	N	NMED[C]			
Benzyl Alcohol	100-51-6	mg/kg	0.18	U			NS	NS	26,900	N	NMED[C]			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.18	U			NS	NS	807	N	NMED[C]			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.18	U			2	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.18	U			3,540	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.18	U			13,400	N	5,380	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.18	U			1,420	N	53,800	N	NMED[C]			
Carbazole	86-74-8	mg/kg	0.18	U			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.18	U			23,100	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.18	U			NS	NS	26,900	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.18	U			NS	NS	2,690	N	NMED[C]			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			24	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.18	U			NS	NS	269	N	NMED[C]			
Diethylphthalate	84-66-2	mg/kg	0.18	U			NS	NS	215,000	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.18	U			NS	NS	269,000	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.18	U			NS	NS	10,000	N	NMED			
Fluorene	86-73-7	mg/kg	0.18	U			NS	NS	10,000	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.18	U			117	N	215	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.18	U			2,400	N	269	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.18	U			4,670	N	188	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.18	U			240	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.18	U			198,000	N	53,700	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.18	U			0.38	N	NA	N	NMED[C]			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	UJ			4	N	2	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.18	U			37,900	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.18	U			633	N	159	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.18	U			1,350	N	353	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.18	U			346	N	989	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.18	U			NS	NS	8,070	N	NMED			
Phenol	108-95-2	mg/kg	0.18	U			NS	NS	77,400	N	NMED			
Pyrene	129-00-0	mg/kg	0.18	U			NS	NS	7,530	N	NMED			

TABLE D1-AQ24-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AQ24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	8,070	N	NMED[C]			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	27	N	NMED[C]			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U			NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U			2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U			NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U			1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U			11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			626	N	2,420	N	NMED[C]			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.21	U			2,440	N	17	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.21	U			55	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.1	U			58	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.1	U			85	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.1	U			85	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.1	U			85	N	5	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.1	U			85	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (3)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.0000003	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000023	J	0.0000077	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg	0.000000006	J	0.0000006	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.0000125	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.000000079	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.00000011	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000042	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.00000011	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		UJ	0.000000043	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		UJ	0.00000015	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000022	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.0000001	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.00000016	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		UJ	0.000000097	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000011	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000031	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000069	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.0000000083				0.00172	N	0.000226	N	NMED	4.83E-11	3.68E-05	

TABLE D1-AQ24-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AQ24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	14,000				NS	NS	41,400	N	NMED		3.38E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	U			NS	NS	142	N	NMED			
Arsenic	7440-38-2	mg/kg	1.1				216	N	41	N	NMED	5.09E-08	2.67E-02	
Barium	7440-39-3	mg/kg	190				NS	NS	4,390	N	NMED		4.33E-02	
Beryllium	7440-41-7	mg/kg	0.46	J			2,710	N	148	N	NMED	1.70E-09	3.11E-03	
Cadmium	7440-43-9	mg/kg	0.33				3,610	N	72	N	NMED	9.14E-10	4.58E-03	
Calcium	7440-70-2	mg/kg	3,100	J			NS	NS	8,850,000	N	NMED		3.50E-04	
Chromium (Total) (4)	7440-47-3	mg/kg	11				468	N	134	N	NMED	2.35E-07	8.21E-02	
Cobalt	7440-48-4	mg/kg	4.1				722	N	37	N	NMED	5.68E-08	1.12E-01	Endocrine
Copper	7440-50-8	mg/kg	50				NS	NS	14,200	N	NMED		3.52E-03	
Iron	7439-89-6	mg/kg	8,100				NS	NS	248,000	N	NMED		3.27E-02	
Lead	7439-92-1	mg/kg	13				NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	6,300				NS	NS	1,550,000	N	NMED		4.06E-03	
Manganese	7439-96-5	mg/kg	290				NS	NS	464	N	NMED		6.25E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.048	J			NS	NS	21	N	NMED		2.32E-03	
Nickel	7440-02-0	mg/kg	7				20,500	N	753	N	NMED	3.41E-09	9.30E-03	
Potassium	7440-09-7	mg/kg	900				NS	NS	20,800,000	N	NMED		4.33E-05	
Selenium	7782-49-2	mg/kg	0.91	J			NS	NS	1,750	N	NMED		5.20E-04	
Silver	7440-22-4	mg/kg	0.086	J			NS	NS	1,770	N	NMED		4.86E-05	
Sodium	7440-23-5	mg/kg	58				NS	NS	10,200,000	N	NMED		5.69E-06	
Thallium	7440-28-0	mg/kg	0.034	J			NS	NS	4	N	NMED		9.60E-03	
Vanadium	7440-62-2	mg/kg	16	J			NS	NS	614	N	NMED		2.61E-02	
Zinc	7440-66-6	mg/kg	29	J			NS	NS	106,000	N	NMED		2.74E-04	

TABLE D1-AQ24-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID AQ24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.33	U			NS	NS	12	N	NMED			
Nitrate	14797-55-8	mg/kg	11				NS	NS	566,000	N	NMED		1.94E-05	
Perchlorate	14797-73-0	mg/kg	0.002	U			NS	NS	248	N	NMED			
										Cumulative Risk/Hazard		**3E-07**	**1.3**	
										Exceeds Target Level		**N**	Y	

System	Hazard Quotient
Nervous	0.96
Endocrine	0.11
All Others	0.25

Notes:

[s] = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update).

2) NMED[C] = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

3) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

4) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper tolerance limit

TABLE D1-B8-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID B8
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0016	U			28.1	N	2,350	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0016	U			NS	NS	14,400	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0016	U			7.98	N	1,560	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0016	U			18.8	N	2.61	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0016	U			78.6	N	15,600	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0016	U			NS	NS	440	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0016	U			29.3	N	141	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0016	U			NS	NS	63	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0039	U			0.051	N	7.09	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0016	U			240	N	82.9	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0016	U			NS	NS	300	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0039	U			0.0858	N	5.88	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0016	U			0.672	N	135	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0016	U			NS	NS	2,150	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0016	U			8.32	N	55.6	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0016	U			17.8	N	29	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0016	U			NS	NS	270	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0016	U			1,290	N	5,480	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0016	U			NS	NS	1,600	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0016	U			1,290	N	5,480	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0016	U			17.8	N	29	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0024	U			NS	NS	37,400	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0016	U			NS	NS	1,560	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0016	U			NS	NS	200	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0016	U			NS	NS	1,600	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0016	U			NS	NS	5,810	N	RSL		
Acetone	67-64-1	mg/kg	0.05				NS	NS	66,300	N	NMED		7.54E-07
Benzene	71-43-2	mg/kg	0.0018	J			17.8	N	114	N	NMED	1.01E-09	1.58E-05
Bromobenzene	108-86-1	mg/kg	0.0016	U			NS	NS	290	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0016	U			NS	NS	150	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0016	U			6.19	N	1,560	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0016	U			674	N	1,230	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0016	U			NS	NS	17.7	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0016	U			NS	NS	1,550	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0016	U			10.7	N	144	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0016	U			NS	NS	378	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0016	U			NS	NS	19,000	N	NMED		
Chloroform	67-66-3	mg/kg	0.0016	U			5.9	N	306	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0039	U			41.1	N	268	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0016	U			NS	NS	156	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0016	U			29.3	N	141	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0016	U			13.9	N	1,230	N	NMED		
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0016	U			NS	NS	57.9	N	NMED		

TABLE D1-B8-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID B8
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dichlorodifluoromethane	75-71-8	mg/kg	0.0016	U			NS	NS	182	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0016	U			75.1	N	3,930	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0016	U			68.3	N	61.6	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0016	U			NS	NS	2,360	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0039	U			NS	NS	764	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0016	U			975	N	37,800	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.0079	U			766	N	409	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0016	U			NS	NS	3,900	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0016	U			NS	NS	3,800	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0016	U			22.6	N	162	N	NMED		
o-Xylene	95-47-6	mg/kg	0.002	U			NS	NS	805	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0016	U			NS	NS	2,360	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0016	U			NS	NS	7,800	N	RSL		
Styrene	100-42-5	mg/kg	0.0016	U			NS	NS	7,260	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0016	U			NS	NS	7,800	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0016	U			337	N	111	N	NMED		
Toluene	108-88-3	mg/kg	0.0015	J			NS	NS	5,230	N	NMED		2.87E-07
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0016	U			NS	NS	210	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0016	U			29.3	N	141	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0016	U			15.5	N	6.77	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0016	U			NS	NS	1,230	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0016	U			0.742	N	113	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	U			240	N	82.9	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	U			NS	NS	2,150	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	U			1,290	N	5,480	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	U			1,290	N	5,480	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	U			NS	NS	6,160	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	U			484	N	61.6	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	U			NS	NS	185	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	U			NS	NS	1,230	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	U			NS	NS	123	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	U			17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	U			3.56	N	18.5	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	U			NS	NS	6,260	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.17	U			NS	NS	391	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.17	U			NS	NS	232	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	U			NS	NS	3,200	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.17	U			NS	NS	630	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.17	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	U			11.8	N	NS	NS	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.17	U			270	N	250	N	RSL[S]		
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	U			NS	NS	4.93	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	U			NS	NS	NS	NS	NS		

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FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	U			NS	NS	6,300	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.17	U			27	N	32	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.17	U			270	N	250	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.17	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.17	U			NS	NS	3,480	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.17	U			NS	NS	1,740	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.17	U			NS	NS	17,400	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.17	U			1.53	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.13	U			1.12	N	17.4	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	U			1.53	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	U			NS	NS	1,740	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	U			15.3	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.17	U			NS	NS	250,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.17	U			NS	NS	6,300	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	U			NS	NS	190	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	U			3.11	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	U			99.3	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	U			380	N	1,230	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.17	U			2,900	N	13,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.17	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.17	U			153	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.17	U			NS	NS	6,160	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.17	U			NS	NS	630	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	U			0.153	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.17	U			NS	NS	78	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.17	U			NS	NS	49,300	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.17	U			NS	NS	61,600	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.17	U			NS	NS	2,320	N	NMED		
Fluorene	86-73-7	mg/kg	0.17	U			NS	NS	2,320	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.17	U			3.33	N	49.3	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	U			68.3	N	61.6	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.17	U			133	N	43.1	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	U			1.53	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.17	U			5,610	N	12,300	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	U			0.78	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.02	UJ			0.0234	N	0.493	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	U			1,090	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.17	U			22.6	N	162	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.17	U			60.4	N	131	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.17	U			9.85	N	234	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.17	U			NS	NS	1,740	N	NMED		
Phenol	108-95-2	mg/kg	0.17	U			NS	NS	18,500	N	NMED		
Pyrene	129-00-0	mg/kg	0.17	U			NS	NS	1,740	N	NMED		

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MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U			NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U			83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U			NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U			60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U			313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			1,300	N	570	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.02	U			69.6	N	3.98	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.02	U			1.81	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.0098	U			1.86	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.0098	U			2.43	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.0098	U			2.43	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.0098	U			2.43	N	1.14	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.0098	U			2.43	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000019	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg		U	0.0000012	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.000000036	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.0000000048	J	0.00000048	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.000000045	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000049	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000042	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000047	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000022	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.000000061	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.000000043	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.000000053	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000055	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.000000051	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.000000039	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg	0.000000033	J	0.00000033	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000091	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.000000038				0.000049	N	0.0000506	N	NMED	7.71E-09	7.47E-04

TABLE D1-B8-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID B8
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	10,000				NS	NS	78,000	N	NMED		1.28E-01
Antimony	7440-36-0	mg/kg	0.18	J			NS	NS	31.3	N	NMED		5.75E-03
Arsenic	7440-38-2	mg/kg	1.4				7.07	N	13	N	NMED	1.98E-06	1.08E-01
Barium	7440-39-3	mg/kg	140				NS	NS	15,600	N	NMED		8.97E-03
Beryllium	7440-41-7	mg/kg	0.42	J			64,400	N	156	N	NMED	6.52E-11	2.69E-03
Cadmium	7440-43-9	mg/kg	0.2				85,900	N	70.5	N	NMED	2.33E-11	2.84E-03
Calcium	7440-70-2	mg/kg	46,000				NS	NS	13,000,000	N	NMED		3.54E-03
Chromium (Total) (3)	7440-47-3	mg/kg	9.7				96.6	N	45,200	N	NMED	1.00E-06	2.15E-04
Cobalt	7440-48-4	mg/kg	3.9				17,200	N	23.4	N	NMED	2.27E-09	1.67E-01
Copper	7440-50-8	mg/kg	45				NS	NS	3,130	N	NMED		1.44E-02
Iron	7439-89-6	mg/kg	8,700				NS	NS	54,800	N	NMED		1.59E-01
Lead	7439-92-1	mg/kg	8.7				NS	NS	200	N	RSL		
Magnesium	7439-95-4	mg/kg	6,800				NS	NS	15,600,000	N	NMED		4.36E-04
Manganese	7439-96-5	mg/kg	320				NS	NS	10,500	N	NMED		3.05E-02
Mercury (Elemental)	7439-97-6	mg/kg	0.041	U			NS	NS	23.8	N	NMED		
Nickel	7440-02-0	mg/kg	10				595,000	N	1,560	N	NMED	1.68E-10	6.41E-03
Potassium	7440-09-7	mg/kg	1,800				NS	NS	15,600,000	N	NMED		1.15E-04
Selenium	7782-49-2	mg/kg	0.97				NS	NS	391	N	NMED		2.48E-03
Silver	7440-22-4	mg/kg	0.043	J			NS	NS	391	N	NMED		1.10E-04
Sodium	7440-23-5	mg/kg	58				NS	NS	7,820,000	N	NMED		7.42E-06
Thallium	7440-28-0	mg/kg	0.06	J			NS	NS	0.782	N	NMED		7.67E-02
Vanadium	7440-62-2	mg/kg	13				NS	NS	394	N	NMED		3.30E-02
Zinc	7440-66-6	mg/kg	18				NS	NS	23,500	N	NMED		7.66E-04

TABLE D1-B8-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID B8
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.32	U			NS	NS	11.2	N	NMED		
Nitrate	14797-55-8	mg/kg	2	U			NS	NS	125,000	N	NMED		
Perchlorate	14797-73-0	mg/kg	0.0041	U			NS	NS	54.8	N	NMED		
										Cumulative Risk/Hazard		**3E-06**	**0.8**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of Quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper Tolerance Limit

TABLE D1-B8-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID B8
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0016	U			137	N	39,400	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0016	U			NS	NS	72,500	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0016	U			39	N	26,000	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0016	U			92	N	12	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0016	U			383	N	260,000	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0016	U			NS	NS	2,260	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0016	U			146	N	695	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0016	U			NS	NS	930	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0039	U			1	N	34	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0016	U			1,250	N	423	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0016	U			NS	NS	1,800	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0039	U			1	N	41	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0016	U			3	N	738	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0016	U			NS	NS	13,000	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0016	U			41	N	286	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0016	U			87	N	137	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0016	U			NS	NS	1,500	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0016	U			6,730	N	90,800	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0016	U			NS	NS	23,000	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0016	U			6,730	N	90,800	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0016	U			87	N	137	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0024	U			NS	NS	411,000	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0016	U			NS	NS	26,000	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0016	U			NS	NS	1,300	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0016	U			NS	NS	23,000	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0016	U			NS	NS	81,600	N	RSL		
Acetone	67-64-1	mg/kg	0.05				NS	NS	960,000	N	NMED		5.21E-08
Benzene	71-43-2	mg/kg	0.0018	J			87	N	729	N	NMED	2.06E-10	2.47E-06
Bromobenzene	108-86-1	mg/kg	0.0016	U			NS	NS	1,800	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0016	U			NS	NS	630	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0016	U			30	N	26,000	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0016	U			1,760	N	18,300	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0016	U			NS	NS	95	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0016	U			NS	NS	8,540	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0016	U			53	N	1,020	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0016	U			NS	NS	2,160	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0016	U			NS	NS	89,500	N	NMED		
Chloroform	67-66-3	mg/kg	0.0016	U			29	N	2,000	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0039	U			201	N	1,260	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0016	U			NS	NS	2,600	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0016	U			146	N	695	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0016	U			67	N	18,300	N	NMED		

TABLE D1-B8-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID B8
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0016	U			NS	NS	288	N	NMED		
Dichlorodifluoromethane	75-71-8	mg/kg	0.0016	U			NS	NS	865	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0016	U			29,000	N	368	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0016	U			52	N	916	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0016	U			NS	NS	14,200	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0039	U			NS	NS	3,730	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0016	U			4,820	N	178,000	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.0079	U			14,400	N	5,130	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0016	U			NS	NS	58,000	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0016	U			NS	NS	24,000	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0016	U			108	N	843	N	NMED		
o-Xylene	95-47-6	mg/kg	0.002	U			NS	NS	3,940	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0016	U			NS	NS	14,200	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0016	U			NS	NS	120,000	N	RSL		
Styrene	100-42-5	mg/kg	0.0016	U			NS	NS	51,300	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0016	U			NS	NS	120,000	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0016	U			1,650	N	629	N	NMED		
Toluene	108-88-3	mg/kg	0.0015	J			NS	NS	61,300	N	NMED		2.45E-08
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0016	U			NS	NS	1,100	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0016	U			146	N	695	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0016	U			112	N	37	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0016	U			NS	NS	6,030	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0016	U			28	N	46	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	U			1,250	N	423	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	U			NS	NS	13,000	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	U			6,730	N	90,800	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	U			6,730	N	90,800	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	U			NS	NS	91,600	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	U			2,330	N	916	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	U			NS	NS	2,750	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	U			NS	NS	18,300	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	U			NS	NS	1,830	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	U			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	U			17	N	276	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	U			NS	NS	104,000	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.17	U			NS	NS	6,490	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.17	U			NS	NS	3,370	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	U			NS	NS	41,000	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.17	U			NS	NS	8,000	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.17	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	U			NS	NS	410	N	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.17	U			1,100	N	3,300	N	RSL[S]		

TABLE D1-B8-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID B8
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	U			NS	NS	73	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	U			NS	NS	NS	NS	NS		
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	U			NS	NS	82,000	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.17	U			110	N	410	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.17	U			1,100	N	3,300	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.17	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.17	U			NS	NS	50,500	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.17	U			NS	NS	25,300	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.17	U			NS	NS	253,000	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.17	U			32	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.13	U			24	N	251	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	U			32	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	U			NS	NS	25,300	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	U			323	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.17	U			NS	NS	3,300,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.17	U			NS	NS	82,000	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	U			NS	NS	2,500	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	U			16	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	U			519	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	U			1,830	N	18,300	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.17	U			12,000	N	160,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.17	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.17	U			3,230	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.17	U			NS	NS	91,600	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.17	U			NS	NS	8,200	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	U			3	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.17	U			NS	NS	1,200	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.17	U			NS	NS	733,000	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.17	U			NS	NS	916,000	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.17	U			NS	NS	33,700	N	NMED		
Fluorene	86-73-7	mg/kg	0.17	U			NS	NS	33,700	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.17	U			16	N	733	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	U			52	N	916	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.17	U			641	N	641	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	U			32	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.17	U			27,000	N	183,000	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	U			3	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.02	UJ			1	N	7	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	U			5,240	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.17	U			108	N	843	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.17	U			293	N	1,540	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.17	U			45	N	3,180	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.17	U			NS	NS	27,500	N	NMED		
Phenol	108-95-2	mg/kg	0.17	U			NS	NS	275,000	N	NMED		
Pyrene	129-00-0	mg/kg	0.17	U			NS	NS	25,300	N	NMED		

TABLE D1-B8-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID B8
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U			NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U			428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U			NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U			293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U			1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			5,300	N	7,400	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.02	U			304	N	57	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.02	U			9	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.0098	U			9	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.0098	U			11	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.0098	U			11	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.0098	U			11	N	16	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.0098	U			11	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000019	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg		U	0.0000012	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.000000036	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.0000000048	J	0.00000048	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.000000045	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000049	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000042	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000047	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000022	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.000000061	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.000000043	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.000000053	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000055	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.000000051	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.000000039	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg	0.000000033	J	0.00000033	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000091	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.000000038				0.000238	N	0.000808	N	NMED	1.59E-09	4.68E-05

TABLE D1-B8-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID B8
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	10,000				NS	NS	1,290,000	N	NMED		7.75E-03
Antimony	7440-36-0	mg/kg	0.18	J			NS	NS	519	N	NMED		3.47E-04
Arsenic	7440-38-2	mg/kg	1.4				36	N	208	N	NMED	3.90E-07	6.73E-03
Barium	7440-39-3	mg/kg	140				NS	NS	255,000	N	NMED		5.49E-04
Beryllium	7440-41-7	mg/kg	0.42	J			313,000	N	2,580	N	NMED	1.34E-11	1.63E-04
Cadmium	7440-43-9	mg/kg	0.2				417,000	N	1,110	N	NMED	4.80E-12	1.80E-04
Calcium	7440-70-2	mg/kg	46,000				NS	NS	32,400,000	N	NMED		1.42E-03
Chromium (Total) (3)	7440-47-3	mg/kg	9.7				505	N	314,000	N	NMED	1.92E-07	3.09E-05
Cobalt	7440-48-4	mg/kg	3.9				83,400	N	388	N	NMED	4.68E-10	1.01E-02
Copper	7440-50-8	mg/kg	45				NS	NS	51,900	N	NMED		8.67E-04
Iron	7439-89-6	mg/kg	8,700				NS	NS	908,000	N	NMED		9.58E-03
Lead	7439-92-1	mg/kg	8.7				NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	6,800				NS	NS	5,680,000	N	NMED		1.20E-03
Manganese	7439-96-5	mg/kg	320				NS	NS	160,000	N	NMED		2.00E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.041	U			NS	NS	112	N	NMED		
Nickel	7440-02-0	mg/kg	10				2,890,000	N	25,700	N	NMED	3.46E-11	3.89E-04
Potassium	7440-09-7	mg/kg	1,800				NS	NS	76,200,000	N	NMED		2.36E-05
Selenium	7782-49-2	mg/kg	0.97				NS	NS	6,490	N	NMED		1.49E-04
Silver	7440-22-4	mg/kg	0.043	J			NS	NS	6,490	N	NMED		6.63E-06
Sodium	7440-23-5	mg/kg	58				NS	NS	37,300,000	N	NMED		1.55E-06
Thallium	7440-28-0	mg/kg	0.06	J			NS	NS	13	N	NMED		4.62E-03
Vanadium	7440-62-2	mg/kg	13				NS	NS	6,530	N	NMED		1.99E-03
Zinc	7440-66-6	mg/kg	18				NS	NS	38,900	N	NMED		4.63E-04

TABLE D1-B8-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID B8
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.32	U			NS	NS	63	N	NMED		
Nitrate	14797-55-8	mg/kg	2	U			NS	NS	2,080,000	N	NMED		
Perchlorate	14797-73-0	mg/kg	0.0041	U			NS	NS	908	N	NMED		
										Cumulative Risk/Hazard		**6E-07**	**0.05**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper tolerance limit

TABLE D1-B8-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID B8
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0016	U			659	N	10,600	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0016	U			NS	NS	13,600	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0016	U			197	N	7,080	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0016	U			4,300	N	2	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0016	U			1,820	N	70,800	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0016	U			NS	NS	424	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0016	U			781	N	130	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0016	U			NS	NS	283	N	NMED[C]			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0039	U			8	N	6	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0016	U			8,540	N	79	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0016	U			NS	NS	492	N	NMED[C]			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0039	U			6	N	8	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0016	U			16	N	140	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0016	U			NS	NS	2,500	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0016	U			195	N	54	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0016	U			415	N	25	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0016	U			NS	NS	422	N	NMED[C]			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0016	U			45,900	N	24,800	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0016	U			NS	NS	7,080	N	NMED[C]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0016	U			45,900	N	24,800	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0016	U			415	N	25	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.0024	U			NS	NS	90,700	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0016	U			NS	NS	7,080	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.0016	U			NS	NS	599	N	NMED[C]			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0016	U			NS	NS	7,080	N	NMED[C]			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0016	U			NS	NS	20,400	N	NMED[C]			
Acetone	67-64-1	mg/kg	0.05				NS	NS	242,000	N	NMED		2.07E-07	
Benzene	71-43-2	mg/kg	0.0018	J			423	N	142	N	NMED	4.26E-11	1.27E-05	
Bromobenzene	108-86-1	mg/kg	0.0016	U			NS	NS	538	N	NMED[C]			
Bromochloromethane	74-97-5	mg/kg	0.0016	U			NS	NS	296	N	NMED[C]			
Bromodichloromethane	75-27-4	mg/kg	0.0016	U			143	N	7,080	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0016	U			23,700	N	5,380	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0016	U			NS	NS	18	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.0016	U			NS	NS	1,620	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0016	U			252	N	202	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0016	U			NS	NS	412	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0016	U			NS	NS	16,600	N	NMED			
Chloroform	67-66-3	mg/kg	0.0016	U			134	N	391	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0039	U			956	N	235	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0016	U			NS	NS	708	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0016	U			781	N	130	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0016	U			340	N	5,380	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0016	U			NS	NS	54	N	NMED			

TABLE D1-B8-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID B8
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Dichlorodifluoromethane	75-71-8	mg/kg	0.0016	U			NS	NS	161	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.0016	U			1,770	N	5,800	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0016	U			2,400	N	269	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0016	U			NS	NS	2,740	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0039	U			NS	NS	696	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0016	U			24,200	N	33,100	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.0079	U			89,600	N	1,210	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0016	U			NS	NS	17,700	N	NMED[C]			
n-Propylbenzene	103-65-1	mg/kg	0.0016	U			NS	NS	6,730	N	NMED[C]			
Naphthalene	91-20-3	mg/kg	0.0016	U			633	N	159	N	NMED			
o-Xylene	95-47-6	mg/kg	0.002	U			NS	NS	736	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.0016	U			NS	NS	2,740	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.0016	U			NS	NS	35,400	N	NMED[C]			
Styrene	100-42-5	mg/kg	0.0016	U			NS	NS	10,200	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0016	U			NS	NS	35,400	N	NMED[C]			
Tetrachloroethene	127-18-4	mg/kg	0.0016	U			7,910	N	120	N	NMED			
Toluene	108-88-3	mg/kg	0.0015	J			NS	NS	14,000	N	NMED		1.07E-07	
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0016	U			NS	NS	206	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0016	U			781	N	130	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0016	U			5,370	N	7	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0016	U			NS	NS	1,130	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0016	U			161	N	162	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	U			8,540	N	79	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	U			NS	NS	2,500	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	U			45,900	N	24,800	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	U			45,900	N	24,800	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	U			NS	NS	26,900	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	U			17,000	N	269	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	U			NS	NS	807	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	U			NS	NS	5,380	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	U			NS	NS	538	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	U			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	U			165	N	81	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	U			NS	NS	28,300	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.17	U			NS	NS	1,770	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.17	U			NS	NS	1,000	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	U			NS	NS	13,500	N	NMED[C]			
2-Nitroaniline	88-74-4	mg/kg	0.17	U			NS	NS	2,690	N	NMED[C]			
2-Nitrophenol	88-75-5	mg/kg	0.17	U			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	U			410	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.17	U			135	N	1,080	N	NMED[SC]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	U			NS	NS	22	N	NMED			

TABLE D1-B8-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID B8
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	U			NS	NS	NS	NS	NS			
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	U			NS	NS	26,900	N	NMED[C]			
4-Chloroaniline	106-47-8	mg/kg	0.17	U			14	N	135	N	NMED[C]			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	U			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.17	U			135	N	1,080	N	NMED[C]			
4-Nitrophenol	100-02-7	mg/kg	0.17	U			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.17	U			NS	NS	15,100	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.17	U			NS	NS	7,530	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.17	U			NS	NS	75,300	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.17	U			240	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.13	U			173	N	15	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	U			240	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	U			NS	NS	7,530	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	U			2,310	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.17	U			NS	NS	1,080,000	N	NMED[C]			
Benzyl Alcohol	100-51-6	mg/kg	0.17	U			NS	NS	26,900	N	NMED[C]			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	U			NS	NS	807	N	NMED[C]			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	U			2	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	U			3,540	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	U			13,400	N	5,380	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.17	U			1,420	N	53,800	N	NMED[C]			
Carbazole	86-74-8	mg/kg	0.17	U			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.17	U			23,100	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.17	U			NS	NS	26,900	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.17	U			NS	NS	2,690	N	NMED[C]			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	U			24	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.17	U			NS	NS	269	N	NMED[C]			
Diethylphthalate	84-66-2	mg/kg	0.17	U			NS	NS	215,000	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.17	U			NS	NS	269,000	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.17	U			NS	NS	10,000	N	NMED			
Fluorene	86-73-7	mg/kg	0.17	U			NS	NS	10,000	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.17	U			117	N	215	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	U			2,400	N	269	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.17	U			4,670	N	188	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	U			240	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.17	U			198,000	N	53,700	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	U			0.38	N	NA	N	NMED[C]			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.02	UJ			4	N	2	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	U			37,900	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.17	U			633	N	159	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.17	U			1,350	N	353	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.17	U			346	N	989	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.17	U			NS	NS	8,070	N	NMED			
Phenol	108-95-2	mg/kg	0.17	U			NS	NS	77,400	N	NMED			
Pyrene	129-00-0	mg/kg	0.17	U			NS	NS	7,530	N	NMED			

TABLE D1-B8-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID B8
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	8,070	N	NMED[C]			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	27	N	NMED[C]			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U			NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U			2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U			NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U			1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U			11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			626	N	2,420	N	NMED[C]			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.02	U			2,440	N	17	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.02	U			55	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.0098	U			58	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.0098	U			85	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.0098	U			85	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.0098	U			85	N	5	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.0098	U			85	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (3)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000019	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg		U	0.0000012	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.000000036	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.0000000048	J	0.00000048	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.000000045	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000049	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000042	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000047	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000022	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.000000061	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.000000043	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.000000053	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000055	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.000000051	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.000000039	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg	0.000000033	J	0.00000033	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000091	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.000000038				0.00172	N	0.000226	N	NMED	2.20E-10	1.67E-04	

TABLE D1-B8-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID B8
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	10,000				NS	NS	41,400	N	NMED		2.42E-01	Nervous
Antimony	7440-36-0	mg/kg	0.18	J			NS	NS	142	N	NMED		1.27E-03	
Arsenic	7440-38-2	mg/kg	1.4				216	N	41	N	NMED	6.48E-08	3.40E-02	
Barium	7440-39-3	mg/kg	140				NS	NS	4,390	N	NMED		3.19E-02	
Beryllium	7440-41-7	mg/kg	0.42	J			2,710	N	148	N	NMED	1.55E-09	2.84E-03	
Cadmium	7440-43-9	mg/kg	0.2				3,610	N	72	N	NMED	5.54E-10	2.77E-03	
Calcium	7440-70-2	mg/kg	46,000				NS	NS	8,850,000	N	NMED		5.20E-03	
Chromium (Total) (4)	7440-47-3	mg/kg	9.7				468	N	134	N	NMED	2.07E-07	7.24E-02	
Cobalt	7440-48-4	mg/kg	3.9				722	N	37	N	NMED	5.40E-08	1.06E-01	Endocrine
Copper	7440-50-8	mg/kg	45				NS	NS	14,200	N	NMED		3.17E-03	
Iron	7439-89-6	mg/kg	8,700				NS	NS	248,000	N	NMED		3.51E-02	
Lead	7439-92-1	mg/kg	8.7				NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	6,800				NS	NS	1,550,000	N	NMED		4.39E-03	
Manganese	7439-96-5	mg/kg	320				NS	NS	464	N	NMED		6.90E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.041	U			NS	NS	21	N	NMED			
Nickel	7440-02-0	mg/kg	10				20,500	N	753	N	NMED	4.88E-09	1.33E-02	
Potassium	7440-09-7	mg/kg	1,800				NS	NS	20,800,000	N	NMED		8.65E-05	
Selenium	7782-49-2	mg/kg	0.97				NS	NS	1,750	N	NMED		5.54E-04	
Silver	7440-22-4	mg/kg	0.043	J			NS	NS	1,770	N	NMED		2.43E-05	
Sodium	7440-23-5	mg/kg	58				NS	NS	10,200,000	N	NMED		5.69E-06	
Thallium	7440-28-0	mg/kg	0.06	J			NS	NS	4	N	NMED		1.69E-02	
Vanadium	7440-62-2	mg/kg	13				NS	NS	614	N	NMED		2.12E-02	
Zinc	7440-66-6	mg/kg	18				NS	NS	106,000	N	NMED		1.70E-04	

TABLE D1-B8-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID B8
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.32	U			NS	NS	12	N	NMED			
Nitrate	14797-55-8	mg/kg	2	U			NS	NS	566,000	N	NMED			
Perchlorate	14797-73-0	mg/kg	0.0041	U			NS	NS	248	N	NMED			
										Cumulative Risk/Hazard		**3E-07**	**1.3**	
										Exceeds Target Level		**N**	**Y**	

Notes:

[s] = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update).

2) NMED[C] = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

3) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

4) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	0.93
Endocrine	0.11
All Others	0.25

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper tolerance limit

TABLE D1-B20-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID B20
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.002	U			28.1	N	2,350	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.002	U			NS	NS	14,400	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.002	U			7.98	N	1,560	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.002	U			18.8	N	2.61	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.002	U			78.6	N	15,600	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.002	U			NS	NS	440	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.002	U			29.3	N	141	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.002	U			NS	NS	63	N	RSL			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0049	U			0.051	N	7.09	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.002	U			240	N	82.9	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.002	U			NS	NS	300	N	RSL			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0049	U			0.0858	N	5.88	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.002	U			0.672	N	135	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.002	U			NS	NS	2,150	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.002	U			8.32	N	55.6	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.002	U			17.8	N	29	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.002	U			NS	NS	270	N	RSL			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.002	U			1,290	N	5,480	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.002	U			NS	NS	1,600	N	RSL			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.002	U			1,290	N	5,480	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.002	U			17.8	N	29	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.027				NS	NS	37,400	N	NMED		7.22E-07	
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.002	U			NS	NS	1,560	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.002	U			NS	NS	200	N	RSL			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.002	U			NS	NS	1,600	N	RSL			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.002	U			NS	NS	5,810	N	RSL			
Acetone	67-64-1	mg/kg	0.19				NS	NS	66,300	N	NMED		2.87E-06	
Benzene	71-43-2	mg/kg	0.002	U			17.8	N	114	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.002	U			NS	NS	290	N	RSL			
Bromochloromethane	74-97-5	mg/kg	0.002	U			NS	NS	150	N	RSL			
Bromodichloromethane	75-27-4	mg/kg	0.002	U			6.19	N	1,560	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.002	U			674	N	1,230	N	NMED			
Bromomethane	74-83-9	mg/kg	0.002	U			NS	NS	17.7	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.002	U			NS	NS	1,550	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.002	U			10.7	N	144	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.002	U			NS	NS	378	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.002	U			NS	NS	19,000	N	NMED			
Chloroform	67-66-3	mg/kg	0.002	U			5.9	N	306	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0049	U			41.1	N	268	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.002	U			NS	NS	156	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.002	U			29.3	N	141	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.002	U			13.9	N	1,230	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.002	U			NS	NS	57.9	N	NMED			

TABLE D1-B20-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID B20
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Dichlorodifluoromethane	75-71-8	mg/kg	0.002	U			NS	NS	182	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.002	U			75.1	N	3,930	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.002	U			68.3	N	61.6	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.002	U			NS	NS	2,360	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0049	U			NS	NS	764	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.002	U			975	N	37,800	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.0098	U			766	N	409	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.002	U			NS	NS	3,900	N	RSL			
n-Propylbenzene	103-65-1	mg/kg	0.002	U			NS	NS	3,800	N	RSL			
Naphthalene	91-20-3	mg/kg	0.002	U			22.6	N	162	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0024	U			NS	NS	805	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.002	U			NS	NS	2,360	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.002	U			NS	NS	7,800	N	RSL			
Styrene	100-42-5	mg/kg	0.002	U			NS	NS	7,260	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.002	U			NS	NS	7,800	N	RSL			
Tetrachloroethene	127-18-4	mg/kg	0.002	U			337	N	111	N	NMED			
Toluene	108-88-3	mg/kg	0.002	U			NS	NS	5,230	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.002	U			NS	NS	210	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.002	U			29.3	N	141	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.002	U			15.5	N	6.77	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.002	U			NS	NS	1,230	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.002	U			0.742	N	113	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	U			240	N	82.9	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	U			NS	NS	2,150	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	U			1,290	N	5,480	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	U			1,290	N	5,480	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	U			NS	NS	6,160	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	U			484	N	61.6	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	U			NS	NS	185	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	U			NS	NS	1,230	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	U			NS	NS	123	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	U			17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	U			3.56	N	18.5	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	U			NS	NS	6,260	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.17	U			NS	NS	391	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.17	U			NS	NS	232	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	U			NS	NS	3,200	N	RSL			
2-Nitroaniline	88-74-4	mg/kg	0.17	U			NS	NS	630	N	RSL			
2-Nitrophenol	88-75-5	mg/kg	0.17	U			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	U			11.8	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.17	U			270	N	250	N	RSL[S]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	U			NS	NS	4.93	N	NMED			
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	U			NS	NS	NS	NS	NS			

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MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	U			NS	NS	6,300	N	RSL			
4-Chloroaniline	106-47-8	mg/kg	0.17	U			27	N	32	N	RSL			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	U			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.17	U			270	N	250	N	RSL			
4-Nitrophenol	100-02-7	mg/kg	0.17	U			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.17	U			NS	NS	3,480	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.17	U			NS	NS	1,740	N	NMED[$]			
Anthracene	120-12-7	mg/kg	0.17	U			NS	NS	17,400	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.17	U			1.53	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			1.12	N	17.4	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	U			1.53	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	U			NS	NS	1,740	N	NMED[$]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	U			15.3	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.17	U			NS	NS	250,000	N	RSL			
Benzyl Alcohol	100-51-6	mg/kg	0.17	U			NS	NS	6,300	N	RSL			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	U			NS	NS	190	N	RSL			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	U			3.11	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	U			99.3	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	U			380	N	1,230	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.17	U			2,900	N	13,000	N	RSL			
Carbazole	86-74-8	mg/kg	0.17	U			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.17	U			153	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.17	U			NS	NS	6,160	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.17	U			NS	NS	630	N	RSL			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			0.153	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.17	U			NS	NS	78	N	RSL			
Diethylphthalate	84-66-2	mg/kg	0.17	U			NS	NS	49,300	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.17	U			NS	NS	61,600	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.17	U			NS	NS	2,320	N	NMED			
Fluorene	86-73-7	mg/kg	0.17	U			NS	NS	2,320	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.17	U			3.33	N	49.3	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	U			68.3	N	61.6	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.17	U			133	N	43.1	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	U			1.53	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.17	U			5,610	N	12,300	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	U			0.78	N	NS	NS	RSL			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	UJ			0.0234	N	0.493	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	U			1,090	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.17	U			22.6	N	162	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.17	U			60.4	N	131	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.17	U			9.85	N	234	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.17	U			NS	NS	1,740	N	NMED			
Phenol	108-95-2	mg/kg	0.17	U			NS	NS	18,500	N	NMED			
Pyrene	129-00-0	mg/kg	0.17	U			NS	NS	1,740	N	NMED			

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FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	2,200	N	RSL			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	6.3	N	RSL			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			211	N	36	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			3.56	N	18.5	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	7.7	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			31.6	N	70.4	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	6.16	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U			NS	NS	7.64	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			333	N	247	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U			83.1	N	301	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U			NS	NS	156	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U			60.4	N	131	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U			313	N	6.16	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NS	NS	3,850	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			1,300	N	570	N	RSL			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.02	U			69.6	N	3.98	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.02	U			1.81	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.0099	U			1.86	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.0099	U			2.43	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.0099	U			2.43	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.0099	U			2.43	N	1.14	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.0099	U			2.43	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (2)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000022	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000012	J	0.0000041	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000012	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.00000067	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000015	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000046	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000045	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000045	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000041	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.000000062	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.000000042	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.000000056	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000067	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg	0.000000043	J	0.000000042	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.000000067	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg	0.000000034	J	0.00000034	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000042	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.000000078				0.000049	N	0.0000506	N	NMED	1.60E-08	1.55E-03	

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MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	17,000				NS	NS	78,000	N	NMED		2.18E-01	Nervous
Antimony	7440-36-0	mg/kg	0.086	J			NS	NS	31.3	N	NMED		2.75E-03	
Arsenic	7440-38-2	mg/kg	1.4				7.07	N	13	N	NMED	1.98E-06	1.08E-01	Heart/Endocrine
Barium	7440-39-3	mg/kg	310				NS	NS	15,600	N	NMED		1.99E-02	
Beryllium	7440-41-7	mg/kg	0.72	J			64,400	N	156	N	NMED	1.12E-10	4.62E-03	
Cadmium	7440-43-9	mg/kg	0.31				85,900	N	70.5	N	NMED	3.61E-11	4.40E-03	
Calcium	7440-70-2	mg/kg	18,000				NS	NS	13,000,000	N	NMED		1.38E-03	
Chromium (Total) (3)	7440-47-3	mg/kg	10				96.6	N	45,200	N	NMED	1.04E-06	2.21E-04	
Cobalt	7440-48-4	mg/kg	4.1				17,200	N	23.4	N	NMED	2.38E-09	1.75E-01	Endocrine
Copper	7440-50-8	mg/kg	38				NS	NS	3,130	N	NMED		1.21E-02	
Iron	7439-89-6	mg/kg	9,200				NS	NS	54,800	N	NMED		1.68E-01	GI
Lead	7439-92-1	mg/kg	8.6				NS	NS	200	N	RSL			
Magnesium	7439-95-4	mg/kg	5,600				NS	NS	15,600,000	N	NMED		3.59E-04	
Manganese	7439-96-5	mg/kg	450				NS	NS	10,500	N	NMED		4.29E-02	
Mercury (Elemental)	7439-97-6	mg/kg	0.017	J			NS	NS	23.8	N	NMED		7.14E-04	
Nickel	7440-02-0	mg/kg	8.4				595,000	N	1,560	N	NMED	1.41E-10	5.38E-03	
Potassium	7440-09-7	mg/kg	1,600				NS	NS	15,600,000	N	NMED		1.03E-04	
Selenium	7782-49-2	mg/kg	1.2				NS	NS	391	N	NMED		3.07E-03	
Silver	7440-22-4	mg/kg	0.027	J			NS	NS	391	N	NMED		6.91E-05	
Sodium	7440-23-5	mg/kg	150				NS	NS	7,820,000	N	NMED		1.92E-05	
Thallium	7440-28-0	mg/kg	0.16				NS	NS	0.782	N	NMED		2.05E-01	Hair/Coat/Eyes
Vanadium	7440-62-2	mg/kg	14				NS	NS	394	N	NMED		3.55E-02	
Zinc	7440-66-6	mg/kg	33				NS	NS	23,500	N	NMED		1.40E-03	

TABLE D1-B20-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID B20
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.32	U			NS	NS	11.2	N	NMED			
Nitrate	14797-55-8	mg/kg	5.3	J			NS	NS	125,000	N	NMED		4.24E-05	
Perchlorate	14797-73-0	mg/kg	0.0042	U			NS	NS	54.8	N	NMED			
										Cumulative Risk/Hazard		**3E-06**	**1.0**	
										Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	0.22
Endocrine	0.28
GI	0.17
Heart	0.11
Hair/Coat	0.20
Eyes	0.20
All Others	0.14

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of Quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper Tolerance Limit

TABLE D1-B20-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID B20
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.002	U			137	N	39,400	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.002	U			NS	NS	72,500	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.002	U			39	N	26,000	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.002	U			92	N	12	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.002	U			383	N	260,000	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.002	U			NS	NS	2,260	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.002	U			146	N	695	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.002	U			NS	NS	930	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0049	U			1	N	34	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.002	U			1,250	N	423	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.002	U			NS	NS	1,800	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0049	U			1	N	41	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.002	U			3	N	738	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.002	U			NS	NS	13,000	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.002	U			41	N	286	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.002	U			87	N	137	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.002	U			NS	NS	1,500	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.002	U			6,730	N	90,800	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.002	U			NS	NS	23,000	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.002	U			6,730	N	90,800	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.002	U			87	N	137	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.027				NS	NS	411,000	N	NMED		6.57E-08
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.002	U			NS	NS	26,000	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.002	U			NS	NS	1,300	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.002	U			NS	NS	23,000	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.002	U			NS	NS	81,600	N	RSL		
Acetone	67-64-1	mg/kg	0.19				NS	NS	960,000	N	NMED		1.98E-07
Benzene	71-43-2	mg/kg	0.002	U			87	N	729	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.002	U			NS	NS	1,800	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.002	U			NS	NS	630	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.002	U			30	N	26,000	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.002	U			1,760	N	18,300	N	NMED		
Bromomethane	74-83-9	mg/kg	0.002	U			NS	NS	95	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.002	U			NS	NS	8,540	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.002	U			53	N	1,020	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.002	U			NS	NS	2,160	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.002	U			NS	NS	89,500	N	NMED		
Chloroform	67-66-3	mg/kg	0.002	U			29	N	2,000	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0049	U			201	N	1,260	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.002	U			NS	NS	2,600	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.002	U			146	N	695	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.002	U			67	N	18,300	N	NMED		

TABLE D1-B20-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID B20
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.002	U			NS	NS	288	N	NMED		
Dichlorodifluoromethane	75-71-8	mg/kg	0.002	U			NS	NS	865	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.002	U			29,000	N	368	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.002	U			52	N	916	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.002	U			NS	NS	14,200	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0049	U			NS	NS	3,730	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.002	U			4,820	N	178,000	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.0098	U			14,400	N	5,130	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.002	U			NS	NS	58,000	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.002	U			NS	NS	24,000	N	RSL		
Naphthalene	91-20-3	mg/kg	0.002	U			108	N	843	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0024	U			NS	NS	3,940	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.002	U			NS	NS	14,200	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.002	U			NS	NS	120,000	N	RSL		
Styrene	100-42-5	mg/kg	0.002	U			NS	NS	51,300	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.002	U			NS	NS	120,000	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.002	U			1,650	N	629	N	NMED		
Toluene	108-88-3	mg/kg	0.002	U			NS	NS	61,300	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.002	U			NS	NS	1,100	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.002	U			146	N	695	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.002	U			112	N	37	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.002	U			NS	NS	6,030	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.002	U			28	N	46	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	U			1,250	N	423	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	U			NS	NS	13,000	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	U			6,730	N	90,800	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	U			6,730	N	90,800	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	U			NS	NS	91,600	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	U			2,330	N	916	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	U			NS	NS	2,750	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	U			NS	NS	18,300	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	U			NS	NS	1,830	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	U			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	U			17	N	276	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	U			NS	NS	104,000	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.17	U			NS	NS	6,490	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.17	U			NS	NS	3,370	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	U			NS	NS	41,000	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.17	U			NS	NS	8,000	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.17	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	U			NS	NS	410	N	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.17	U			1,100	N	3,300	N	RSL[S]		

TABLE D1-B20-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID B20
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	U			NS	NS	73	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	U			NS	NS	NS	NS	NS		
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	U			NS	NS	82,000	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.17	U			110	N	410	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.17	U			1,100	N	3,300	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.17	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.17	U			NS	NS	50,500	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.17	U			NS	NS	25,300	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.17	U			NS	NS	253,000	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.17	U			32	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			24	N	251	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	U			32	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	U			NS	NS	25,300	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	U			323	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.17	U			NS	NS	3,300,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.17	U			NS	NS	82,000	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	U			NS	NS	2,500	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	U			16	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	U			519	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	U			1,830	N	18,300	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.17	U			12,000	N	160,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.17	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.17	U			3,230	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.17	U			NS	NS	91,600	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.17	U			NS	NS	8,200	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			3	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.17	U			NS	NS	1,200	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.17	U			NS	NS	733,000	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.17	U			NS	NS	916,000	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.17	U			NS	NS	33,700	N	NMED		
Fluorene	86-73-7	mg/kg	0.17	U			NS	NS	33,700	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.17	U			16	N	733	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	U			52	N	916	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.17	U			641	N	641	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	U			32	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.17	U			27,000	N	183,000	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	U			3	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	UJ			1	N	7	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	U			5,240	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.17	U			108	N	843	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.17	U			293	N	1,540	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.17	U			45	N	3,180	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.17	U			NS	NS	27,500	N	NMED		
Phenol	108-95-2	mg/kg	0.17	U			NS	NS	275,000	N	NMED		
Pyrene	129-00-0	mg/kg	0.17	U			NS	NS	25,300	N	NMED		

TABLE D1-B20-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID B20
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U			NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U			428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U			NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U			293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U			1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			5,300	N	7,400	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.02	U			304	N	57	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.02	U			9	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.0099	U			9	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.0099	U			11	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.0099	U			11	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.0099	U			11	N	16	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.0099	U			11	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000022	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000012	J	0.0000041	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000012	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.00000067	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000015	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	4.6E-08	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	4.5E-08	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	4.5E-08	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	4.1E-08	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	6.2E-08	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	4.2E-08	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	5.6E-08	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	6.7E-08	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg	0.000000043	J	4.2E-08	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	6.7E-08	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg	0.000000034	J	0.00000034	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	4.2E-08	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.000000078				0.000238	N	0.000808	N	NMED	3.29E-09	9.68E-05

TABLE D1-B20-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID B20
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	17,000				NS	NS	1,290,000	N	NMED		1.32E-02
Antimony	7440-36-0	mg/kg	0.086	J			NS	NS	519	N	NMED		1.66E-04
Arsenic	7440-38-2	mg/kg	1.4				36	N	208	N	NMED	3.90E-07	6.73E-03
Barium	7440-39-3	mg/kg	310				NS	NS	255,000	N	NMED		1.22E-03
Beryllium	7440-41-7	mg/kg	0.72	J			313,000	N	2,580	N	NMED	2.30E-11	2.79E-04
Cadmium	7440-43-9	mg/kg	0.31				417,000	N	1,110	N	NMED	7.43E-12	2.79E-04
Calcium	7440-70-2	mg/kg	18,000				NS	NS	32,400,000	N	NMED		5.56E-04
Chromium (Total) (3)	7440-47-3	mg/kg	10				505	N	314,000	N	NMED	1.98E-07	3.18E-05
Cobalt	7440-48-4	mg/kg	4.1				83,400	N	388	N	NMED	4.92E-10	1.06E-02
Copper	7440-50-8	mg/kg	38				NS	NS	51,900	N	NMED		7.32E-04
Iron	7439-89-6	mg/kg	9,200				NS	NS	908,000	N	NMED		1.01E-02
Lead	7439-92-1	mg/kg	8.6				NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	5,600				NS	NS	5,680,000	N	NMED		9.86E-04
Manganese	7439-96-5	mg/kg	450				NS	NS	160,000	N	NMED		2.81E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.017	J			NS	NS	112	N	NMED		1.52E-04
Nickel	7440-02-0	mg/kg	8.4				2,890,000	N	25,700	N	NMED	2.91E-11	3.27E-04
Potassium	7440-09-7	mg/kg	1,600				NS	NS	76,200,000	N	NMED		2.10E-05
Selenium	7782-49-2	mg/kg	1.2				NS	NS	6,490	N	NMED		1.85E-04
Silver	7440-22-4	mg/kg	0.027	J			NS	NS	6,490	N	NMED		4.16E-06
Sodium	7440-23-5	mg/kg	150				NS	NS	37,300,000	N	NMED		4.02E-06
Thallium	7440-28-0	mg/kg	0.16				NS	NS	13	N	NMED		1.23E-02
Vanadium	7440-62-2	mg/kg	14				NS	NS	6,530	N	NMED		2.14E-03
Zinc	7440-66-6	mg/kg	33				NS	NS	38,900	N	NMED		8.48E-04

TABLE D1-B20-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID B20
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.32	U			NS	NS	63	N	NMED		
Nitrate	14797-55-8	mg/kg	5.3	J			NS	NS	2,080,000	N	NMED		2.55E-06
Perchlorate	14797-73-0	mg/kg	0.0042	U			NS	NS	908	N	NMED		
										Cumulative Risk/Hazard		**6E-07**	**0.06**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper tolerance limit

TABLE D1-B20-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID B20
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.002	U			659	N	10,600	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.002	U			NS	NS	13,600	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.002	U			197	N	7,080	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.002	U			4,300	N	2	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.002	U			1,820	N	70,800	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.002	U			NS	NS	424	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.002	U			781	N	130	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.002	U			NS	NS	283	N	NMED[C]			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0049	U			8	N	6	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.002	U			8,540	N	79	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.002	U			NS	NS	492	N	NMED[C]			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0049	U			6	N	8	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.002	U			16	N	140	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.002	U			NS	NS	2,500	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.002	U			195	N	54	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.002	U			415	N	25	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.002	U			NS	NS	422	N	NMED[C]			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.002	U			45,900	N	24,800	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.002	U			NS	NS	7,080	N	NMED[C]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.002	U			45,900	N	24,800	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.002	U			415	N	25	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.027				NS	NS	90,700	N	NMED		2.98E-07	
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.002	U			NS	NS	7,080	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.002	U			NS	NS	599	N	NMED[C]			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.002	U			NS	NS	7,080	N	NMED[C]			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.002	U			NS	NS	20,400	N	NMED[C]			
Acetone	67-64-1	mg/kg	0.19				NS	NS	242,000	N	NMED		7.85E-07	
Benzene	71-43-2	mg/kg	0.002	U			423	N	142	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.002	U			NS	NS	538	N	NMED[C]			
Bromochloromethane	74-97-5	mg/kg	0.002	U			NS	NS	296	N	NMED[C]			
Bromodichloromethane	75-27-4	mg/kg	0.002	U			143	N	7,080	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.002	U			23,700	N	5,380	N	NMED			
Bromomethane	74-83-9	mg/kg	0.002	U			NS	NS	18	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.002	U			NS	NS	1,620	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.002	U			252	N	202	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.002	U			NS	NS	412	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.002	U			NS	NS	16,600	N	NMED			
Chloroform	67-66-3	mg/kg	0.002	U			134	N	391	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0049	U			956	N	235	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.002	U			NS	NS	708	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.002	U			781	N	130	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.002	U			340	N	5,380	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.002	U			NS	NS	54	N	NMED			

TABLE D1-B20-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID B20
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Dichlorodifluoromethane	75-71-8	mg/kg	0.002	U			NS	NS	161	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.002	U			1,770	N	5,800	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.002	U			2,400	N	269	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.002	U			NS	NS	2,740	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0049	U			NS	NS	696	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.002	U			24,200	N	33,100	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.0098	U			89,600	N	1,210	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.002	U			NS	NS	17,700	N	NMED[C]			
n-Propylbenzene	103-65-1	mg/kg	0.002	U			NS	NS	6,730	N	NMED[C]			
Naphthalene	91-20-3	mg/kg	0.002	U			633	N	159	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0024	U			NS	NS	736	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.002	U			NS	NS	2,740	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.002	U			NS	NS	35,400	N	NMED[C]			
Styrene	100-42-5	mg/kg	0.002	U			NS	NS	10,200	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.002	U			NS	NS	35,400	N	NMED[C]			
Tetrachloroethene	127-18-4	mg/kg	0.002	U			7,910	N	120	N	NMED			
Toluene	108-88-3	mg/kg	0.002	U			NS	NS	14,000	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.002	U			NS	NS	206	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.002	U			781	N	130	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.002	U			5,370	N	7	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.002	U			NS	NS	1,130	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.002	U			161	N	162	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	U			8,540	N	79	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	U			NS	NS	2,500	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	U			45,900	N	24,800	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	U			45,900	N	24,800	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	U			NS	NS	26,900	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	U			17,000	N	269	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	U			NS	NS	807	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	U			NS	NS	5,380	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	U			NS	NS	538	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	U			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	U			165	N	81	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	U			NS	NS	28,300	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.17	U			NS	NS	1,770	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.17	U			NS	NS	1,000	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	U			NS	NS	13,500	N	NMED[C]			
2-Nitroaniline	88-74-4	mg/kg	0.17	U			NS	NS	2,690	N	NMED[C]			
2-Nitrophenol	88-75-5	mg/kg	0.17	U			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	U			410	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.17	U			135	N	1,080	N	NMED[SC]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	U			NS	NS	22	N	NMED			

TABLE D1-B20-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID B20
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	U			NS	NS	NS	NS	NS			
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	U			NS	NS	26,900	N	NMED[C]			
4-Chloroaniline	106-47-8	mg/kg	0.17	U			14	N	135	N	NMED[C]			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	U			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.17	U			135	N	1,080	N	NMED[C]			
4-Nitrophenol	100-02-7	mg/kg	0.17	U			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.17	U			NS	NS	15,100	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.17	U			NS	NS	7,530	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.17	U			NS	NS	75,300	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.17	U			240	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			173	N	15	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	U			240	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	U			NS	NS	7,530	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	U			2,310	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.17	U			NS	NS	1,080,000	N	NMED[C]			
Benzyl Alcohol	100-51-6	mg/kg	0.17	U			NS	NS	26,900	N	NMED[C]			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	U			NS	NS	807	N	NMED[C]			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	U			2	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	U			3,540	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	U			13,400	N	5,380	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.17	U			1,420	N	53,800	N	NMED[C]			
Carbazole	86-74-8	mg/kg	0.17	U			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.17	U			23,100	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.17	U			NS	NS	26,900	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.17	U			NS	NS	2,690	N	NMED[C]			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			24	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.17	U			NS	NS	269	N	NMED[C]			
Diethylphthalate	84-66-2	mg/kg	0.17	U			NS	NS	215,000	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.17	U			NS	NS	269,000	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.17	U			NS	NS	10,000	N	NMED			
Fluorene	86-73-7	mg/kg	0.17	U			NS	NS	10,000	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.17	U			117	N	215	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	U			2,400	N	269	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.17	U			4,670	N	188	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	U			240	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.17	U			198,000	N	53,700	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	U			0.38	N	NA	N	NMED[C]			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	UJ			4	N	2	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	U			37,900	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.17	U			633	N	159	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.17	U			1,350	N	353	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.17	U			346	N	989	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.17	U			NS	NS	8,070	N	NMED			
Phenol	108-95-2	mg/kg	0.17	U			NS	NS	77,400	N	NMED			
Pyrene	129-00-0	mg/kg	0.17	U			NS	NS	7,530	N	NMED			

TABLE D1-B20-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID B20
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	8,070	N	NMED[C]			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	27	N	NMED[C]			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U			NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U			2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U			NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U			1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U			11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			626	N	2,420	N	NMED[C]			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.02	U			2,440	N	17	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.02	U			55	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.0099	U			58	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.0099	U			85	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.0099	U			85	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.0099	U			85	N	5	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.0099	U			85	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (3)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000022	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000012	J	0.0000041	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000012	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.00000067	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000015	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000046	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000045	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000045	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000041	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.000000062	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.000000042	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.000000056	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000067	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg	0.000000043	J	0.000000042	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.000000067	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg	0.000000034	J	0.00000034	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000042	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.000000078				0.00172	N	0.000226	N	NMED	4.55E-10	3.46E-04	

TABLE D1-B20-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID B20
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	17,000				NS	NS	41,400	N	NMED		4.11E-01	Nervous
Antimony	7440-36-0	mg/kg	0.086	J			NS	NS	142	N	NMED		6.06E-04	
Arsenic	7440-38-2	mg/kg	1.4				216	N	41	N	NMED	6.48E-08	3.40E-02	
Barium	7440-39-3	mg/kg	310				NS	NS	4,390	N	NMED		7.06E-02	
Beryllium	7440-41-7	mg/kg	0.72	J			2,710	N	148	N	NMED	2.66E-09	4.86E-03	
Cadmium	7440-43-9	mg/kg	0.31				3,610	N	72	N	NMED	8.59E-10	4.30E-03	
Calcium	7440-70-2	mg/kg	18,000				NS	NS	8,850,000	N	NMED		2.03E-03	
Chromium (Total) (4)	7440-47-3	mg/kg	10				468	N	134	N	NMED	2.14E-07	7.46E-02	
Cobalt	7440-48-4	mg/kg	4.1				722	N	37	N	NMED	5.68E-08	1.12E-01	Endocrine
Copper	7440-50-8	mg/kg	38				NS	NS	14,200	N	NMED		2.68E-03	
Iron	7439-89-6	mg/kg	9,200				NS	NS	248,000	N	NMED		3.71E-02	
Lead	7439-92-1	mg/kg	8.6				NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	5,600				NS	NS	1,550,000	N	NMED		3.61E-03	
Manganese	7439-96-5	mg/kg	450				NS	NS	464	N	NMED		9.70E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.017	J			NS	NS	21	N	NMED		8.21E-04	
Nickel	7440-02-0	mg/kg	8.4				20,500	N	753	N	NMED	4.10E-09	1.12E-02	
Potassium	7440-09-7	mg/kg	1,600				NS	NS	20,800,000	N	NMED		7.69E-05	
Selenium	7782-49-2	mg/kg	1.2				NS	NS	1,750	N	NMED		6.86E-04	
Silver	7440-22-4	mg/kg	0.027	J			NS	NS	1,770	N	NMED		1.53E-05	
Sodium	7440-23-5	mg/kg	150				NS	NS	10,200,000	N	NMED		1.47E-05	
Thallium	7440-28-0	mg/kg	0.16				NS	NS	4	N	NMED		4.52E-02	
Vanadium	7440-62-2	mg/kg	14				NS	NS	614	N	NMED		2.28E-02	
Zinc	7440-66-6	mg/kg	33				NS	NS	106,000	N	NMED		3.11E-04	

TABLE D1-B20-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID B20
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.32	U			NS	NS	12	N	NMED			
Nitrate	14797-55-8	mg/kg	5.3	J			NS	NS	566,000	N	NMED		9.36E-06	
Perchlorate	14797-73-0	mg/kg	0.0042	U			NS	NS	248	N	NMED			
										Cumulative Risk/Hazard		**3E-07**	**1.8**	
										Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	1.4
Endocrine	0.11
All Others	0.32

Notes:

[s] = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update).

2) NMED[C] = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

3) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

4) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper tolerance limit

TABLE D1-B21-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID B21
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0019	U			28.1	N	2,350	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0019	U			NS	NS	14,400	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0019	U			7.98	N	1,560	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0019	U			18.8	N	2.61	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0019	U			78.6	N	15,600	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0019	U			NS	NS	440	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0019	U			29.3	N	141	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0019	U			NS	NS	63	N	RSL			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0047	U			0.051	N	7.09	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0019	U			240	N	82.9	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0019	U			NS	NS	300	N	RSL			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0047	U			0.0858	N	5.88	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0019	U			0.672	N	135	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0019	U			NS	NS	2,150	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0019	U			8.32	N	55.6	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0019	U			17.8	N	29	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0019	U			NS	NS	270	N	RSL			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0019	U			1,290	N	5,480	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0019	U			NS	NS	1,600	N	RSL			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0019	U			1,290	N	5,480	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0019	U			17.8	N	29	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.031				NS	NS	37,400	N	NMED		8.29E-07	
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0019	U			NS	NS	1,560	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.0019	U			NS	NS	200	N	RSL			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0019	U			NS	NS	1,600	N	RSL			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0019	U			NS	NS	5,810	N	RSL			
Acetone	67-64-1	mg/kg	0.3				NS	NS	66,300	N	NMED		4.52E-06	
Benzene	71-43-2	mg/kg	0.0019	U			17.8	N	114	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.0019	U			NS	NS	290	N	RSL			
Bromochloromethane	74-97-5	mg/kg	0.0019	U			NS	NS	150	N	RSL			
Bromodichloromethane	75-27-4	mg/kg	0.0019	U			6.19	N	1,560	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0019	U			674	N	1,230	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0019	U			NS	NS	17.7	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.0019	U			NS	NS	1,550	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0019	U			10.7	N	144	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0019	U			NS	NS	378	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0019	U			NS	NS	19,000	N	NMED			
Chloroform	67-66-3	mg/kg	0.0019	U			5.9	N	306	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0047	U			41.1	N	268	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0019	U			NS	NS	156	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0019	U			29.3	N	141	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0019	U			13.9	N	1,230	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0019	U			NS	NS	57.9	N	NMED			

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HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID B21
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Dichlorodifluoromethane	75-71-8	mg/kg	0.0019	U			NS	NS	182	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.0019	U			75.1	N	3,930	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0019	U			68.3	N	61.6	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0019	U			NS	NS	2,360	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0047	U			NS	NS	764	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0019	U			975	N	37,800	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.0095	U			766	N	409	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0019	U			NS	NS	3,900	N	RSL			
n-Propylbenzene	103-65-1	mg/kg	0.0019	U			NS	NS	3,800	N	RSL			
Naphthalene	91-20-3	mg/kg	0.0019	U			22.6	N	162	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0024	U			NS	NS	805	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.0019	U			NS	NS	2,360	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.0019	U			NS	NS	7,800	N	RSL			
Styrene	100-42-5	mg/kg	0.0019	U			NS	NS	7,260	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0019	U			NS	NS	7,800	N	RSL			
Tetrachloroethene	127-18-4	mg/kg	0.0019	U			337	N	111	N	NMED			
Toluene	108-88-3	mg/kg	0.0019	U			NS	NS	5,230	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0019	U			NS	NS	210	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0019	U			29.3	N	141	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0019	U			15.5	N	6.77	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0019	U			NS	NS	1,230	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0019	U			0.742	N	113	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	U			240	N	82.9	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	U			NS	NS	2,150	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	U			1,290	N	5,480	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	U			1,290	N	5,480	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	U			NS	NS	6,160	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	U			484	N	61.6	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	U			NS	NS	185	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	U			NS	NS	1,230	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	U			NS	NS	123	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	U			17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	U			3.56	N	18.5	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	U			NS	NS	6,260	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.17	U			NS	NS	391	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.17	U			NS	NS	232	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	U			NS	NS	3,200	N	RSL			
2-Nitroaniline	88-74-4	mg/kg	0.17	U			NS	NS	630	N	RSL			
2-Nitrophenol	88-75-5	mg/kg	0.17	U			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	U			11.8	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.17	U			270	N	250	N	RSL[S]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	U			NS	NS	4.93	N	NMED			
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	U			NS	NS	NS	NS	NS			

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MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	U			NS	NS	6,300	N	RSL			
4-Chloroaniline	106-47-8	mg/kg	0.17	U			27	N	32	N	RSL			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	U			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.17	U			270	N	250	N	RSL			
4-Nitrophenol	100-02-7	mg/kg	0.17	U			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.17	U			NS	NS	3,480	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.17	U			NS	NS	1,740	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.17	U			NS	NS	17,400	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.17	U			1.53	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.13	U			1.12	N	17.4	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	U			1.53	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	U			NS	NS	1,740	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	U			15.3	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.17	U			NS	NS	250,000	N	RSL			
Benzyl Alcohol	100-51-6	mg/kg	0.17	U			NS	NS	6,300	N	RSL			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	U			NS	NS	190	N	RSL			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	U			3.11	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	U			99.3	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	U			380	N	1,230	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.17	U			2,900	N	13,000	N	RSL			
Carbazole	86-74-8	mg/kg	0.17	U			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.17	U			153	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.17	U			NS	NS	6,160	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.17	U			NS	NS	630	N	RSL			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	U			0.153	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.17	U			NS	NS	78	N	RSL			
Diethylphthalate	84-66-2	mg/kg	0.17	U			NS	NS	49,300	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.17	U			NS	NS	61,600	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.17	U			NS	NS	2,320	N	NMED			
Fluorene	86-73-7	mg/kg	0.17	U			NS	NS	2,320	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.17	U			3.33	N	49.3	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	U			68.3	N	61.6	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.17	U			133	N	43.1	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	U			1.53	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.17	U			5,610	N	12,300	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	U			0.78	N	NS	NS	RSL			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.02	UJ			0.0234	N	0.493	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	U			1,090	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.17	U			22.6	N	162	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.17	U			60.4	N	131	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.17	U			9.85	N	234	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.17	U			NS	NS	1,740	N	NMED			
Phenol	108-95-2	mg/kg	0.17	U			NS	NS	18,500	N	NMED			
Pyrene	129-00-0	mg/kg	0.17	U			NS	NS	1,740	N	NMED			

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FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	2,200	N	RSL			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	6.3	N	RSL			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			211	N	36	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			3.56	N	18.5	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	7.7	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			31.6	N	70.4	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	6.16	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U			NS	NS	7.64	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			333	N	247	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U			83.1	N	301	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U			NS	NS	156	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U			60.4	N	131	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U			313	N	6.16	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NS	NS	3,850	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			1,300	N	570	N	RSL			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.02	U			69.6	N	3.98	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.02	U			1.81	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.01	U			1.86	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.01	U			2.43	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.01	U			2.43	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.01	U			2.43	N	1.14	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.01	U			2.43	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (2)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000014	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg		U	0.0000019	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.000000077	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.00000039	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.000000098	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000047	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000063	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000046	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg	0.0000000079	J	0.000000079	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.000000035	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.000000064	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.000000052	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000064	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.000000049	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.000000053	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg	0.00000004	J	0.0000004	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000043	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.000000048				0.000049	N	0.0000506	N	NMED	9.78E-09	9.47E-04	

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MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	22,000				NS	NS	78,000	N	NMED		2.82E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	J			NS	NS	31.3	N	NMED		4.79E-03	
Arsenic	7440-38-2	mg/kg	1.6				7.07	N	13	N	NMED	2.26E-06	1.23E-01	Heart/Endocrine
Barium	7440-39-3	mg/kg	400				NS	NS	15,600	N	NMED		2.56E-02	
Beryllium	7440-41-7	mg/kg	0.79	J			64,400	N	156	N	NMED	1.23E-10	5.06E-03	
Cadmium	7440-43-9	mg/kg	0.48	J			85,900	N	70.5	N	NMED	5.59E-11	6.81E-03	
Calcium	7440-70-2	mg/kg	14,000				NS	NS	13,000,000	N	NMED		1.08E-03	
Chromium (Total) (3)	7440-47-3	mg/kg	11				96.6	N	45,200	N	NMED	1.14E-06	2.43E-04	
Cobalt	7440-48-4	mg/kg	4.7				17,200	N	23.4	N	NMED	2.73E-09	2.01E-01	Endocrine
Copper	7440-50-8	mg/kg	39				NS	NS	3,130	N	NMED		1.25E-02	
Iron	7439-89-6	mg/kg	9,900				NS	NS	54,800	N	NMED		1.81E-01	GI
Lead	7439-92-1	mg/kg	8.9				NS	NS	200	N	RSL			
Magnesium	7439-95-4	mg/kg	6,700				NS	NS	15,600,000	N	NMED		4.29E-04	
Manganese	7439-96-5	mg/kg	570				NS	NS	10,500	N	NMED		5.43E-02	
Mercury (Elemental)	7439-97-6	mg/kg	0.024	J			NS	NS	23.8	N	NMED		1.01E-03	
Nickel	7440-02-0	mg/kg	8.4				595,000	N	1,560	N	NMED	1.41E-10	5.38E-03	
Potassium	7440-09-7	mg/kg	1,600				NS	NS	15,600,000	N	NMED		1.03E-04	
Selenium	7782-49-2	mg/kg	1.5				NS	NS	391	N	NMED		3.84E-03	
Silver	7440-22-4	mg/kg	0.03	J			NS	NS	391	N	NMED		7.67E-05	
Sodium	7440-23-5	mg/kg	36				NS	NS	7,820,000	N	NMED		4.60E-06	
Thallium	7440-28-0	mg/kg	0.065	J			NS	NS	0.782	N	NMED		8.31E-02	
Vanadium	7440-62-2	mg/kg	17				NS	NS	394	N	NMED		4.31E-02	
Zinc	7440-66-6	mg/kg	23				NS	NS	23,500	N	NMED		9.79E-04	

TABLE D1-B21-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID B21
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.32	U			NS	NS	11.2	N	NMED			
Nitrate	14797-55-8	mg/kg	2.3	J			NS	NS	125,000	N	NMED		1.84E-05	
Perchlorate	14797-73-0	mg/kg	0.0042	U			NS	NS	54.8	N	NMED			
										Cumulative Risk/Hazard		**3E-06**	**1.04**	
										Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	0.28
Endocrine	0.32
GI	0.18
Heart	0.12
All Others	0.25

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of Quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper Tolerance Limit

TABLE D1-B21-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID B21
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0019	U			137	N	39,400	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0019	U			NS	NS	72,500	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0019	U			39	N	26,000	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0019	U			92	N	12	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0019	U			383	N	260,000	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0019	U			NS	NS	2,260	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0019	U			146	N	695	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0019	U			NS	NS	930	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0047	U			1	N	34	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0019	U			1,250	N	423	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0019	U			NS	NS	1,800	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0047	U			1	N	41	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0019	U			3	N	738	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0019	U			NS	NS	13,000	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0019	U			41	N	286	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0019	U			87	N	137	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0019	U			NS	NS	1,500	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0019	U			6,730	N	90,800	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0019	U			NS	NS	23,000	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0019	U			6,730	N	90,800	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0019	U			87	N	137	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.031				NS	NS	411,000	N	NMED		7.54E-08
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0019	U			NS	NS	26,000	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0019	U			NS	NS	1,300	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0019	U			NS	NS	23,000	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0019	U			NS	NS	81,600	N	RSL		
Acetone	67-64-1	mg/kg	0.3				NS	NS	960,000	N	NMED		3.13E-07
Benzene	71-43-2	mg/kg	0.0019	U			87	N	729	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0019	U			NS	NS	1,800	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0019	U			NS	NS	630	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0019	U			30	N	26,000	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0019	U			1,760	N	18,300	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0019	U			NS	NS	95	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0019	U			NS	NS	8,540	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0019	U			53	N	1,020	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0019	U			NS	NS	2,160	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0019	U			NS	NS	89,500	N	NMED		
Chloroform	67-66-3	mg/kg	0.0019	U			29	N	2,000	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0047	U			201	N	1,260	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0019	U			NS	NS	2,600	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0019	U			146	N	695	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0019	U			67	N	18,300	N	NMED		

TABLE D1-B21-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID B21
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0019	U			NS	NS	288	N	NMED		
Dichlorodifluoromethane	75-71-8	mg/kg	0.0019	U			NS	NS	865	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0019	U			29,000	N	368	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0019	U			52	N	916	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0019	U			NS	NS	14,200	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0047	U			NS	NS	3,730	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0019	U			4,820	N	178,000	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.0095	U			14,400	N	5,130	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0019	U			NS	NS	58,000	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0019	U			NS	NS	24,000	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0019	U			108	N	843	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0024	U			NS	NS	3,940	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0019	U			NS	NS	14,200	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0019	U			NS	NS	120,000	N	RSL		
Styrene	100-42-5	mg/kg	0.0019	U			NS	NS	51,300	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0019	U			NS	NS	120,000	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0019	U			1,650	N	629	N	NMED		
Toluene	108-88-3	mg/kg	0.0019	U			NS	NS	61,300	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0019	U			NS	NS	1,100	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0019	U			146	N	695	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0019	U			112	N	37	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0019	U			NS	NS	6,030	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0019	U			28	N	46	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	U			1,250	N	423	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	U			NS	NS	13,000	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	U			6,730	N	90,800	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	U			6,730	N	90,800	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	U			NS	NS	91,600	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	U			2,330	N	916	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	U			NS	NS	2,750	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	U			NS	NS	18,300	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	U			NS	NS	1,830	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	U			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	U			17	N	276	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	U			NS	NS	104,000	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.17	U			NS	NS	6,490	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.17	U			NS	NS	3,370	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	U			NS	NS	41,000	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.17	U			NS	NS	8,000	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.17	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	U			NS	NS	410	N	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.17	U			1,100	N	3,300	N	RSL[S]		

TABLE D1-B21-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID B21
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	U			NS	NS	73	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	U			NS	NS	NS	NS	NS		
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	U			NS	NS	82,000	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.17	U			110	N	410	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.17	U			1,100	N	3,300	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.17	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.17	U			NS	NS	50,500	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.17	U			NS	NS	25,300	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.17	U			NS	NS	253,000	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.17	U			32	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.13	U			24	N	251	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	U			32	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	U			NS	NS	25,300	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	U			323	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.17	U			NS	NS	3,300,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.17	U			NS	NS	82,000	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	U			NS	NS	2,500	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	U			16	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	U			519	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	U			1,830	N	18,300	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.17	U			12,000	N	160,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.17	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.17	U			3,230	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.17	U			NS	NS	91,600	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.17	U			NS	NS	8,200	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	U			3	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.17	U			NS	NS	1,200	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.17	U			NS	NS	733,000	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.17	U			NS	NS	916,000	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.17	U			NS	NS	33,700	N	NMED		
Fluorene	86-73-7	mg/kg	0.17	U			NS	NS	33,700	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.17	U			16	N	733	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	U			52	N	916	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.17	U			641	N	641	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	U			32	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.17	U			27,000	N	183,000	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	U			3	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.02	UJ			1	N	7	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	U			5,240	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.17	U			108	N	843	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.17	U			293	N	1,540	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.17	U			45	N	3,180	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.17	U			NS	NS	27,500	N	NMED		
Phenol	108-95-2	mg/kg	0.17	U			NS	NS	275,000	N	NMED		
Pyrene	129-00-0	mg/kg	0.17	U			NS	NS	25,300	N	NMED		

TABLE D1-B21-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID B21
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U			NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U			428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U			NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U			293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U			1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			5,300	N	7,400	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.02	U			304	N	57	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.02	U			9	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.01	U			9	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.01	U			11	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.01	U			11	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.01	U			11	N	16	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.01	U			11	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000014	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg		U	0.0000019	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.000000077	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.00000039	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.000000098	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000047	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000063	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000046	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg	0.0000000079	J	0.000000079	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.000000035	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.000000064	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.000000052	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000064	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.000000049	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.000000053	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg	0.00000004	J	0.0000004	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000043	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.000000048				0.000238	N	0.000808	N	NMED	2.01E-09	5.93E-05

TABLE D1-B21-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID B21
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	22,000				NS	NS	1,290,000	N	NMED		1.71E-02
Antimony	7440-36-0	mg/kg	0.15	J			NS	NS	519	N	NMED		2.89E-04
Arsenic	7440-38-2	mg/kg	1.6				36	N	208	N	NMED	4.46E-07	7.69E-03
Barium	7440-39-3	mg/kg	400				NS	NS	255,000	N	NMED		1.57E-03
Beryllium	7440-41-7	mg/kg	0.79	J			313,000	N	2,580	N	NMED	2.52E-11	3.06E-04
Cadmium	7440-43-9	mg/kg	0.48	J			417,000	N	1,110	N	NMED	1.15E-11	4.32E-04
Calcium	7440-70-2	mg/kg	14,000				NS	NS	32,400,000	N	NMED		4.32E-04
Chromium (Total) (3)	7440-47-3	mg/kg	11				505	N	314,000	N	NMED	2.18E-07	3.50E-05
Cobalt	7440-48-4	mg/kg	4.7				83,400	N	388	N	NMED	5.64E-10	1.21E-02
Copper	7440-50-8	mg/kg	39				NS	NS	51,900	N	NMED		7.51E-04
Iron	7439-89-6	mg/kg	9,900				NS	NS	908,000	N	NMED		1.09E-02
Lead	7439-92-1	mg/kg	8.9				NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	6,700				NS	NS	5,680,000	N	NMED		1.18E-03
Manganese	7439-96-5	mg/kg	570				NS	NS	160,000	N	NMED		3.56E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.024	J			NS	NS	112	N	NMED		2.14E-04
Nickel	7440-02-0	mg/kg	8.4				2,890,000	N	25,700	N	NMED	2.91E-11	3.27E-04
Potassium	7440-09-7	mg/kg	1,600				NS	NS	76,200,000	N	NMED		2.10E-05
Selenium	7782-49-2	mg/kg	1.5				NS	NS	6,490	N	NMED		2.31E-04
Silver	7440-22-4	mg/kg	0.03	J			NS	NS	6,490	N	NMED		4.62E-06
Sodium	7440-23-5	mg/kg	36				NS	NS	37,300,000	N	NMED		9.65E-07
Thallium	7440-28-0	mg/kg	0.065	J			NS	NS	13	N	NMED		5.00E-03
Vanadium	7440-62-2	mg/kg	17				NS	NS	6,530	N	NMED		2.60E-03
Zinc	7440-66-6	mg/kg	23				NS	NS	38,900	N	NMED		5.91E-04

TABLE D1-B21-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID B21
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.32	U			NS	NS	63	N	NMED		
Nitrate	14797-55-8	mg/kg	2.3	J			NS	NS	2,080,000	N	NMED		1.11E-06
Perchlorate	14797-73-0	mg/kg	0.0042	U			NS	NS	908	N	NMED		
										Cumulative Risk/Hazard		**7E-07**	**0.07**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper tolerance limit

TABLE D1-B21-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID B21
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0019	U			659	N	10,600	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0019	U			NS	NS	13,600	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0019	U			197	N	7,080	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0019	U			4,300	N	2	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0019	U			1,820	N	70,800	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0019	U			NS	NS	424	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0019	U			781	N	130	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0019	U			NS	NS	283	N	NMED[C]			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0047	U			8	N	6	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0019	U			8,540	N	79	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0019	U			NS	NS	492	N	NMED[C]			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0047	U			6	N	8	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0019	U			16	N	140	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0019	U			NS	NS	2,500	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0019	U			195	N	54	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0019	U			415	N	25	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0019	U			NS	NS	422	N	NMED[C]			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0019	U			45,900	N	24,800	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0019	U			NS	NS	7,080	N	NMED[C]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0019	U			45,900	N	24,800	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0019	U			415	N	25	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.031				NS	NS	90,700	N	NMED		3.42E-07	
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0019	U			NS	NS	7,080	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.0019	U			NS	NS	599	N	NMED[C]			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0019	U			NS	NS	7,080	N	NMED[C]			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0019	U			NS	NS	20,400	N	NMED[C]			
Acetone	67-64-1	mg/kg	0.3				NS	NS	242,000	N	NMED		1.24E-06	
Benzene	71-43-2	mg/kg	0.0019	U			423	N	142	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.0019	U			NS	NS	538	N	NMED[C]			
Bromochloromethane	74-97-5	mg/kg	0.0019	U			NS	NS	296	N	NMED[C]			
Bromodichloromethane	75-27-4	mg/kg	0.0019	U			143	N	7,080	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0019	U			23,700	N	5,380	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0019	U			NS	NS	18	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.0019	U			NS	NS	1,620	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0019	U			252	N	202	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0019	U			NS	NS	412	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0019	U			NS	NS	16,600	N	NMED			
Chloroform	67-66-3	mg/kg	0.0019	U			134	N	391	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0047	U			956	N	235	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0019	U			NS	NS	708	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0019	U			781	N	130	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0019	U			340	N	5,380	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0019	U			NS	NS	54	N	NMED			

TABLE D1-B21-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID B21
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Dichlorodifluoromethane	75-71-8	mg/kg	0.0019	U			NS	NS	161	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.0019	U			1,770	N	5,800	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0019	U			2,400	N	269	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0019	U			NS	NS	2,740	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0047	U			NS	NS	696	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0019	U			24,200	N	33,100	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.0095	U			89,600	N	1,210	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0019	U			NS	NS	17,700	N	NMED[C]			
n-Propylbenzene	103-65-1	mg/kg	0.0019	U			NS	NS	6,730	N	NMED[C]			
Naphthalene	91-20-3	mg/kg	0.0019	U			633	N	159	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0024	U			NS	NS	736	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.0019	U			NS	NS	2,740	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.0019	U			NS	NS	35,400	N	NMED[C]			
Styrene	100-42-5	mg/kg	0.0019	U			NS	NS	10,200	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0019	U			NS	NS	35,400	N	NMED[C]			
Tetrachloroethene	127-18-4	mg/kg	0.0019	U			7,910	N	120	N	NMED			
Toluene	108-88-3	mg/kg	0.0019	U			NS	NS	14,000	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0019	U			NS	NS	206	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0019	U			781	N	130	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0019	U			5,370	N	7	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0019	U			NS	NS	1,130	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0019	U			161	N	162	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	U			8,540	N	79	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	U			NS	NS	2,500	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	U			45,900	N	24,800	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	U			45,900	N	24,800	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	U			NS	NS	26,900	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	U			17,000	N	269	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	U			NS	NS	807	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	U			NS	NS	5,380	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	U			NS	NS	538	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	U			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	U			165	N	81	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	U			NS	NS	28,300	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.17	U			NS	NS	1,770	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.17	U			NS	NS	1,000	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	U			NS	NS	13,500	N	NMED[C]			
2-Nitroaniline	88-74-4	mg/kg	0.17	U			NS	NS	2,690	N	NMED[C]			
2-Nitrophenol	88-75-5	mg/kg	0.17	U			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	U			410	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.17	U			135	N	1,080	N	NMED[SC]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	U			NS	NS	22	N	NMED			

TABLE D1-B21-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID B21
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	U			NS	NS	NS	NS	NS			
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	U			NS	NS	26,900	N	NMED[C]			
4-Chloroaniline	106-47-8	mg/kg	0.17	U			14	N	135	N	NMED[C]			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	U			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.17	U			135	N	1,080	N	NMED[C]			
4-Nitrophenol	100-02-7	mg/kg	0.17	U			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.17	U			NS	NS	15,100	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.17	U			NS	NS	7,530	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.17	U			NS	NS	75,300	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.17	U			240	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.13	U			173	N	15	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	U			240	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	U			NS	NS	7,530	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	U			2,310	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.17	U			NS	NS	1,080,000	N	NMED[C]			
Benzyl Alcohol	100-51-6	mg/kg	0.17	U			NS	NS	26,900	N	NMED[C]			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	U			NS	NS	807	N	NMED[C]			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	U			2	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	U			3,540	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	U			13,400	N	5,380	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.17	U			1,420	N	53,800	N	NMED[C]			
Carbazole	86-74-8	mg/kg	0.17	U			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.17	U			23,100	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.17	U			NS	NS	26,900	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.17	U			NS	NS	2,690	N	NMED[C]			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	U			24	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.17	U			NS	NS	269	N	NMED[C]			
Diethylphthalate	84-66-2	mg/kg	0.17	U			NS	NS	215,000	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.17	U			NS	NS	269,000	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.17	U			NS	NS	10,000	N	NMED			
Fluorene	86-73-7	mg/kg	0.17	U			NS	NS	10,000	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.17	U			117	N	215	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	U			2,400	N	269	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.17	U			4,670	N	188	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	U			240	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.17	U			198,000	N	53,700	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	U			0.38	N	NA	N	NMED[C]			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.02	UJ			4	N	2	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	U			37,900	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.17	U			633	N	159	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.17	U			1,350	N	353	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.17	U			346	N	989	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.17	U			NS	NS	8,070	N	NMED			
Phenol	108-95-2	mg/kg	0.17	U			NS	NS	77,400	N	NMED			
Pyrene	129-00-0	mg/kg	0.17	U			NS	NS	7,530	N	NMED			

TABLE D1-B21-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID B21
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	8,070	N	NMED[C]			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	27	N	NMED[C]			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U			NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U			2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U			NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U			1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U			11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			626	N	2,420	N	NMED[C]			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.02	U			2,440	N	17	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.02	U			55	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.01	U			58	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.01	U			85	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.01	U			85	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.01	U			85	N	5	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.01	U			85	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (3)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000014	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg		U	0.0000019	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.000000077	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.00000039	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.000000098	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000047	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000063	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000046	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg	0.0000000079	J	0.000000079	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.000000035	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.000000064	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.000000052	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000064	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.000000049	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.000000053	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg	0.00000004	J	0.0000004	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000043	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.000000048				0.00172	N	0.000226	N	NMED	2.78E-10	2.12E-04	

TABLE D1-B21-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID B21
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	22,000				NS	NS	41,400	N	NMED		5.31E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	J			NS	NS	142	N	NMED		1.06E-03	
Arsenic	7440-38-2	mg/kg	1.6				216	N	41	N	NMED		3.88E-02	
Barium	7440-39-3	mg/kg	400				NS	NS	4,390	N	NMED		9.11E-02	
Beryllium	7440-41-7	mg/kg	0.79	J			2,710	N	148	N	NMED		5.34E-03	
Cadmium	7440-43-9	mg/kg	0.48	J			3,610	N	72	N	NMED		6.66E-03	
Calcium	7440-70-2	mg/kg	14,000				NS	NS	8,850,000	N	NMED		1.58E-03	
Chromium (Total) (4)	7440-47-3	mg/kg	11				468	N	134	N	NMED		8.21E-02	
Cobalt	7440-48-4	mg/kg	4.7				722	N	37	N	NMED		1.28E-01	Endocrine
Copper	7440-50-8	mg/kg	39				NS	NS	14,200	N	NMED		2.75E-03	
Iron	7439-89-6	mg/kg	9,900				NS	NS	248,000	N	NMED		3.99E-02	
Lead	7439-92-1	mg/kg	8.9				NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	6,700				NS	NS	1,550,000	N	NMED		4.32E-03	
Manganese	7439-96-5	mg/kg	570				NS	NS	464	Y	NMED		1.23E+00	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.024	J			NS	NS	21	N	NMED		1.16E-03	
Nickel	7440-02-0	mg/kg	8.4				20,500	N	753	N	NMED		1.12E-02	
Potassium	7440-09-7	mg/kg	1,600				NS	NS	20,800,000	N	NMED		7.69E-05	
Selenium	7782-49-2	mg/kg	1.5				NS	NS	1,750	N	NMED		8.57E-04	
Silver	7440-22-4	mg/kg	0.03	J			NS	NS	1,770	N	NMED		1.69E-05	
Sodium	7440-23-5	mg/kg	36				NS	NS	10,200,000	N	NMED		3.53E-06	
Thallium	7440-28-0	mg/kg	0.065	J			NS	NS	4	N	NMED		1.84E-02	
Vanadium	7440-62-2	mg/kg	17				NS	NS	614	N	NMED		2.77E-02	
Zinc	7440-66-6	mg/kg	23				NS	NS	106,000	N	NMED		2.17E-04	

TABLE D1-B21-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID B21
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.32	U			NS	NS	12	N	NMED			
Nitrate	14797-55-8	mg/kg	2.3	J			NS	NS	566,000	N	NMED		4.06E-06	
Perchlorate	14797-73-0	mg/kg	0.0042	U			NS	NS	248	N	NMED			
										Cumulative Risk/Hazard		**3E-10**	**2.2**	
										Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	1.8
Endocrine	0.13
All Others	0.33

Notes:

[s] = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update).

2) NMED[C] = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

3) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

4) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be disucssed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect

TABLE D1-B22-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AF25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0042	U			28.1	N	2,350	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0042	U			NS	NS	14,400	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0042	U			7.98	N	1,560	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0042	U			18.8	N	2.61	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0042	U			78.6	N	15,600	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0042	U			NS	NS	440	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0042	U			29.3	N	141	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0042	U			NS	NS	63	N	RSL			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.01	U			0.051	N	7.09	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0042	U			240	N	82.9	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0042	U			NS	NS	300	N	RSL			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.01	U			0.0858	N	5.88	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0042	U			0.672	N	135	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0042	U			NS	NS	2,150	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0042	U			8.32	N	55.6	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0042	U			17.8	N	29	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0042	U			NS	NS	270	N	RSL			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0042	U			1,290	N	5,480	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0042	U			NS	NS	1,600	N	RSL			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0042	U			1,290	N	5,480	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0042	U			17.8	N	29	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.14	J			NS	NS	37,400	N	NMED		3.74E-06	
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0042	U			NS	NS	1,560	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.0042	U			NS	NS	200	N	RSL			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0042	U			NS	NS	1,600	N	RSL			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0042	U			NS	NS	5,810	N	RSL			
Acetone	67-64-1	mg/kg	3.1	J			NS	NS	66,300	N	NMED		4.68E-05	
Benzene	71-43-2	mg/kg	0.0042	U			17.8	N	114	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.0042	U			NS	NS	290	N	RSL			
Bromochloromethane	74-97-5	mg/kg	0.0042	U			NS	NS	150	N	RSL			
Bromodichloromethane	75-27-4	mg/kg	0.0042	U			6.19	N	1,560	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0042	U			674	N	1,230	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0042	U			NS	NS	17.7	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.0042	U			NS	NS	1,550	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0042	U			10.7	N	144	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0042	U			NS	NS	378	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0042	U			NS	NS	19,000	N	NMED			
Chloroform	67-66-3	mg/kg	0.0042	U			5.9	N	306	N	NMED			
Chloromethane	74-87-3	mg/kg	0.01	U			41.1	N	268	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0042	U			NS	NS	156	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0042	U			29.3	N	141	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0042	U			13.9	N	1,230	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0042	U			NS	NS	57.9	N	NMED			

TABLE D1-B22-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AF25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Dichlorodifluoromethane	75-71-8	mg/kg	0.0042	U			NS	NS	182	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.0042	U			75.1	N	3,930	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0042	U			68.3	N	61.6	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0042	U			NS	NS	2,360	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.01	U			NS	NS	764	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0042	U			975	N	37,800	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.021	U			766	N	409	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0042	U			NS	NS	3,900	N	RSL			
n-Propylbenzene	103-65-1	mg/kg	0.0042	U			NS	NS	3,800	N	RSL			
Naphthalene	91-20-3	mg/kg	0.0042	U			22.6	N	162	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0052	U			NS	NS	805	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.0042	U			NS	NS	2,360	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.0042	U			NS	NS	7,800	N	RSL			
Styrene	100-42-5	mg/kg	0.0042	U			NS	NS	7,260	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0042	U			NS	NS	7,800	N	RSL			
Tetrachloroethene	127-18-4	mg/kg	0.0042	U			337	N	111	N	NMED			
Toluene	108-88-3	mg/kg	0.016	J			NS	NS	5,230	N	NMED		3.06E-06	
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0042	U			NS	NS	210	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0042	U			29.3	N	141	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0042	U			15.5	N	6.77	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0042	U			NS	NS	1,230	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0042	U			0.742	N	113	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	U			240	N	82.9	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	U			NS	NS	2,150	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	U			1,290	N	5,480	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	U			1,290	N	5,480	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	U			NS	NS	6,160	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	U			484	N	61.6	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	U			NS	NS	185	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	U			NS	NS	1,230	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	U			NS	NS	123	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	U			17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	U			3.56	N	18.5	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	U			NS	NS	6,260	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.17	U			NS	NS	391	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.17	U			NS	NS	232	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	U			NS	NS	3,200	N	RSL			
2-Nitroaniline	88-74-4	mg/kg	0.17	U			NS	NS	630	N	RSL			
2-Nitrophenol	88-75-5	mg/kg	0.17	U			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	U			11.8	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.17	U			270	N	250	N	RSL[S]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	U			NS	NS	4.93	N	NMED			
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	U			NS	NS	NS	NS	NS			

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HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AF25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	U			NS	NS	6,300	N	RSL			
4-Chloroaniline	106-47-8	mg/kg	0.17	U			27	N	32	N	RSL			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	U			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.17	U			270	N	250	N	RSL			
4-Nitrophenol	100-02-7	mg/kg	0.17	U			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.17	U			NS	NS	3,480	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.17	U			NS	NS	1,740	N	NMED[$]			
Anthracene	120-12-7	mg/kg	0.17	U			NS	NS	17,400	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.17	U			1.53	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.13	U			1.12	N	17.4	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	U			1.53	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	U			NS	NS	1,740	N	NMED[$]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	U			15.3	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.17	U			NS	NS	250,000	N	RSL			
Benzyl Alcohol	100-51-6	mg/kg	0.17	U			NS	NS	6,300	N	RSL			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	U			NS	NS	190	N	RSL			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	U			3.11	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	U			99.3	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	U			380	N	1,230	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.17	U			2,900	N	13,000	N	RSL			
Carbazole	86-74-8	mg/kg	0.17	U			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.17	U			153	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.17	U			NS	NS	6,160	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.17	U			NS	NS	630	N	RSL			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	U			0.153	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.17	U			NS	NS	78	N	RSL			
Diethylphthalate	84-66-2	mg/kg	0.072	J			NS	NS	49,300	N	NMED		1.46E-06	
Dimethylphthalate	131-11-3	mg/kg	0.17	U			NS	NS	61,600	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.17	U			NS	NS	2,320	N	NMED			
Fluorene	86-73-7	mg/kg	0.17	U			NS	NS	2,320	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.17	U			3.33	N	49.3	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	U			68.3	N	61.6	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.17	U			133	N	43.1	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	U			1.53	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.17	U			5,610	N	12,300	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.021	UJ			0.78	N	NS	NS	RSL			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.17	U			0.0234	Y	0.493	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	U			1,090	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.17	U			22.6	N	162	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.17	U			60.4	N	131	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.17	U			9.85	N	234	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.17	U			NS	NS	1,740	N	NMED			
Phenol	108-95-2	mg/kg	0.17	U			NS	NS	18,500	N	NMED			
Pyrene	129-00-0	mg/kg	0.17	U			NS	NS	1,740	N	NMED			

TABLE D1-B22-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AF25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	2,200	N	RSL			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	6.3	N	RSL			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			211	N	36	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			3.56	N	18.5	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	7.7	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			31.6	N	70.4	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	6.16	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U			NS	NS	7.64	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			333	N	247	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U			83.1	N	301	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U			NS	NS	156	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U			60.4	N	131	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U			313	N	6.16	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NS	NS	3,850	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			1,300	N	570	N	RSL			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.02	U			69.6	N	3.98	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.02	U			1.81	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.0099	U			1.86	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.0099	U			2.43	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.0099	U			2.43	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.0099	U			2.43	N	1.14	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.0099	U			2.43	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (2)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg	0.00000000011	J	0.00000038	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000015	J	0.000005	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000027	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.00000013	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000012	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000089	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000071	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000086	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000071	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.00000011	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.000000072	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.000000092	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000088	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.000000082	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.000000094	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000028	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000087	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.0000000016				0.000049	N	0.0000506	N	NMED	3.29E-10	3.19E-05	

TABLE D1-B22-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AF25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	20,000				NS	NS	78,000	N	NMED		2.56E-01	Nervous
Antimony	7440-36-0	mg/kg	0.25				NS	NS	31.3	N	NMED		7.99E-03	
Arsenic	7440-38-2	mg/kg	1.6				7.07	N	13	N	NMED		1.23E-01	Heart/Endocrine
Barium	7440-39-3	mg/kg	260				NS	NS	15,600	N	NMED		1.67E-02	
Beryllium	7440-41-7	mg/kg	0.84	J			64,400	N	156	N	NMED		5.38E-03	
Cadmium	7440-43-9	mg/kg	0.41				85,900	N	70.5	N	NMED		5.82E-03	
Calcium	7440-70-2	mg/kg	15,000				NS	NS	13,000,000	N	NMED		1.15E-03	
Chromium (Total) (3)	7440-47-3	mg/kg	11				96.6	N	45,200	N	NMED		2.43E-04	
Cobalt	7440-48-4	mg/kg	4.6				17,200	N	23.4	N	NMED		1.97E-01	Endocrine
Copper	7440-50-8	mg/kg	55				NS	NS	3,130	N	NMED		1.76E-02	
Iron	7439-89-6	mg/kg	11,000				NS	NS	54,800	N	NMED		2.01E-01	GI
Lead	7439-92-1	mg/kg	12				NS	NS	200	N	RSL			
Magnesium	7439-95-4	mg/kg	6,200				NS	NS	15,600,000	N	NMED		3.97E-04	
Manganese	7439-96-5	mg/kg	530				NS	NS	10,500	N	NMED		5.05E-02	
Mercury (Elemental)	7439-97-6	mg/kg	0.023	J			NS	NS	23.8	N	NMED		9.66E-04	
Nickel	7440-02-0	mg/kg	9.3				595,000	N	1,560	N	NMED		5.96E-03	
Potassium	7440-09-7	mg/kg	2,100				NS	NS	15,600,000	N	NMED		1.35E-04	
Selenium	7782-49-2	mg/kg	1.3				NS	NS	391	N	NMED		3.32E-03	
Silver	7440-22-4	mg/kg	0.026	J			NS	NS	391	N	NMED		6.65E-05	
Sodium	7440-23-5	mg/kg	46				NS	NS	7,820,000	N	NMED		5.88E-06	
Thallium	7440-28-0	mg/kg	0.091	J			NS	NS	0.782	N	NMED		1.16E-01	Hair/Coat/Eyes
Vanadium	7440-62-2	mg/kg	12				NS	NS	394	N	NMED		3.05E-02	
Zinc	7440-66-6	mg/kg	24				NS	NS	23,500	N	NMED		1.02E-03	

TABLE D1-B22-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID AF25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.32	U			NS	NS	11.2	N	NMED			
Nitrate	14797-55-8	mg/kg	5.7	J			NS	NS	125,000	N	NMED		4.56E-05	
Perchlorate	14797-73-0	mg/kg	0.0042	U			NS	NS	54.8	N	NMED			
										Cumulative Risk/Hazard		**3E-10**	**1.0**	
										Exceeds Target Level		**N**	**Y**	

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	0.26
Endocrine	0.32
GI	0.20
Heart	0.12
Hair/Coat	0.12
Eyes	0.12
All Others	0.15

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of Quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper Tolerance Limit

TABLE D1-B22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID B22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0042	U			137	N	39,400	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0042	U			NS	NS	72,500	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0042	U			39	N	26,000	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0042	U			92	N	12	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0042	U			383	N	260,000	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0042	U			NS	NS	2,260	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0042	U			146	N	695	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0042	U			NS	NS	930	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.01	U			1	N	34	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0042	U			1,250	N	423	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0042	U			NS	NS	1,800	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.01	U			1	N	41	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0042	U			3	N	738	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0042	U			NS	NS	13,000	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0042	U			41	N	286	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0042	U			87	N	137	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0042	U			NS	NS	1,500	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0042	U			6,730	N	90,800	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0042	U			NS	NS	23,000	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0042	U			6,730	N	90,800	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0042	U			87	N	137	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.14	J			NS	NS	411,000	N	NMED		3.41E-07
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0042	U			NS	NS	26,000	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0042	U			NS	NS	1,300	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0042	U			NS	NS	23,000	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0042	U			NS	NS	81,600	N	RSL		
Acetone	67-64-1	mg/kg	3.1	J			NS	NS	960,000	N	NMED		3.23E-06
Benzene	71-43-2	mg/kg	0.0042	U			87	N	729	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0042	U			NS	NS	1,800	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0042	U			NS	NS	630	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0042	U			30	N	26,000	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0042	U			1,760	N	18,300	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0042	U			NS	NS	95	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0042	U			NS	NS	8,540	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0042	U			53	N	1,020	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0042	U			NS	NS	2,160	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0042	U			NS	NS	89,500	N	NMED		
Chloroform	67-66-3	mg/kg	0.0042	U			29	N	2,000	N	NMED		
Chloromethane	74-87-3	mg/kg	0.01	U			201	N	1,260	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0042	U			NS	NS	2,600	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0042	U			146	N	695	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0042	U			67	N	18,300	N	NMED		

TABLE D1-B22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID B22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0042	U			NS	NS	288	N	NMED		
Dichlorodifluoromethane	75-71-8	mg/kg	0.0042	U			NS	NS	865	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0042	U			29,000	N	368	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0042	U			52	N	916	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0042	U			NS	NS	14,200	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.01	U			NS	NS	3,730	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0042	U			4,820	N	178,000	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.021	U			14,400	N	5,130	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0042	U			NS	NS	58,000	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0042	U			NS	NS	24,000	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0042	U			108	N	843	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0052	U			NS	NS	3,940	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0042	U			NS	NS	14,200	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0042	U			NS	NS	120,000	N	RSL		
Styrene	100-42-5	mg/kg	0.0042	U			NS	NS	51,300	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0042	U			NS	NS	120,000	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0042	U			1,650	N	629	N	NMED		
Toluene	108-88-3	mg/kg	0.016	J			NS	NS	61,300	N	NMED		2.61E-07
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0042	U			NS	NS	1,100	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0042	U			146	N	695	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0042	U			112	N	37	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0042	U			NS	NS	6,030	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0042	U			28	N	46	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	U			1,250	N	423	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	U			NS	NS	13,000	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	U			6,730	N	90,800	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	U			6,730	N	90,800	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	U			NS	NS	91,600	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	U			2,330	N	916	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	U			NS	NS	2,750	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	U			NS	NS	18,300	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	U			NS	NS	1,830	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	U			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	U			17	N	276	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	U			NS	NS	104,000	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.17	U			NS	NS	6,490	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.17	U			NS	NS	3,370	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	U			NS	NS	41,000	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.17	U			NS	NS	8,000	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.17	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	U			NS	NS	410	N	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.17	U			1,100	N	3,300	N	RSL[S]		

TABLE D1-B22-2
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MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	U			NS	NS	73	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	U			NS	NS	NS	NS	NS		
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	U			NS	NS	82,000	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.17	U			110	N	410	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.17	U			1,100	N	3,300	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.17	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.17	U			NS	NS	50,500	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.17	U			NS	NS	25,300	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.17	U			NS	NS	253,000	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.17	U			32	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.13	U			24	N	251	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	U			32	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	U			NS	NS	25,300	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	U			323	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.17	U			NS	NS	3,300,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.17	U			NS	NS	82,000	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	U			NS	NS	2,500	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	U			16	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	U			519	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	U			1,830	N	18,300	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.17	U			12,000	N	160,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.17	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.17	U			3,230	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.17	U			NS	NS	91,600	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.17	U			NS	NS	8,200	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	U			3	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.17	U			NS	NS	1,200	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.072	J			NS	NS	733,000	N	NMED		9.82E-08
Dimethylphthalate	131-11-3	mg/kg	0.17	U			NS	NS	916,000	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.17	U			NS	NS	33,700	N	NMED		
Fluorene	86-73-7	mg/kg	0.17	U			NS	NS	33,700	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.17	U			16	N	733	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	U			52	N	916	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.17	U			641	N	641	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	U			32	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.17	U			27,000	N	183,000	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.021	UJ			3	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.17	U			1	N	7	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	U			5,240	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.17	U			108	N	843	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.17	U			293	N	1,540	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.17	U			45	N	3,180	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.17	U			NS	NS	27,500	N	NMED		
Phenol	108-95-2	mg/kg	0.17	U			NS	NS	275,000	N	NMED		
Pyrene	129-00-0	mg/kg	0.17	U			NS	NS	25,300	N	NMED		

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MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U			NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U			428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U			NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U			293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U			1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			5,300	N	7,400	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.02	U			304	N	57	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.02	U			9	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.0099	U			9	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.0099	U			11	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.0099	U			11	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.0099	U			11	N	16	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.0099	U			11	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg	0.00000000011	J	0.00000038	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000015	J	0.000005	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000027	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.00000013	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000012	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000089	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000071	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000086	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000071	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.00000011	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.000000072	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.000000092	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000088	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.000000082	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.000000094	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000028	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000087	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.0000000016				0.000238	N	0.000808	N	NMED	6.78E-11	2.00E-06

TABLE D1-B22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID B22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	20,000				NS	NS	1,290,000	N	NMED		1.55E-02
Antimony	7440-36-0	mg/kg	0.25				NS	NS	519	N	NMED		4.82E-04
Arsenic	7440-38-2	mg/kg	1.6				36	N	208	N	NMED	4.46E-07	7.69E-03
Barium	7440-39-3	mg/kg	260				NS	NS	255,000	N	NMED		1.02E-03
Beryllium	7440-41-7	mg/kg	0.84	J			313,000	N	2,580	N	NMED	2.68E-11	3.26E-04
Cadmium	7440-43-9	mg/kg	0.41				417,000	N	1,110	N	NMED	9.83E-12	3.69E-04
Calcium	7440-70-2	mg/kg	15,000				NS	NS	32,400,000	N	NMED		4.63E-04
Chromium (Total) (3)	7440-47-3	mg/kg	11				505	N	314,000	N	NMED	2.18E-07	3.50E-05
Cobalt	7440-48-4	mg/kg	4.6				83,400	N	388	N	NMED	5.52E-10	1.19E-02
Copper	7440-50-8	mg/kg	55				NS	NS	51,900	N	NMED		1.06E-03
Iron	7439-89-6	mg/kg	11,000				NS	NS	908,000	N	NMED		1.21E-02
Lead	7439-92-1	mg/kg	12				NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	6,200				NS	NS	5,680,000	N	NMED		1.09E-03
Manganese	7439-96-5	mg/kg	530				NS	NS	160,000	N	NMED		3.31E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.023	J			NS	NS	112	N	NMED		2.05E-04
Nickel	7440-02-0	mg/kg	9.3				2,890,000	N	25,700	N	NMED	3.22E-11	3.62E-04
Potassium	7440-09-7	mg/kg	2,100				NS	NS	76,200,000	N	NMED		2.76E-05
Selenium	7782-49-2	mg/kg	1.3				NS	NS	6,490	N	NMED		2.00E-04
Silver	7440-22-4	mg/kg	0.026	J			NS	NS	6,490	N	NMED		4.01E-06
Sodium	7440-23-5	mg/kg	46				NS	NS	37,300,000	N	NMED		1.23E-06
Thallium	7440-28-0	mg/kg	0.091	J			NS	NS	13	N	NMED		7.00E-03
Vanadium	7440-62-2	mg/kg	12				NS	NS	6,530	N	NMED		1.84E-03
Zinc	7440-66-6	mg/kg	24				NS	NS	38,900	N	NMED		6.17E-04

TABLE D1-B22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID B22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.32	U			NS	NS	63	N	NMED		
Nitrate	14797-55-8	mg/kg	5.7	J			NS	NS	2,080,000	N	NMED		2.74E-06
Perchlorate	14797-73-0	mg/kg	0.0042	U			NS	NS	908	N	NMED		
										Cumulative Risk/Hazard		**7E-07**	**0.07**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper tolerance limit

TABLE D1-B22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID B22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0042	U			659	N	10,600	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0042	U			NS	NS	13,600	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0042	U			197	N	7,080	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0042	U			4,300	N	2	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0042	U			1,820	N	70,800	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0042	U			NS	NS	424	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0042	U			781	N	130	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0042	U			NS	NS	283	N	NMED[C]			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.01	U			8	N	6	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0042	U			8,540	N	79	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0042	U			NS	NS	492	N	NMED[C]			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.01	U			6	N	8	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0042	U			16	N	140	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0042	U			NS	NS	2,500	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0042	U			195	N	54	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0042	U			415	N	25	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0042	U			NS	NS	422	N	NMED[C]			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0042	U			45,900	N	24,800	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0042	U			NS	NS	7,080	N	NMED[C]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0042	U			45,900	N	24,800	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0042	U			415	N	25	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.14	J			NS	NS	90,700	N	NMED		1.54E-06	
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0042	U			NS	NS	7,080	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.0042	U			NS	NS	599	N	NMED[C]			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0042	U			NS	NS	7,080	N	NMED[C]			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0042	U			NS	NS	20,400	N	NMED[C]			
Acetone	67-64-1	mg/kg	3.1	J			NS	NS	242,000	N	NMED		1.28E-05	
Benzene	71-43-2	mg/kg	0.0042	U			423	N	142	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.0042	U			NS	NS	538	N	NMED[C]			
Bromochloromethane	74-97-5	mg/kg	0.0042	U			NS	NS	296	N	NMED[C]			
Bromodichloromethane	75-27-4	mg/kg	0.0042	U			143	N	7,080	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0042	U			23,700	N	5,380	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0042	U			NS	NS	18	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.0042	U			NS	NS	1,620	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0042	U			252	N	202	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0042	U			NS	NS	412	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0042	U			NS	NS	16,600	N	NMED			
Chloroform	67-66-3	mg/kg	0.0042	U			134	N	391	N	NMED			
Chloromethane	74-87-3	mg/kg	0.01	U			956	N	235	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0042	U			NS	NS	708	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0042	U			781	N	130	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0042	U			340	N	5,380	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0042	U			NS	NS	54	N	NMED			

TABLE D1-B22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID B22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Dichlorodifluoromethane	75-71-8	mg/kg	0.0042	U			NS	NS	161	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.0042	U			1,770	N	5,800	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0042	U			2,400	N	269	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0042	U			NS	NS	2,740	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.01	U			NS	NS	696	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0042	U			24,200	N	33,100	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.021	U			89,600	N	1,210	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0042	U			NS	NS	17,700	N	NMED[C]			
n-Propylbenzene	103-65-1	mg/kg	0.0042	U			NS	NS	6,730	N	NMED[C]			
Naphthalene	91-20-3	mg/kg	0.0042	U			633	N	159	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0052	U			NS	NS	736	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.0042	U			NS	NS	2,740	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.0042	U			NS	NS	35,400	N	NMED[C]			
Styrene	100-42-5	mg/kg	0.0042	U			NS	NS	10,200	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0042	U			NS	NS	35,400	N	NMED[C]			
Tetrachloroethene	127-18-4	mg/kg	0.0042	U			7,910	N	120	N	NMED			
Toluene	108-88-3	mg/kg	0.016	J			NS	NS	14,000	N	NMED		1.14E-06	
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0042	U			NS	NS	206	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0042	U			781	N	130	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0042	U			5,370	N	7	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0042	U			NS	NS	1,130	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0042	U			161	N	162	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	U			8,540	N	79	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	U			NS	NS	2,500	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	U			45,900	N	24,800	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	U			45,900	N	24,800	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	U			NS	NS	26,900	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	U			17,000	N	269	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	U			NS	NS	807	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	U			NS	NS	5,380	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	U			NS	NS	538	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	U			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	U			165	N	81	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	U			NS	NS	28,300	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.17	U			NS	NS	1,770	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.17	U			NS	NS	1,000	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	U			NS	NS	13,500	N	NMED[C]			
2-Nitroaniline	88-74-4	mg/kg	0.17	U			NS	NS	2,690	N	NMED[C]			
2-Nitrophenol	88-75-5	mg/kg	0.17	U			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	U			410	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.17	U			135	N	1,080	N	NMED[SC]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	U			NS	NS	22	N	NMED			

TABLE D1-B22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID B22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	U			NS	NS	NS	NS	NS			
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	U			NS	NS	26,900	N	NMED[C]			
4-Chloroaniline	106-47-8	mg/kg	0.17	U			14	N	135	N	NMED[C]			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	U			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.17	U			135	N	1,080	N	NMED[C]			
4-Nitrophenol	100-02-7	mg/kg	0.17	U			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.17	U			NS	NS	15,100	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.17	U			NS	NS	7,530	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.17	U			NS	NS	75,300	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.17	U			240	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.13	U			173	N	15	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	U			240	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	U			NS	NS	7,530	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	U			2,310	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.17	U			NS	NS	1,080,000	N	NMED[C]			
Benzyl Alcohol	100-51-6	mg/kg	0.17	U			NS	NS	26,900	N	NMED[C]			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	U			NS	NS	807	N	NMED[C]			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	U			2	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	U			3,540	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	U			13,400	N	5,380	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.17	U			1,420	N	53,800	N	NMED[C]			
Carbazole	86-74-8	mg/kg	0.17	U			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.17	U			23,100	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.17	U			NS	NS	26,900	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.17	U			NS	NS	2,690	N	NMED[C]			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	U			24	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.17	U			NS	NS	269	N	NMED[C]			
Diethylphthalate	84-66-2	mg/kg	0.072	J			NS	NS	215,000	N	NMED		3.35E-07	
Dimethylphthalate	131-11-3	mg/kg	0.17	U			NS	NS	269,000	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.17	U			NS	NS	10,000	N	NMED			
Fluorene	86-73-7	mg/kg	0.17	U			NS	NS	10,000	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.17	U			117	N	215	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	U			2,400	N	269	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.17	U			4,670	N	188	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	U			240	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.17	U			198,000	N	53,700	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.021	UJ			0.38	N	NA	N	NMED[C]			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.17	U			4	N	2	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	U			37,900	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.17	U			633	N	159	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.17	U			1,350	N	353	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.17	U			346	N	989	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.17	U			NS	NS	8,070	N	NMED			
Phenol	108-95-2	mg/kg	0.17	U			NS	NS	77,400	N	NMED			
Pyrene	129-00-0	mg/kg	0.17	U			NS	NS	7,530	N	NMED			

TABLE D1-B22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID B22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	8,070	N	NMED[C]			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	27	N	NMED[C]			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U			NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U			2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U			NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U			1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U			11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			626	N	2,420	N	NMED[C]			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.02	U			2,440	N	17	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.02	U			55	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.0099	U			58	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.0099	U			85	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.0099	U			85	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.0099	U			85	N	5	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.0099	U			85	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (3)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg	0.00000000011	J	0.00000038	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000015	J	0.000005	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000027	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.00000013	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000012	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000089	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000071	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000086	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000071	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.00000011	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.000000072	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.000000092	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000088	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.000000082	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.000000094	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000028	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000087	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.0000000016				0.00172	N	0.000226	N	NMED	9.38E-12	7.14E-06	

TABLE D1-B22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID B22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	20,000				NS	NS	41,400	N	NMED		4.83E-01	Nervous
Antimony	7440-36-0	mg/kg	0.25				NS	NS	142	N	NMED		1.76E-03	
Arsenic	7440-38-2	mg/kg	1.6				216	N	41	N	NMED	7.41E-08	3.88E-02	
Barium	7440-39-3	mg/kg	260				NS	NS	4,390	N	NMED		5.92E-02	
Beryllium	7440-41-7	mg/kg	0.84	J			2,710	N	148	N	NMED	3.10E-09	5.68E-03	
Cadmium	7440-43-9	mg/kg	0.41				3,610	N	72	N	NMED	1.14E-09	5.69E-03	
Calcium	7440-70-2	mg/kg	15,000				NS	NS	8,850,000	N	NMED		1.69E-03	
Chromium (Total) (4)	7440-47-3	mg/kg	11				468	N	134	N	NMED	2.35E-07	8.21E-02	
Cobalt	7440-48-4	mg/kg	4.6				722	N	37	N	NMED	6.37E-08	1.25E-01	Endocrine
Copper	7440-50-8	mg/kg	55				NS	NS	14,200	N	NMED		3.87E-03	
Iron	7439-89-6	mg/kg	11,000				NS	NS	248,000	N	NMED		4.44E-02	
Lead	7439-92-1	mg/kg	12				NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	6,200				NS	NS	1,550,000	N	NMED		4.00E-03	
Manganese	7439-96-5	mg/kg	530				NS	NS	464	Y	NMED		1.14E+00	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.023	J			NS	NS	21	N	NMED		1.11E-03	
Nickel	7440-02-0	mg/kg	9.3				20,500	N	753	N	NMED	4.54E-09	1.24E-02	
Potassium	7440-09-7	mg/kg	2,100				NS	NS	20,800,000	N	NMED		1.01E-04	
Selenium	7782-49-2	mg/kg	1.3				NS	NS	1,750	N	NMED		7.43E-04	
Silver	7440-22-4	mg/kg	0.026	J			NS	NS	1,770	N	NMED		1.47E-05	
Sodium	7440-23-5	mg/kg	46				NS	NS	10,200,000	N	NMED		4.51E-06	
Thallium	7440-28-0	mg/kg	0.091	J			NS	NS	4	N	NMED		2.57E-02	
Vanadium	7440-62-2	mg/kg	12				NS	NS	614	N	NMED		1.95E-02	
Zinc	7440-66-6	mg/kg	24				NS	NS	106,000	N	NMED		2.26E-04	

TABLE D1-B22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID B22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.32	U			NS	NS	12	N	NMED			
Nitrate	14797-55-8	mg/kg	5.7	J			NS	NS	566,000	N	NMED		1.01E-05	
Perchlorate	14797-73-0	mg/kg	0.0042	U			NS	NS	248	N	NMED			
										Cumulative Risk/Hazard		**4E-07**	**2.1**	
										Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	1.6
Endocrine	0.13
All Others	0.31

Notes:

[s] = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update).

2) NMED[C] = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

3) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

4) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
DL = Detection limit
J = Estimated
LOD = Limit of detection
LOQ = Limit of quantitation
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper tolerance limit

TABLE D1-C8-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID C8
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0016	U			28.1	N	2,350	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0016	U			NS	NS	14,400	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0016	U			7.98	N	1,560	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0016	U			18.8	N	2.61	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0016	U			78.6	N	15,600	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0016	U			NS	NS	440	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0016	U			29.3	N	141	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0016	U			NS	NS	63	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.004	U			0.051	N	7.09	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0016	U			240	N	82.9	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0016	U			NS	NS	300	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.004	U			0.0858	N	5.88	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0016	U			0.672	N	135	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0016	U			NS	NS	2,150	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0016	U			8.32	N	55.6	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0016	U			17.8	N	29	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0016	U			NS	NS	270	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0016	U			1,290	N	5,480	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0016	U			NS	NS	1,600	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0016	U			1,290	N	5,480	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0016	U			17.8	N	29	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0024	U			NS	NS	37,400	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0016	U			NS	NS	1,560	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0016	U			NS	NS	200	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0016	U			NS	NS	1,600	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0016	U			NS	NS	5,810	N	RSL		
Acetone	67-64-1	mg/kg	0.037				NS	NS	66,300	N	NMED		5.58E-07
Benzene	71-43-2	mg/kg	0.0025	J			17.8	N	114	N	NMED	1.40E-09	2.19E-05
Bromobenzene	108-86-1	mg/kg	0.0016	U			NS	NS	290	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0016	U			NS	NS	150	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0016	U			6.19	N	1,560	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0016	U			674	N	1,230	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0016	U			NS	NS	17.7	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0016	U			NS	NS	1,550	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0016	U			10.7	N	144	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0016	U			NS	NS	378	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0016	U			NS	NS	19,000	N	NMED		
Chloroform	67-66-3	mg/kg	0.0016	U			5.9	N	306	N	NMED		
Chloromethane	74-87-3	mg/kg	0.004	U			41.1	N	268	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0016	U			NS	NS	156	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0016	U			29.3	N	141	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0016	U			13.9	N	1,230	N	NMED		
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0016	U			NS	NS	57.9	N	NMED		

TABLE D1-C8-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID C8
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dichlorodifluoromethane	75-71-8	mg/kg	0.0016	U			NS	NS	182	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0016	U			75.1	N	3,930	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0016	U			68.3	N	61.6	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0016	U			NS	NS	2,360	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.004	U			NS	NS	764	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0016	U			975	N	37,800	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.0081	U			766	N	409	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0016	U			NS	NS	3,900	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0016	U			NS	NS	3,800	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0016	U			22.6	N	162	N	NMED		
o-Xylene	95-47-6	mg/kg	0.002	U			NS	NS	805	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0016	U			NS	NS	2,360	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0016	U			NS	NS	7,800	N	RSL		
Styrene	100-42-5	mg/kg	0.0016	U			NS	NS	7,260	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0016	U			NS	NS	7,800	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0016	U			337	N	111	N	NMED		
Toluene	108-88-3	mg/kg	0.0022	J			NS	NS	5,230	N	NMED		4.21E-07
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0016	U			NS	NS	210	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0016	U			29.3	N	141	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0016	U			15.5	N	6.77	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0016	U			NS	NS	1,230	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0016	U			0.742	N	113	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	U			240	N	82.9	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	U			NS	NS	2,150	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	U			1,290	N	5,480	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	U			1,290	N	5,480	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	U			NS	NS	6,160	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	U			484	N	61.6	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	U			NS	NS	185	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	U			NS	NS	1,230	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	U			NS	NS	123	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	U			17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	U			3.56	N	18.5	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	U			NS	NS	6,260	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.17	U			NS	NS	391	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.17	U			NS	NS	232	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	U			NS	NS	3,200	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.17	U			NS	NS	630	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.17	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	U			11.8	N	NS	NS	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.17	U			270	N	250	N	RSL[S]		
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	U			NS	NS	4.93	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	U			NS	NS	NS	NS	NS		

TABLE D1-C8-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID C8
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	U			NS	NS	6,300	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.17	U			27	N	32	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.17	U			270	N	250	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.17	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.17	U			NS	NS	3,480	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.17	U			NS	NS	1,740	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.17	U			NS	NS	17,400	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.17	U			1.53	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.13	U			1.12	N	17.4	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	U			1.53	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	U			NS	NS	1,740	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	U			15.3	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.17	U			NS	NS	250,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.17	U			NS	NS	6,300	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	U			NS	NS	190	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	U			3.11	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	U			99.3	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	U			380	N	1,230	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.17	U			2,900	N	13,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.17	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.17	U			153	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.17	U			NS	NS	6,160	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.17	U			NS	NS	630	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	U			0.153	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.17	U			NS	NS	78	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.17	U			NS	NS	49,300	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.17	U			NS	NS	61,600	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.17	U			NS	NS	2,320	N	NMED		
Fluorene	86-73-7	mg/kg	0.17	U			NS	NS	2,320	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.17	U			3.33	N	49.3	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	U			68.3	N	61.6	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.17	U			133	N	43.1	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	U			1.53	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.17	U			5,610	N	12,300	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	U			0.78	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.02	UJ			0.0234	N	0.493	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	U			1,090	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.17	U			22.6	N	162	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.17	U			60.4	N	131	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.17	U			9.85	N	234	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.17	U			NS	NS	1,740	N	NMED		
Phenol	108-95-2	mg/kg	0.17	U			NS	NS	18,500	N	NMED		
Pyrene	129-00-0	mg/kg	0.17	U			NS	NS	1,740	N	NMED		

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FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U			NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.19	J			83.1	N	301	N	NMED	2.29E-08	6.31E-04
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U			NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U			60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U			313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.1				NS	NS	3,850	N	NMED		2.60E-05
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			1,300	N	570	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.02	U			69.6	N	3.98	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.02	U			1.81	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.01	U			1.86	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.01	U			2.43	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.01	U			2.43	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.01	U			2.43	N	1.14	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.01	U			2.43	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000023	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.00000000081	J	0.0000027	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000004	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.00000059	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.0000002	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000054	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000005	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000096	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.00000005	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.00000013	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.000000057	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg	0.0000000039	J	0.00000013	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg	0.00000025	J	0.00000025	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.000000074	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.0000125	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.0000001	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000056	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.00000025				0.000049	N	0.0000506	N	NMED	5.20E-08	5.03E-03

TABLE D1-C8-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID C8
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	10,000				NS	NS	78,000	N	NMED		1.28E-01
Antimony	7440-36-0	mg/kg	0.29				NS	NS	31.3	N	NMED		9.27E-03
Arsenic	7440-38-2	mg/kg	1.5				7.07	N	13	N	NMED	2.12E-06	1.15E-01
Barium	7440-39-3	mg/kg	140				NS	NS	15,600	N	NMED		8.97E-03
Beryllium	7440-41-7	mg/kg	0.43	J			64,400	N	156	N	NMED	6.68E-11	2.76E-03
Cadmium	7440-43-9	mg/kg	0.54				85,900	N	70.5	N	NMED	6.29E-11	7.66E-03
Calcium	7440-70-2	mg/kg	39,000				NS	NS	13,000,000	N	NMED		3.00E-03
Chromium (Total) (3)	7440-47-3	mg/kg	11				96.6	N	45,200	N	NMED	1.14E-06	2.43E-04
Cobalt	7440-48-4	mg/kg	3.9				17,200	N	23.4	N	NMED	2.27E-09	1.67E-01
Copper	7440-50-8	mg/kg	83				NS	NS	3,130	N	NMED		2.65E-02
Iron	7439-89-6	mg/kg	9,000				NS	NS	54,800	N	NMED		1.64E-01
Lead	7439-92-1	mg/kg	11				NS	NS	200	N	RSL		
Magnesium	7439-95-4	mg/kg	6,500				NS	NS	15,600,000	N	NMED		4.17E-04
Manganese	7439-96-5	mg/kg	310				NS	NS	10,500	N	NMED		2.95E-02
Mercury (Elemental)	7439-97-6	mg/kg	0.018	J			NS	NS	23.8	N	NMED		7.56E-04
Nickel	7440-02-0	mg/kg	11				595,000	N	1,560	N	NMED	1.85E-10	7.05E-03
Potassium	7440-09-7	mg/kg	1,900				NS	NS	15,600,000	N	NMED		1.22E-04
Selenium	7782-49-2	mg/kg	0.79				NS	NS	391	N	NMED		2.02E-03
Silver	7440-22-4	mg/kg	0.05	U			NS	NS	391	N	NMED		
Sodium	7440-23-5	mg/kg	60				NS	NS	7,820,000	N	NMED		7.67E-06
Thallium	7440-28-0	mg/kg	0.062	J			NS	NS	0.782	N	NMED		7.93E-02
Vanadium	7440-62-2	mg/kg	16	J			NS	NS	394	N	NMED		4.06E-02
Zinc	7440-66-6	mg/kg	21	J			NS	NS	23,500	N	NMED		8.94E-04

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HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID C8
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MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.32	U			NS	NS	11.2	N	NMED		
Nitrate	14797-55-8	mg/kg	3.9	J			NS	NS	125,000	N	NMED		3.12E-05
Perchlorate	14797-73-0	mg/kg	0.0041	U			NS	NS	54.8	N	NMED		
										Cumulative Risk/Hazard		**3E-06**	**0.8**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service

J = Estimated

mg/kg = milligrams per kilogram

NS = No Standard

U = Nondetect

UJ = Estimated Nondetect

TABLE D1-C8-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID C8
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0016	U			137	N	39,400	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0016	U			NS	NS	72,500	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0016	U			39	N	26,000	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0016	U			92	N	12	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0016	U			383	N	260,000	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0016	U			NS	NS	2,260	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0016	U			146	N	695	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0016	U			NS	NS	930	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.004	U			1	N	34	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0016	U			1,250	N	423	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0016	U			NS	NS	1,800	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.004	U			1	N	41	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0016	U			3	N	738	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0016	U			NS	NS	13,000	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0016	U			41	N	286	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0016	U			87	N	137	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0016	U			NS	NS	1,500	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0016	U			6,730	N	90,800	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0016	U			NS	NS	23,000	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0016	U			6,730	N	90,800	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0016	U			87	N	137	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0024	U			NS	NS	411,000	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0016	U			NS	NS	26,000	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0016	U			NS	NS	1,300	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0016	U			NS	NS	23,000	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0016	U			NS	NS	81,600	N	RSL		
Acetone	67-64-1	mg/kg	0.037				NS	NS	960,000	N	NMED		3.85E-08
Benzene	71-43-2	mg/kg	0.0025	J			87	N	729	N	NMED	2.87E-10	3.43E-06
Bromobenzene	108-86-1	mg/kg	0.0016	U			NS	NS	1,800	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0016	U			NS	NS	630	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0016	U			30	N	26,000	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0016	U			1,760	N	18,300	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0016	U			NS	NS	95	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0016	U			NS	NS	8,540	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0016	U			53	N	1,020	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0016	U			NS	NS	2,160	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0016	U			NS	NS	89,500	N	NMED		
Chloroform	67-66-3	mg/kg	0.0016	U			29	N	2,000	N	NMED		
Chloromethane	74-87-3	mg/kg	0.004	U			201	N	1,260	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0016	U			NS	NS	2,600	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0016	U			146	N	695	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0016	U			67	N	18,300	N	NMED		

TABLE D1-C8-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID C8
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0016	U			NS	NS	288	N	NMED		
Dichlorodifluoromethane	75-71-8	mg/kg	0.0016	U			NS	NS	865	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0016	U			29,000	N	368	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0016	U			52	N	916	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0016	U			NS	NS	14,200	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.004	U			NS	NS	3,730	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0016	U			4,820	N	178,000	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.0081	U			14,400	N	5,130	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0016	U			NS	NS	58,000	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0016	U			NS	NS	24,000	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0016	U			108	N	843	N	NMED		
o-Xylene	95-47-6	mg/kg	0.002	U			NS	NS	3,940	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0016	U			NS	NS	14,200	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0016	U			NS	NS	120,000	N	RSL		
Styrene	100-42-5	mg/kg	0.0016	U			NS	NS	51,300	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0016	U			NS	NS	120,000	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0016	U			1,650	N	629	N	NMED		
Toluene	108-88-3	mg/kg	0.0022	J			NS	NS	61,300	N	NMED		3.59E-08
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0016	U			NS	NS	1,100	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0016	U			146	N	695	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0016	U			112	N	37	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0016	U			NS	NS	6,030	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0016	U			28	N	46	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	U			1,250	N	423	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	U			NS	NS	13,000	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	U			6,730	N	90,800	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	U			6,730	N	90,800	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	U			NS	NS	91,600	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	U			2,330	N	916	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	U			NS	NS	2,750	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	U			NS	NS	18,300	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	U			NS	NS	1,830	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	U			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	U			17	N	276	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	U			NS	NS	104,000	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.17	U			NS	NS	6,490	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.17	U			NS	NS	3,370	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	U			NS	NS	41,000	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.17	U			NS	NS	8,000	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.17	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	U			NS	NS	410	N	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.17	U			1,100	N	3,300	N	RSL[S]		

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MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	U			NS	NS	73	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	U			NS	NS	NS	NS	NS		
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	U			NS	NS	82,000	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.17	U			110	N	410	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.17	U			1,100	N	3,300	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.17	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.17	U			NS	NS	50,500	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.17	U			NS	NS	25,300	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.17	U			NS	NS	253,000	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.17	U			32	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.13	U			24	N	251	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	U			32	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	U			NS	NS	25,300	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	U			323	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.17	U			NS	NS	3,300,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.17	U			NS	NS	82,000	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	U			NS	NS	2,500	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	U			16	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	U			519	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	U			1,830	N	18,300	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.17	U			12,000	N	160,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.17	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.17	U			3,230	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.17	U			NS	NS	91,600	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.17	U			NS	NS	8,200	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	U			3	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.17	U			NS	NS	1,200	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.17	U			NS	NS	733,000	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.17	U			NS	NS	916,000	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.17	U			NS	NS	33,700	N	NMED		
Fluorene	86-73-7	mg/kg	0.17	U			NS	NS	33,700	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.17	U			16	N	733	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	U			52	N	916	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.17	U			641	N	641	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	U			32	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.17	U			27,000	N	183,000	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	U			3	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.02	UJ			1	N	7	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	U			5,240	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.17	U			108	N	843	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.17	U			293	N	1,540	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.17	U			45	N	3,180	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.17	U			NS	NS	27,500	N	NMED		
Phenol	108-95-2	mg/kg	0.17	U			NS	NS	275,000	N	NMED		
Pyrene	129-00-0	mg/kg	0.17	U			NS	NS	25,300	N	NMED		

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MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U			NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.19	J			428	N	4,890	N	NMED	4.44E-09	3.89E-05
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U			NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U			293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U			1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.1				NS	NS	63,300	N	NMED		1.58E-06
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			5,300	N	7,400	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.02	U			304	N	57	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.02	U			9	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.01	U			9	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.01	U			11	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.01	U			11	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.01	U			11	N	16	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.01	U			11	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000023	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.00000000081	J	0.0000027	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000004	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.00000059	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.0000002	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000054	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000005	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000096	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.00000005	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.00000013	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.000000057	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg	0.0000000039	J	0.00000013	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg	0.00000025	J	0.00000025	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.000000074	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.0000125	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.0000001	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000056	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.00000025				0.000238	N	0.000808	N	NMED	1.07E-08	3.15E-04

TABLE D1-C8-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID C8
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	10,000				NS	NS	1,290,000	N	NMED		7.75E-03
Antimony	7440-36-0	mg/kg	0.29				NS	NS	519	N	NMED		5.59E-04
Arsenic	7440-38-2	mg/kg	1.5				36	N	208	N	NMED	4.18E-07	7.21E-03
Barium	7440-39-3	mg/kg	140				NS	NS	255,000	N	NMED		5.49E-04
Beryllium	7440-41-7	mg/kg	0.43	J			313,000	N	2,580	N	NMED	1.37E-11	1.67E-04
Cadmium	7440-43-9	mg/kg	0.54				417,000	N	1,110	N	NMED	1.29E-11	4.86E-04
Calcium	7440-70-2	mg/kg	39,000				NS	NS	32,400,000	N	NMED		1.20E-03
Chromium (Total) (3)	7440-47-3	mg/kg	11				505	N	314,000	N	NMED	2.18E-07	3.50E-05
Cobalt	7440-48-4	mg/kg	3.9				83,400	N	388	N	NMED	4.68E-10	1.01E-02
Copper	7440-50-8	mg/kg	83				NS	NS	51,900	N	NMED		1.60E-03
Iron	7439-89-6	mg/kg	9,000				NS	NS	908,000	N	NMED		9.91E-03
Lead	7439-92-1	mg/kg	11				NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	6,500				NS	NS	5,680,000	N	NMED		1.14E-03
Manganese	7439-96-5	mg/kg	310				NS	NS	160,000	N	NMED		1.94E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.018	J			NS	NS	112	N	NMED		1.61E-04
Nickel	7440-02-0	mg/kg	11				2,890,000	N	25,700	N	NMED	3.81E-11	4.28E-04
Potassium	7440-09-7	mg/kg	1,900				NS	NS	76,200,000	N	NMED		2.49E-05
Selenium	7782-49-2	mg/kg	0.79				NS	NS	6,490	N	NMED		1.22E-04
Silver	7440-22-4	mg/kg	0.05	U			NS	NS	6,490	N	NMED		
Sodium	7440-23-5	mg/kg	60				NS	NS	37,300,000	N	NMED		1.61E-06
Thallium	7440-28-0	mg/kg	0.062	J			NS	NS	13	N	NMED		4.77E-03
Vanadium	7440-62-2	mg/kg	16	J			NS	NS	6,530	N	NMED		2.45E-03
Zinc	7440-66-6	mg/kg	21	J			NS	NS	38,900	N	NMED		5.40E-04

TABLE D1-C8-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID C8
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.32	U			NS	NS	63	N	NMED		
Nitrate	14797-55-8	mg/kg	3.9	J			NS	NS	2,080,000	N	NMED		1.88E-06
Perchlorate	14797-73-0	mg/kg	0.0041	U			NS	NS	908	N	NMED		
										Cumulative Risk/Hazard		**7E-07**	**0.05**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
IEUBK = Integrated Exposure Uptake Biokentic Model
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect

TABLE D1-C8-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID C8
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Background Value (1)	Exceeds Background (Y/N)	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)																
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0016	U			NA	NA	659	N	10,600	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0016	U			NA	NA	NS	NS	13,600	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0016	U			NA	NA	197	N	7,080	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0016	U			NA	NA	4,300	N	2	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0016	U			NA	NA	1,820	N	70,800	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0016	U			NA	NA	NS	NS	424	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0016	U			NA	NA	781	N	130	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0016	U			NA	NA	NS	NS	283	N	NMED[C]			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.004	U			NA	NA	8	N	6	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0016	U			NA	NA	8,540	N	79	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0016	U			NA	NA	NS	NS	492	N	NMED[C]			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.004	U			NA	NA	6	N	8	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0016	U			NA	NA	16	N	140	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0016	U			NA	NA	NS	NS	2,500	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0016	U			NA	NA	195	N	54	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0016	U			NA	NA	415	N	25	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0016	U			NA	NA	NS	NS	422	N	NMED[C]			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0016	U			NA	NA	45,900	N	24,800	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0016	U			NA	NA	NS	NS	7,080	N	NMED[C]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0016	U			NA	NA	45,900	N	24,800	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0016	U			NA	NA	415	N	25	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.0024	U			NA	NA	NS	NS	90,700	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0016	U			NA	NA	NS	NS	7,080	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.0016	U			NA	NA	NS	NS	599	N	NMED[C]			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0016	U			NA	NA	NS	NS	7,080	N	NMED[C]			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0016	U			NA	NA	NS	NS	20,400	N	NMED[C]			
Acetone	67-64-1	mg/kg	0.037				NA	NA	NS	NS	242,000	N	NMED		1.53E-07	
Benzene	71-43-2	mg/kg	0.0025	J			NA	NA	423	N	142	N	NMED	5.91E-11	1.76E-05	
Bromobenzene	108-86-1	mg/kg	0.0016	U			NA	NA	NS	NS	538	N	NMED[C]			
Bromochloromethane	74-97-5	mg/kg	0.0016	U			NA	NA	NS	NS	296	N	NMED[C]			
Bromodichloromethane	75-27-4	mg/kg	0.0016	U			NA	NA	143	N	7,080	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0016	U			NA	NA	23,700	N	5,380	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0016	U			NA	NA	NS	NS	18	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.0016	U			NA	NA	NS	NS	1,620	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0016	U			NA	NA	252	N	202	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0016	U			NA	NA	NS	NS	412	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0016	U			NA	NA	NS	NS	16,600	N	NMED			
Chloroform	67-66-3	mg/kg	0.0016	U			NA	NA	134	N	391	N	NMED			
Chloromethane	74-87-3	mg/kg	0.004	U			NA	NA	956	N	235	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0016	U			NA	NA	NS	NS	708	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0016	U			NA	NA	781	N	130	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0016	U			NA	NA	340	N	5,380	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0016	U			NA	NA	NS	NS	54	N	NMED			

TABLE D1-C8-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID C8
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Background Value (1)	Exceeds Background (Y/N)	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued																
Dichlorodifluoromethane	75-71-8	mg/kg	0.0016	U			NA	NA	NS	NS	161	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.0016	U			NA	NA	1,770	N	5,800	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0016	U			NA	NA	2,400	N	269	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0016	U			NA	NA	NS	NS	2,740	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.004	U			NA	NA	NS	NS	696	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0016	U			NA	NA	24,200	N	33,100	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.0081	U			NA	NA	89,600	N	1,210	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0016	U			NA	NA	NS	NS	17,700	N	NMED[C]			
n-Propylbenzene	103-65-1	mg/kg	0.0016	U			NA	NA	NS	NS	6,730	N	NMED[C]			
Naphthalene	91-20-3	mg/kg	0.0016	U			NA	NA	633	N	159	N	NMED			
o-Xylene	95-47-6	mg/kg	0.002	U			NA	NA	NS	NS	736	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.0016	U			NA	NA	NS	NS	2,740	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.0016	U			NA	NA	NS	NS	35,400	N	NMED[C]			
Styrene	100-42-5	mg/kg	0.0016	U			NA	NA	NS	NS	10,200	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0016	U			NA	NA	NS	NS	35,400	N	NMED[C]			
Tetrachloroethene	127-18-4	mg/kg	0.0016	U			NA	NA	7,910	N	120	N	NMED			
Toluene	108-88-3	mg/kg	0.0022	J			NA	NA	NS	NS	14,000	N	NMED		1.57E-07	
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0016	U			NA	NA	NS	NS	206	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0016	U			NA	NA	781	N	130	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0016	U			NA	NA	5,370	N	7	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0016	U			NA	NA	NS	NS	1,130	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0016	U			NA	NA	161	N	162	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)																
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	U			NA	NA	8,540	N	79	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	U			NA	NA	NS	NS	2,500	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	U			NA	NA	45,900	N	24,800	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	U			NA	NA	45,900	N	24,800	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	U			NA	NA	NS	NS	26,900	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	U			NA	NA	17,000	N	269	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	U			NA	NA	NS	NS	807	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	U			NA	NA	NS	NS	5,380	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	U			NA	NA	NS	NS	538	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	U			NA	NA	600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	U			NA	NA	165	N	81	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	U			NA	NA	NS	NS	28,300	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.17	U			NA	NA	NS	NS	1,770	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.17	U			NA	NA	NS	NS	1,000	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	U			NA	NA	NS	NS	13,500	N	NMED[C]			
2-Nitroaniline	88-74-4	mg/kg	0.17	U			NA	NA	NS	NS	2,690	N	NMED[C]			
2-Nitrophenol	88-75-5	mg/kg	0.17	U			NA	NA	NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	U			NA	NA	410	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.17	U			NA	NA	135	N	1,080	N	NMED[SC]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	U			NA	NA	NS	NS	22	N	NMED			

TABLE D1-C8-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID C8
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Background Value (1)	Exceeds Background (Y/N)	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued																
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	U			NA	NA	NS	NS	NS	NS	NS			
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	U			NA	NA	NS	NS	26,900	N	NMED[C]			
4-Chloroaniline	106-47-8	mg/kg	0.17	U			NA	NA	14	N	135	N	NMED[C]			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	U			NA	NA	NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.17	U			NA	NA	135	N	1,080	N	NMED[C]			
4-Nitrophenol	100-02-7	mg/kg	0.17	U			NA	NA	NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.17	U			NA	NA	NS	NS	15,100	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.17	U			NA	NA	NS	NS	7,530	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.17	U			NA	NA	NS	NS	75,300	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.17	U			NA	NA	240	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.13	U			NA	NA	173	N	15	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	U			NA	NA	240	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	U			NA	NA	NS	NS	7,530	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	U			NA	NA	2,310	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.17	U			NA	NA	NS	NS	1,080,000	N	NMED[C]			
Benzyl Alcohol	100-51-6	mg/kg	0.17	U			NA	NA	NS	NS	26,900	N	NMED[C]			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	U			NA	NA	NS	NS	807	N	NMED[C]			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	U			NA	NA	2	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	U			NA	NA	3,540	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	U			NA	NA	13,400	N	5,380	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.17	U			NA	NA	1,420	N	53,800	N	NMED[C]			
Carbazole	86-74-8	mg/kg	0.17	U			NA	NA	NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.17	U			NA	NA	23,100	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.17	U			NA	NA	NS	NS	26,900	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.17	U			NA	NA	NS	NS	2,690	N	NMED[C]			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	U			NA	NA	24	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.17	U			NA	NA	NS	NS	269	N	NMED[C]			
Diethylphthalate	84-66-2	mg/kg	0.17	U			NA	NA	NS	NS	215,000	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.17	U			NA	NA	NS	NS	269,000	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.17	U			NA	NA	NS	NS	10,000	N	NMED			
Fluorene	86-73-7	mg/kg	0.17	U			NA	NA	NS	NS	10,000	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.17	U			NA	NA	117	N	215	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	U			NA	NA	2,400	N	269	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.17	U			NA	NA	4,670	N	188	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	U			NA	NA	240	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.17	U			NA	NA	198,000	N	53,700	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	U			NA	NA	0.38	N	NA	N	NMED[C]			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.02	UJ			NA	NA	4	N	2	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	U			NA	NA	37,900	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.17	U			NA	NA	633	N	159	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.17	U			NA	NA	1,350	N	353	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.17	U			NA	NA	346	N	989	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.17	U			NA	NA	NS	NS	8,070	N	NMED			
Phenol	108-95-2	mg/kg	0.17	U			NA	NA	NS	NS	77,400	N	NMED			
Pyrene	129-00-0	mg/kg	0.17	U			NA	NA	NS	NS	7,530	N	NMED			

TABLE D1-C8-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID C8
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Background Value (1)	Exceeds Background (Y/N)	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)																
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NA	NA	NS	NS	8,070	N	NMED[C]			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NA	NA	NS	NS	27	N	NMED[C]			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			NA	NA	7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			NA	NA	600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			NA	NA	165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NA	NA	NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			NA	NA	1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NA	NA	NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U			NA	NA	NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			NA	NA	11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.19	J			NA	NA	2,960	N	1,350	N	NMED	6.42E-10	1.41E-04	
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U			NA	NA	NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U			NA	NA	1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U			NA	NA	11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.1				NA	NA	NS	NS	17,400	N	NMED		5.75E-06	
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			NA	NA	626	N	2,420	N	NMED[C]			
POLYCHLORINATED BIPHENYLS (mg/kg)																
Aroclor 1016	12674-11-2	mg/kg	0.02	U			NA	NA	2,440	N	17	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.02	U			NA	NA	55	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.01	U			NA	NA	58	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.01	U			NA	NA	85	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.01	U			NA	NA	85	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.01	U			NA	NA	85	N	5	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.01	U			NA	NA	85	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (3)																
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000023	0.0003	NA	NA	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.00000000081	J	0.0000027	0.0003	NA	NA	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000004	0.01	NA	NA	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.00000059	0.01	NA	NA	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.0000002	0.01	NA	NA	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000054	0.1	NA	NA	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000005	0.1	NA	NA	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000096	0.1	NA	NA	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.00000005	0.1	NA	NA	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.00000013	0.1	NA	NA	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.000000057	0.1	NA	NA	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg	0.0000000039	J	0.00000013	0.03	NA	NA	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg	0.00000025	J	0.00000025	1	NA	NA	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.000000074	0.1	NA	NA	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.0000125	0.3	NA	NA	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.0000001	0.1	NA	NA	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000056	1	NA	NA	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.00000025				NA	NA	0.00172	N	0.000226	N	NMED	1.48E-09	1.13E-03	

TABLE D1-C8-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID C8
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Background Value (1)	Exceeds Background (Y/N)	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)																
Aluminum	7429-90-5	mg/kg	10,000					NA	NS	NS	41,400	N	NMED		2.42E-01	Nervous
Antimony	7440-36-0	mg/kg	0.29					NA	NS	NS	142	N	NMED		2.04E-03	
Arsenic	7440-38-2	mg/kg	1.5					NA	216	N	41	N	NMED		3.64E-02	
Barium	7440-39-3	mg/kg	140					NA	NS	NS	4,390	N	NMED		3.19E-02	
Beryllium	7440-41-7	mg/kg	0.43	J				NA	2,710	N	148	N	NMED		2.91E-03	
Cadmium	7440-43-9	mg/kg	0.54					NA	3,610	N	72	N	NMED		7.49E-03	
Calcium	7440-70-2	mg/kg	39,000					NA	NS	NS	8,850,000	N	NMED		4.41E-03	
Chromium (Total) (4)	7440-47-3	mg/kg	11					NA	468	N	134	N	NMED		8.21E-02	
Cobalt	7440-48-4	mg/kg	3.9					NA	722	N	37	N	NMED		1.06E-01	Endocrine
Copper	7440-50-8	mg/kg	83					NA	NS	NS	14,200	N	NMED		5.85E-03	
Iron	7439-89-6	mg/kg	9,000					NA	NS	NS	248,000	N	NMED		3.63E-02	
Lead	7439-92-1	mg/kg	11					NA	NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	6,500					NA	NS	NS	1,550,000	N	NMED		4.19E-03	
Manganese	7439-96-5	mg/kg	310					NA	NS	NS	464	N	NMED		6.68E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.018	J				NA	NS	NS	21	N	NMED		8.70E-04	
Nickel	7440-02-0	mg/kg	11					NA	20,500	N	753	N	NMED		1.46E-02	
Potassium	7440-09-7	mg/kg	1,900					NA	NS	NS	20,800,000	N	NMED		9.13E-05	
Selenium	7782-49-2	mg/kg	0.79					NA	NS	NS	1,750	N	NMED		4.51E-04	
Silver	7440-22-4	mg/kg	0.05	U				NA	NS	NS	1,770	N	NMED			
Sodium	7440-23-5	mg/kg	60					NA	NS	NS	10,200,000	N	NMED		5.88E-06	
Thallium	7440-28-0	mg/kg	0.062	J				NA	NS	NS	4	N	NMED		1.75E-02	
Vanadium	7440-62-2	mg/kg	16	J				NA	NS	NS	614	N	NMED		2.61E-02	
Zinc	7440-66-6	mg/kg	21	J				NA	NS	NS	106,000	N	NMED		1.98E-04	

TABLE D1-C8-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID C8
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Background Value (1)	Exceeds Background (Y/N)	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)																
Cyanide	57-12-5	mg/kg	0.32	U			NA	NA	NS	NS	12	N	NMED			
Nitrate	14797-55-8	mg/kg	3.9	J			NA	NA	NS	NS	566,000	N	NMED		6.89E-06	
Perchlorate	14797-73-0	mg/kg	0.0041	U			NA	NA	NS	NS	248	N	NMED			
												Cumulative Risk/Hazard		**2E-09**	**1.3**	
												Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	0.91
Endocrine	0.11
All Others	0.27

Notes:

[s] = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update).

2) NMED[C] = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

3) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

4) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect

TABLE D1-C22-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID C22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0019	U			28.1	N	2,350	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0019	U			NS	NS	14,400	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0019	U			7.98	N	1,560	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0019	U			18.8	N	2.61	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0019	U			78.6	N	15,600	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0019	U			NS	NS	440	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0019	U			29.3	N	141	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0019	U			NS	NS	63	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0047	U			0.051	N	7.09	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0019	U			240	N	82.9	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0019	U			NS	NS	300	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0047	U			0.0858	N	5.88	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0019	U			0.672	N	135	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0019	U			NS	NS	2,150	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0019	U			8.32	N	55.6	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0019	U			17.8	N	29	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0019	U			NS	NS	270	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0019	U			1,290	N	5,480	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0019	U			NS	NS	1,600	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0019	U			1,290	N	5,480	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0019	U			17.8	N	29	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0028	U			NS	NS	37,400	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0019	U			NS	NS	1,560	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0019	U			NS	NS	200	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0019	U			NS	NS	1,600	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0019	U			NS	NS	5,810	N	RSL		
Acetone	67-64-1	mg/kg	0.6	J			NS	NS	66,300	N	NMED		9.05E-06
Benzene	71-43-2	mg/kg	0.0019	U			17.8	N	114	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0019	U			NS	NS	290	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0019	U			NS	NS	150	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0019	U			6.19	N	1,560	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0019	U			674	N	1,230	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0019	U			NS	NS	17.7	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0019	U			NS	NS	1,550	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0019	U			10.7	N	144	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0019	U			NS	NS	378	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0019	U			NS	NS	19,000	N	NMED		
Chloroform	67-66-3	mg/kg	0.0019	U			5.9	N	306	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0047	U			41.1	N	268	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0019	U			NS	NS	156	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0019	U			29.3	N	141	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0019	U			13.9	N	1,230	N	NMED		
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0019	U			NS	NS	57.9	N	NMED		

TABLE D1-C22-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID C22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dichlorodifluoromethane	75-71-8	mg/kg	0.0019	U			NS	NS	182	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0019	U			75.1	N	3,930	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0019	U			68.3	N	61.6	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0019	U			NS	NS	2,360	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0047	U			NS	NS	764	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0019	U			975	N	37,800	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.0094	U			766	N	409	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0019	U			NS	NS	3,900	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0019	U			NS	NS	3,800	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0019	U			22.6	N	162	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0024	U			NS	NS	805	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0019	U			NS	NS	2,360	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0019	U			NS	NS	7,800	N	RSL		
Styrene	100-42-5	mg/kg	0.0019	U			NS	NS	7,260	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0019	U			NS	NS	7,800	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0019	U			337	N	111	N	NMED		
Toluene	108-88-3	mg/kg	0.0031	J			NS	NS	5,230	N	NMED		5.93E-07
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0019	U			NS	NS	210	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0019	U			29.3	N	141	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0019	U			15.5	N	6.77	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0019	U			NS	NS	1,230	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0019	U			0.742	N	113	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.18	U			240	N	82.9	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.18	U			NS	NS	2,150	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.18	U			1,290	N	5,480	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.18	U			1,290	N	5,480	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.18	U			NS	NS	6,160	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.18	U			484	N	61.6	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.18	U			NS	NS	185	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.18	U			NS	NS	1,230	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.18	U			NS	NS	123	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.18	U			17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.18	U			3.56	N	18.5	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.18	U			NS	NS	6,260	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.18	U			NS	NS	391	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.18	U			NS	NS	232	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.18	U			NS	NS	3,200	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.18	U			NS	NS	630	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.18	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.18	U			11.8	N	NS	NS	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.18	U			270	N	250	N	RSL[S]		
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.18	U			NS	NS	4.93	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.18	U			NS	NS	NS	NS	NS		

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FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.18	U			NS	NS	6,300	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.18	U			27	N	32	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.18	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.18	U			270	N	250	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.18	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.18	U			NS	NS	3,480	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.18	U			NS	NS	1,740	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.18	U			NS	NS	17,400	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.18	U			1.53	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			1.12	N	17.4	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.18	U			1.53	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.18	U			NS	NS	1,740	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.18	U			15.3	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.18	U			NS	NS	250,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.18	U			NS	NS	6,300	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.18	U			NS	NS	190	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.18	U			3.11	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.18	U			99.3	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.18	U			380	N	1,230	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.18	U			2,900	N	13,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.18	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.18	U			153	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.18	U			NS	NS	6,160	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.18	U			NS	NS	630	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			0.153	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.18	U			NS	NS	78	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.18	U			NS	NS	49,300	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.18	U			NS	NS	61,600	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.18	U			NS	NS	2,320	N	NMED		
Fluorene	86-73-7	mg/kg	0.18	U			NS	NS	2,320	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.18	U			3.33	N	49.3	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.18	U			68.3	N	61.6	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.18	U			133	N	43.1	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.18	U			1.53	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.18	U			5,610	N	12,300	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.18	U			0.78	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	UJ			0.0234	N	0.493	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.18	U			1,090	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.18	U			22.6	N	162	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.18	U			60.4	N	131	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.18	U			9.85	N	234	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.18	U			NS	NS	1,740	N	NMED		
Phenol	108-95-2	mg/kg	0.18	U			NS	NS	18,500	N	NMED		
Pyrene	129-00-0	mg/kg	0.18	U			NS	NS	1,740	N	NMED		

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FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U			NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U			83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U			NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U			60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U			313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			1,300	N	570	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.02	U			69.6	N	3.98	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.02	U			1.81	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.01	U			1.86	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.01	U			2.43	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.01	U			2.43	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.01	U			2.43	N	1.14	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.01	U			2.43	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000018	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000015	J	0.0000049	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg	0.0000000026	J	0.00000026	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.0000000095	J	0.00000095	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000011	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000061	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000069	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000032	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.00000007	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.000000075	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.000000047	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.000000081	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000089	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.000000054	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000012	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000032	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000087	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.000000014				0.000049	N	0.0000506	N	NMED	2.77E-09	2.68E-04

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HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID C22
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MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	17,000				NS	NS	78,000	N	NMED		2.18E-01
Antimony	7440-36-0	mg/kg	0.15	U			NS	NS	31.3	N	NMED		
Arsenic	7440-38-2	mg/kg	1.4				7.07	N	13	N	NMED	1.98E-06	1.08E-01
Barium	7440-39-3	mg/kg	230				NS	NS	15,600	N	NMED		1.47E-02
Beryllium	7440-41-7	mg/kg	0.76	J			64,400	N	156	N	NMED	1.18E-10	4.87E-03
Cadmium	7440-43-9	mg/kg	0.4				85,900	N	70.5	N	NMED	4.66E-11	5.67E-03
Calcium	7440-70-2	mg/kg	11,000				NS	NS	13,000,000	N	NMED		8.46E-04
Chromium (Total) (3)	7440-47-3	mg/kg	11				96.6	N	45,200	N	NMED	1.14E-06	2.43E-04
Cobalt	7440-48-4	mg/kg	3.9				17,200	N	23.4	N	NMED	2.27E-09	1.67E-01
Copper	7440-50-8	mg/kg	76				NS	NS	3,130	N	NMED		2.43E-02
Iron	7439-89-6	mg/kg	8,500				NS	NS	54,800	N	NMED		1.55E-01
Lead	7439-92-1	mg/kg	11				NS	NS	200	N	RSL		
Magnesium	7439-95-4	mg/kg	5,300				NS	NS	15,600,000	N	NMED		3.40E-04
Manganese	7439-96-5	mg/kg	480				NS	NS	10,500	N	NMED		4.57E-02
Mercury (Elemental)	7439-97-6	mg/kg	0.023	J			NS	NS	23.8	N	NMED		9.66E-04
Nickel	7440-02-0	mg/kg	9				595,000	N	1,560	N	NMED	1.51E-10	5.77E-03
Potassium	7440-09-7	mg/kg	1,700				NS	NS	15,600,000	N	NMED		1.09E-04
Selenium	7782-49-2	mg/kg	1.2				NS	NS	391	N	NMED		3.07E-03
Silver	7440-22-4	mg/kg	0.061	J			NS	NS	391	N	NMED		1.56E-04
Sodium	7440-23-5	mg/kg	42				NS	NS	7,820,000	N	NMED		5.37E-06
Thallium	7440-28-0	mg/kg	0.058	J			NS	NS	0.782	N	NMED		7.42E-02
Vanadium	7440-62-2	mg/kg	12				NS	NS	394	N	NMED		3.05E-02
Zinc	7440-66-6	mg/kg	24				NS	NS	23,500	N	NMED		1.02E-03

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MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.33	U			NS	NS	11.2	N	NMED		
Nitrate	14797-55-8	mg/kg	4.8	J			NS	NS	125,000	N	NMED		3.84E-05
Perchlorate	14797-73-0	mg/kg	0.0043	U			NS	NS	54.8	N	NMED		
										Cumulative Risk/Hazard		**3E-06**	**0.9**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service

J = Estimated

mg/kg = milligrams per kilogram

NS = No Standard

U = Nondetect

UJ = Estimated Nondetect

TABLE D1-C22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID C22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0019	U			137	N	39,400	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0019	U			NS	NS	72,500	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0019	U			39	N	26,000	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0019	U			92	N	12	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0019	U			383	N	260,000	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0019	U			NS	NS	2,260	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0019	U			146	N	695	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0019	U			NS	NS	930	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0047	U			1	N	34	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0019	U			1,250	N	423	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0019	U			NS	NS	1,800	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0047	U			1	N	41	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0019	U			3	N	738	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0019	U			NS	NS	13,000	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0019	U			41	N	286	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0019	U			87	N	137	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0019	U			NS	NS	1,500	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0019	U			6,730	N	90,800	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0019	U			NS	NS	23,000	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0019	U			6,730	N	90,800	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0019	U			87	N	137	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0028	U			NS	NS	411,000	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0019	U			NS	NS	26,000	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0019	U			NS	NS	1,300	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0019	U			NS	NS	23,000	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0019	U			NS	NS	81,600	N	RSL		
Acetone	67-64-1	mg/kg	0.6	J			NS	NS	960,000	N	NMED		6.25E-07
Benzene	71-43-2	mg/kg	0.0019	U			87	N	729	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0019	U			NS	NS	1,800	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0019	U			NS	NS	630	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0019	U			30	N	26,000	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0019	U			1,760	N	18,300	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0019	U			NS	NS	95	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0019	U			NS	NS	8,540	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0019	U			53	N	1,020	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0019	U			NS	NS	2,160	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0019	U			NS	NS	89,500	N	NMED		
Chloroform	67-66-3	mg/kg	0.0019	U			29	N	2,000	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0047	U			201	N	1,260	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0019	U			NS	NS	2,600	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0019	U			146	N	695	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0019	U			67	N	18,300	N	NMED		

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FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0019	U			NS	NS	288	N	NMED		
Dichlorodifluoromethane	75-71-8	mg/kg	0.0019	U			NS	NS	865	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0019	U			29,000	N	368	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0019	U			52	N	916	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0019	U			NS	NS	14,200	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0047	U			NS	NS	3,730	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0019	U			4,820	N	178,000	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.0094	U			14,400	N	5,130	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0019	U			NS	NS	58,000	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0019	U			NS	NS	24,000	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0019	U			108	N	843	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0024	U			NS	NS	3,940	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0019	U			NS	NS	14,200	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0019	U			NS	NS	120,000	N	RSL		
Styrene	100-42-5	mg/kg	0.0019	U			NS	NS	51,300	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0019	U			NS	NS	120,000	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0019	U			1,650	N	629	N	NMED		
Toluene	108-88-3	mg/kg	0.0031	J			NS	NS	61,300	N	NMED		5.06E-08
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0019	U			NS	NS	1,100	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0019	U			146	N	695	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0019	U			112	N	37	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0019	U			NS	NS	6,030	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0019	U			28	N	46	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.18	U			1,250	N	423	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.18	U			NS	NS	13,000	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.18	U			6,730	N	90,800	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.18	U			6,730	N	90,800	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.18	U			NS	NS	91,600	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.18	U			2,330	N	916	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.18	U			NS	NS	2,750	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.18	U			NS	NS	18,300	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.18	U			NS	NS	1,830	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.18	U			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.18	U			17	N	276	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.18	U			NS	NS	104,000	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.18	U			NS	NS	6,490	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.18	U			NS	NS	3,370	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.18	U			NS	NS	41,000	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.18	U			NS	NS	8,000	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.18	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.18	U			NS	NS	410	N	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.18	U			1,100	N	3,300	N	RSL[S]		

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	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.18	U			NS	NS	73	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.18	U			NS	NS	NS	NS	NS		
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.18	U			NS	NS	82,000	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.18	U			110	N	410	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.18	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.18	U			1,100	N	3,300	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.18	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.18	U			NS	NS	50,500	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.18	U			NS	NS	25,300	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.18	U			NS	NS	253,000	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.18	U			32	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			24	N	251	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.18	U			32	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.18	U			NS	NS	25,300	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.18	U			323	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.18	U			NS	NS	3,300,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.18	U			NS	NS	82,000	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.18	U			NS	NS	2,500	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.18	U			16	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.18	U			519	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.18	U			1,830	N	18,300	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.18	U			12,000	N	160,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.18	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.18	U			3,230	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.18	U			NS	NS	91,600	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.18	U			NS	NS	8,200	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			3	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.18	U			NS	NS	1,200	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.18	U			NS	NS	733,000	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.18	U			NS	NS	916,000	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.18	U			NS	NS	33,700	N	NMED		
Fluorene	86-73-7	mg/kg	0.18	U			NS	NS	33,700	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.18	U			16	N	733	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.18	U			52	N	916	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.18	U			641	N	641	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.18	U			32	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.18	U			27,000	N	183,000	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.18	U			3	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	UJ			1	N	7	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.18	U			5,240	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.18	U			108	N	843	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.18	U			293	N	1,540	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.18	U			45	N	3,180	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.18	U			NS	NS	27,500	N	NMED		
Phenol	108-95-2	mg/kg	0.18	U			NS	NS	275,000	N	NMED		
Pyrene	129-00-0	mg/kg	0.18	U			NS	NS	25,300	N	NMED		

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EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U			NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U			428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U			NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U			293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U			1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			5,300	N	7,400	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.02	U			304	N	57	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.02	U			9	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.01	U			9	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.01	U			11	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.01	U			11	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.01	U			11	N	16	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.01	U			11	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000018	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000015	J	0.0000049	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg	0.0000000026	J	0.00000026	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.0000000095	J	0.00000095	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000011	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000061	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000069	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000032	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.00000007	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.000000075	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.000000047	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.000000081	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000089	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.000000054	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000012	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000032	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000087	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.000000014				0.000238	N	0.000808	N	NMED	5.70E-10	1.68E-05

TABLE D1-C22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID C22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	17,000				NS	NS	1,290,000	N	NMED		1.32E-02
Antimony	7440-36-0	mg/kg	0.15	U			NS	NS	519	N	NMED		
Arsenic	7440-38-2	mg/kg	1.4				36	N	208	N	NMED	3.90E-07	6.73E-03
Barium	7440-39-3	mg/kg	230				NS	NS	255,000	N	NMED		9.02E-04
Beryllium	7440-41-7	mg/kg	0.76	J			313,000	N	2,580	N	NMED	2.43E-11	2.95E-04
Cadmium	7440-43-9	mg/kg	0.4				417,000	N	1,110	N	NMED	9.59E-12	3.60E-04
Calcium	7440-70-2	mg/kg	11,000				NS	NS	32,400,000	N	NMED		3.40E-04
Chromium (Total) (3)	7440-47-3	mg/kg	11				505	N	314,000	N	NMED	2.18E-07	3.50E-05
Cobalt	7440-48-4	mg/kg	3.9				83,400	N	388	N	NMED	4.68E-10	1.01E-02
Copper	7440-50-8	mg/kg	76				NS	NS	51,900	N	NMED		1.46E-03
Iron	7439-89-6	mg/kg	8,500				NS	NS	908,000	N	NMED		9.36E-03
Lead	7439-92-1	mg/kg	11				NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	5,300				NS	NS	5,680,000	N	NMED		9.33E-04
Manganese	7439-96-5	mg/kg	480				NS	NS	160,000	N	NMED		3.00E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.023	J			NS	NS	112	N	NMED		2.05E-04
Nickel	7440-02-0	mg/kg	9				2,890,000	N	25,700	N	NMED	3.11E-11	3.50E-04
Potassium	7440-09-7	mg/kg	1,700				NS	NS	76,200,000	N	NMED		2.23E-05
Selenium	7782-49-2	mg/kg	1.2				NS	NS	6,490	N	NMED		1.85E-04
Silver	7440-22-4	mg/kg	0.061	J			NS	NS	6,490	N	NMED		9.40E-06
Sodium	7440-23-5	mg/kg	42				NS	NS	37,300,000	N	NMED		1.13E-06
Thallium	7440-28-0	mg/kg	0.058	J			NS	NS	13	N	NMED		4.46E-03
Vanadium	7440-62-2	mg/kg	12				NS	NS	6,530	N	NMED		1.84E-03
Zinc	7440-66-6	mg/kg	24				NS	NS	38,900	N	NMED		6.17E-04

TABLE D1-C22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID C22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.33	U			NS	NS	63	N	NMED		
Nitrate	14797-55-8	mg/kg	4.8	J			NS	NS	2,080,000	N	NMED		2.31E-06
Perchlorate	14797-73-0	mg/kg	0.0043	U			NS	NS	908	N	NMED		
										Cumulative Risk/Hazard		**6E-07**	**0.05**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service

IEUBK = Integrated Exposure Uptake Biokentic Model

J = Estimated

mg/kg = milligrams per kilogram

NS = No Standard

U = Nondetect

UJ = Estimated Nondetect

TABLE D1-C22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID C22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0019	U			659	N	10,600	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0019	U			NS	NS	13,600	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0019	U			197	N	7,080	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0019	U			4,300	N	2	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0019	U			1,820	N	70,800	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0019	U			NS	NS	424	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0019	U			781	N	130	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0019	U			NS	NS	283	N	NMED[C]			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0047	U			8	N	6	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0019	U			8,540	N	79	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0019	U			NS	NS	492	N	NMED[C]			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0047	U			6	N	8	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0019	U			16	N	140	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0019	U			NS	NS	2,500	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0019	U			195	N	54	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0019	U			415	N	25	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0019	U			NS	NS	422	N	NMED[C]			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0019	U			45,900	N	24,800	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0019	U			NS	NS	7,080	N	NMED[C]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0019	U			45,900	N	24,800	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0019	U			415	N	25	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.0028	U			NS	NS	90,700	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0019	U			NS	NS	7,080	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.0019	U			NS	NS	599	N	NMED[C]			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0019	U			NS	NS	7,080	N	NMED[C]			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0019	U			NS	NS	20,400	N	NMED[C]			
Acetone	67-64-1	mg/kg	0.6	J			NS	NS	242,000	N	NMED		2.48E-06	
Benzene	71-43-2	mg/kg	0.0019	U			423	N	142	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.0019	U			NS	NS	538	N	NMED[C]			
Bromochloromethane	74-97-5	mg/kg	0.0019	U			NS	NS	296	N	NMED[C]			
Bromodichloromethane	75-27-4	mg/kg	0.0019	U			143	N	7,080	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0019	U			23,700	N	5,380	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0019	U			NS	NS	18	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.0019	U			NS	NS	1,620	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0019	U			252	N	202	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0019	U			NS	NS	412	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0019	U			NS	NS	16,600	N	NMED			
Chloroform	67-66-3	mg/kg	0.0019	U			134	N	391	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0047	U			956	N	235	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0019	U			NS	NS	708	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0019	U			781	N	130	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0019	U			340	N	5,380	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0019	U			NS	NS	54	N	NMED			

TABLE D1-C22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID C22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Dichlorodifluoromethane	75-71-8	mg/kg	0.0019	U			NS	NS	161	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.0019	U			1,770	N	5,800	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0019	U			2,400	N	269	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0019	U			NS	NS	2,740	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0047	U			NS	NS	696	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0019	U			24,200	N	33,100	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.0094	U			89,600	N	1,210	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0019	U			NS	NS	17,700	N	NMED[C]			
n-Propylbenzene	103-65-1	mg/kg	0.0019	U			NS	NS	6,730	N	NMED[C]			
Naphthalene	91-20-3	mg/kg	0.0019	U			633	N	159	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0024	U			NS	NS	736	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.0019	U			NS	NS	2,740	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.0019	U			NS	NS	35,400	N	NMED[C]			
Styrene	100-42-5	mg/kg	0.0019	U			NS	NS	10,200	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0019	U			NS	NS	35,400	N	NMED[C]			
Tetrachloroethene	127-18-4	mg/kg	0.0019	U			7,910	N	120	N	NMED			
Toluene	108-88-3	mg/kg	0.0031	J			NS	NS	14,000	N	NMED		2.21E-07	
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0019	U			NS	NS	206	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0019	U			781	N	130	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0019	U			5,370	N	7	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0019	U			NS	NS	1,130	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0019	U			161	N	162	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.18	U			8,540	N	79	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.18	U			NS	NS	2,500	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.18	U			45,900	N	24,800	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.18	U			45,900	N	24,800	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.18	U			NS	NS	26,900	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.18	U			17,000	N	269	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.18	U			NS	NS	807	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.18	U			NS	NS	5,380	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.18	U			NS	NS	538	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.18	U			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.18	U			165	N	81	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.18	U			NS	NS	28,300	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.18	U			NS	NS	1,770	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.18	U			NS	NS	1,000	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.18	U			NS	NS	13,500	N	NMED[C]			
2-Nitroaniline	88-74-4	mg/kg	0.18	U			NS	NS	2,690	N	NMED[C]			
2-Nitrophenol	88-75-5	mg/kg	0.18	U			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.18	U			410	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.18	U			135	N	1,080	N	NMED[SC]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.18	U			NS	NS	22	N	NMED			

TABLE D1-C22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID C22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.18	U			NS	NS	NS	NS	NS			
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.18	U			NS	NS	26,900	N	NMED[C]			
4-Chloroaniline	106-47-8	mg/kg	0.18	U			14	N	135	N	NMED[C]			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.18	U			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.18	U			135	N	1,080	N	NMED[C]			
4-Nitrophenol	100-02-7	mg/kg	0.18	U			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.18	U			NS	NS	15,100	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.18	U			NS	NS	7,530	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.18	U			NS	NS	75,300	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.18	U			240	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			173	N	15	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.18	U			240	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.18	U			NS	NS	7,530	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.18	U			2,310	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.18	U			NS	NS	1,080,000	N	NMED[C]			
Benzyl Alcohol	100-51-6	mg/kg	0.18	U			NS	NS	26,900	N	NMED[C]			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.18	U			NS	NS	807	N	NMED[C]			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.18	U			2	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.18	U			3,540	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.18	U			13,400	N	5,380	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.18	U			1,420	N	53,800	N	NMED[C]			
Carbazole	86-74-8	mg/kg	0.18	U			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.18	U			23,100	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.18	U			NS	NS	26,900	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.18	U			NS	NS	2,690	N	NMED[C]			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			24	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.18	U			NS	NS	269	N	NMED[C]			
Diethylphthalate	84-66-2	mg/kg	0.18	U			NS	NS	215,000	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.18	U			NS	NS	269,000	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.18	U			NS	NS	10,000	N	NMED			
Fluorene	86-73-7	mg/kg	0.18	U			NS	NS	10,000	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.18	U			117	N	215	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.18	U			2,400	N	269	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.18	U			4,670	N	188	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.18	U			240	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.18	U			198,000	N	53,700	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.18	U			0.38	N	NA	N	NMED[C]			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	UJ			4	N	2	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.18	U			37,900	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.18	U			633	N	159	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.18	U			1,350	N	353	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.18	U			346	N	989	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.18	U			NS	NS	8,070	N	NMED			
Phenol	108-95-2	mg/kg	0.18	U			NS	NS	77,400	N	NMED			
Pyrene	129-00-0	mg/kg	0.18	U			NS	NS	7,530	N	NMED			

TABLE D1-C22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID C22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	8,070	N	NMED[C]			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	27	N	NMED[C]			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U			NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U			2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U			NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U			1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U			11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			626	N	2,420	N	NMED[C]			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.02	U			2,440	N	17	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.02	U			55	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.01	U			58	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.01	U			85	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.01	U			85	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.01	U			85	N	5	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.01	U			85	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (3)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000018	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000015	J	0.0000049	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg	0.0000000026	J	0.00000026	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.0000000095	J	0.00000095	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000011	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000061	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000069	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000032	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.00000007	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.000000075	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.000000047	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.000000081	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000089	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.000000054	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000012	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000032	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000087	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.000000014				0.00172	N	0.000226	N	NMED	7.89E-11	6.00E-05	

TABLE D1-C22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID C22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	17,000				NS	NS	41,400	N	NMED		4.11E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	U			NS	NS	142	N	NMED			
Arsenic	7440-38-2	mg/kg	1.4				216	N	41	N	NMED	6.48E-08	3.40E-02	
Barium	7440-39-3	mg/kg	230				NS	NS	4,390	N	NMED		5.24E-02	
Beryllium	7440-41-7	mg/kg	0.76	J			2,710	N	148	N	NMED	2.80E-09	5.14E-03	
Cadmium	7440-43-9	mg/kg	0.4				3,610	N	72	N	NMED	1.11E-09	5.55E-03	
Calcium	7440-70-2	mg/kg	11,000				NS	NS	8,850,000	N	NMED		1.24E-03	
Chromium (Total) (4)	7440-47-3	mg/kg	11				468	N	134	N	NMED	2.35E-07	8.21E-02	
Cobalt	7440-48-4	mg/kg	3.9				722	N	37	N	NMED	5.40E-08	1.06E-01	Endocrine
Copper	7440-50-8	mg/kg	76				NS	NS	14,200	N	NMED		5.35E-03	
Iron	7439-89-6	mg/kg	8,500				NS	NS	248,000	N	NMED		3.43E-02	
Lead	7439-92-1	mg/kg	11				NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	5,300				NS	NS	1,550,000	N	NMED		3.42E-03	
Manganese	7439-96-5	mg/kg	480				NS	NS	464	Y	NMED		1.03E+00	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.023	J			NS	NS	21	N	NMED		1.11E-03	
Nickel	7440-02-0	mg/kg	9				20,500	N	753	N	NMED	4.39E-09	1.20E-02	
Potassium	7440-09-7	mg/kg	1,700				NS	NS	20,800,000	N	NMED		8.17E-05	
Selenium	7782-49-2	mg/kg	1.2				NS	NS	1,750	N	NMED		6.86E-04	
Silver	7440-22-4	mg/kg	0.061	J			NS	NS	1,770	N	NMED		3.45E-05	
Sodium	7440-23-5	mg/kg	42				NS	NS	10,200,000	N	NMED		4.12E-06	
Thallium	7440-28-0	mg/kg	0.058	J			NS	NS	4	N	NMED		1.64E-02	
Vanadium	7440-62-2	mg/kg	12				NS	NS	614	N	NMED		1.95E-02	
Zinc	7440-66-6	mg/kg	24				NS	NS	106,000	N	NMED		2.26E-04	

TABLE D1-C22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID C22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.33	U			NS	NS	12	N	NMED			
Nitrate	14797-55-8	mg/kg	4.8	J			NS	NS	566,000	N	NMED		8.48E-06	
Perchlorate	14797-73-0	mg/kg	0.0043	U			NS	NS	248	N	NMED			
										Cumulative Risk/Hazard		**4E-07**	**1.8**	
										Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	1.4
Endocrine	0.11
All Others	0.27

Notes:

[s] = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update).

2) NMED[C] = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

3) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

4) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect

TABLE D1-D8-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID D8
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0018	U			28.1	N	2,350	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0018	U			NS	NS	14,400	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0018	U			7.98	N	1,560	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0018	U			18.8	N	2.61	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0018	U			78.6	N	15,600	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0018	U			NS	NS	440	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0018	U			29.3	N	141	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0018	U			NS	NS	63	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0044	U			0.051	N	7.09	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0018	U			240	N	82.9	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0018	U			NS	NS	300	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0044	U			0.0858	N	5.88	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0018	U			0.672	N	135	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0018	U			NS	NS	2,150	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0018	U			8.32	N	55.6	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0018	U			17.8	N	29	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0018	U			NS	NS	270	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0018	U			1,290	N	5,480	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0018	U			NS	NS	1,600	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0018	U			1,290	N	5,480	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0018	U			17.8	N	29	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0027	U			NS	NS	37,400	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0018	U			NS	NS	1,560	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0018	U			NS	NS	200	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0018	U			NS	NS	1,600	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0018	U			NS	NS	5,810	N	RSL		
Acetone	67-64-1	mg/kg	0.23				NS	NS	66,300	N	NMED		3.47E-06
Benzene	71-43-2	mg/kg	0.0018	U			17.8	N	114	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0018	U			NS	NS	290	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0018	U			NS	NS	150	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0018	U			6.19	N	1,560	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0018	U			674	N	1,230	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0018	U			NS	NS	17.7	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0018	U			NS	NS	1,550	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0018	U			10.7	N	144	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0018	U			NS	NS	378	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0018	U			NS	NS	19,000	N	NMED		
Chloroform	67-66-3	mg/kg	0.0018	U			5.9	N	306	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0044	U			41.1	N	268	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0018	U			NS	NS	156	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0018	U			29.3	N	141	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0018	U			13.9	N	1,230	N	NMED		
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0018	U			NS	NS	57.9	N	NMED		

TABLE D1-D8-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID D8
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dichlorodifluoromethane	75-71-8	mg/kg	0.0018	U			NS	NS	182	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0018	U			75.1	N	3,930	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0018	U			68.3	N	61.6	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0018	U			NS	NS	2,360	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0044	U			NS	NS	764	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0018	U			975	N	37,800	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.0089	U			766	N	409	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0018	U			NS	NS	3,900	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0018	U			NS	NS	3,800	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0018	U			22.6	N	162	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0022	U			NS	NS	805	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0018	U			NS	NS	2,360	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0018	U			NS	NS	7,800	N	RSL		
Styrene	100-42-5	mg/kg	0.0018	U			NS	NS	7,260	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0018	U			NS	NS	7,800	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0018	U			337	N	111	N	NMED		
Toluene	108-88-3	mg/kg	0.0018	U			NS	NS	5,230	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0018	U			NS	NS	210	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0018	U			29.3	N	141	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0018	U			15.5	N	6.77	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0018	U			NS	NS	1,230	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0018	U			0.742	N	113	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	U			240	N	82.9	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	U			NS	NS	2,150	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	U			1,290	N	5,480	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	U			1,290	N	5,480	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	U			NS	NS	6,160	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	U			484	N	61.6	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	U			NS	NS	185	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	U			NS	NS	1,230	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	U			NS	NS	123	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	U			17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	U			3.56	N	18.5	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	U			NS	NS	6,260	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.17	U			NS	NS	391	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.17	U			NS	NS	232	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	U			NS	NS	3,200	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.17	U			NS	NS	630	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.17	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	U			11.8	N	NS	NS	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.17	U			270	N	250	N	RSL[S]		
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	U			NS	NS	4.93	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	U			NS	NS	NS	NS	NS		

TABLE D1-D8-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID D8
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	U			NS	NS	6,300	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.17	U			27	N	32	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.17	U			270	N	250	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.17	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.17	U			NS	NS	3,480	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.17	U			NS	NS	1,740	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.17	U			NS	NS	17,400	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.17	U			1.53	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.13	U			1.12	N	17.4	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	U			1.53	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	U			NS	NS	1,740	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	U			15.3	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.17	U			NS	NS	250,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.17	U			NS	NS	6,300	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	U			NS	NS	190	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	U			3.11	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	U			99.3	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	U			380	N	1,230	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.17	U			2,900	N	13,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.17	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.17	U			153	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.17	U			NS	NS	6,160	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.17	U			NS	NS	630	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	U			0.153	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.17	U			NS	NS	78	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.17	U			NS	NS	49,300	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.17	U			NS	NS	61,600	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.17	U			NS	NS	2,320	N	NMED		
Fluorene	86-73-7	mg/kg	0.17	U			NS	NS	2,320	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.17	U			3.33	N	49.3	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	U			68.3	N	61.6	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.17	U			133	N	43.1	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	U			1.53	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.17	U			5,610	N	12,300	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	U			0.78	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.02	UJ			0.0234	N	0.493	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	U			1,090	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.17	U			22.6	N	162	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.17	U			60.4	N	131	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.17	U			9.85	N	234	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.17	U			NS	NS	1,740	N	NMED		
Phenol	108-95-2	mg/kg	0.17	U			NS	NS	18,500	N	NMED		
Pyrene	129-00-0	mg/kg	0.17	U			NS	NS	1,740	N	NMED		

TABLE D1-D8-1
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FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U			NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.22				83.1	N	301	N	NMED	2.65E-08	7.31E-04
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U			NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U			60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U			313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			1,300	N	570	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.019	U			69.6	N	3.98	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.019	U			1.81	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.0096	U			1.86	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.0096	U			2.43	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.0096	U			2.43	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.0096	U			2.43	N	1.14	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.0096	U			2.43	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000029	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000012	J	0.0000041	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.000000091	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.00000067	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000011	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000029	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000035	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000034	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000035	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.000000047	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.000000029	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000004	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000054	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.000000048	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.000000093	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg	0.000000033	J	0.00000033	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.00000004	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.000000034				0.000049	N	0.0000506	N	NMED	6.99E-09	6.76E-04

TABLE D1-D8-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID D8
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	6,200				NS	NS	78,000	N	NMED		7.95E-02
Antimony	7440-36-0	mg/kg	0.2				NS	NS	31.3	N	NMED		6.39E-03
Arsenic	7440-38-2	mg/kg	1.9				7.07	N	13	N	NMED	2.69E-06	1.46E-01
Barium	7440-39-3	mg/kg	100				NS	NS	15,600	N	NMED		6.41E-03
Beryllium	7440-41-7	mg/kg	0.3	J			64,400	N	156	N	NMED	4.66E-11	1.92E-03
Cadmium	7440-43-9	mg/kg	0.38				85,900	N	70.5	N	NMED	4.42E-11	5.39E-03
Calcium	7440-70-2	mg/kg	10,000				NS	NS	13,000,000	N	NMED		7.69E-04
Chromium (Total) (3)	7440-47-3	mg/kg	7.3				96.6	N	45,200	N	NMED	7.56E-07	1.62E-04
Cobalt	7440-48-4	mg/kg	2.5				17,200	N	23.4	N	NMED	1.45E-09	1.07E-01
Copper	7440-50-8	mg/kg	76				NS	NS	3,130	N	NMED		2.43E-02
Iron	7439-89-6	mg/kg	6,500				NS	NS	54,800	N	NMED		1.19E-01
Lead	7439-92-1	mg/kg	9.4				NS	NS	200	N	RSL		
Magnesium	7439-95-4	mg/kg	2,300				NS	NS	15,600,000	N	NMED		1.47E-04
Manganese	7439-96-5	mg/kg	200				NS	NS	10,500	N	NMED		1.90E-02
Mercury (Elemental)	7439-97-6	mg/kg	0.019	J			NS	NS	23.8	N	NMED		7.98E-04
Nickel	7440-02-0	mg/kg	5.7				595,000	N	1,560	N	NMED	9.58E-11	3.65E-03
Potassium	7440-09-7	mg/kg	1,400				NS	NS	15,600,000	N	NMED		8.97E-05
Selenium	7782-49-2	mg/kg	0.66				NS	NS	391	N	NMED		1.69E-03
Silver	7440-22-4	mg/kg	0.056	J			NS	NS	391	N	NMED		1.43E-04
Sodium	7440-23-5	mg/kg	25				NS	NS	7,820,000	N	NMED		3.20E-06
Thallium	7440-28-0	mg/kg	0.058	J			NS	NS	0.782	N	NMED		7.42E-02
Vanadium	7440-62-2	mg/kg	11				NS	NS	394	N	NMED		2.79E-02
Zinc	7440-66-6	mg/kg	19				NS	NS	23,500	N	NMED		8.09E-04

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HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID D8
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MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.29	U			NS	NS	11.2	N	NMED		
Nitrate	14797-55-8	mg/kg	4.6	J			NS	NS	125,000	N	NMED		3.68E-05
Perchlorate	14797-73-0	mg/kg	0.0041	U			NS	NS	54.8	N	NMED		
										Cumulative Risk/Hazard		**3E-06**	**0.6**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect

TABLE D1-D8-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID D8
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0018	U			137	N	39,400	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0018	U			NS	NS	72,500	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0018	U			39	N	26,000	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0018	U			92	N	12	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0018	U			383	N	260,000	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0018	U			NS	NS	2,260	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0018	U			146	N	695	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0018	U			NS	NS	930	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0044	U			1	N	34	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0018	U			1,250	N	423	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0018	U			NS	NS	1,800	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0044	U			1	N	41	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0018	U			3	N	738	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0018	U			NS	NS	13,000	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0018	U			41	N	286	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0018	U			87	N	137	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0018	U			NS	NS	1,500	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0018	U			6,730	N	90,800	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0018	U			NS	NS	23,000	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0018	U			6,730	N	90,800	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0018	U			87	N	137	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0027	U			NS	NS	411,000	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0018	U			NS	NS	26,000	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0018	U			NS	NS	1,300	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0018	U			NS	NS	23,000	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0018	U			NS	NS	81,600	N	RSL		
Acetone	67-64-1	mg/kg	0.23				NS	NS	960,000	N	NMED		2.40E-07
Benzene	71-43-2	mg/kg	0.0018	U			87	N	729	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0018	U			NS	NS	1,800	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0018	U			NS	NS	630	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0018	U			30	N	26,000	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0018	U			1,760	N	18,300	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0018	U			NS	NS	95	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0018	U			NS	NS	8,540	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0018	U			53	N	1,020	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0018	U			NS	NS	2,160	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0018	U			NS	NS	89,500	N	NMED		
Chloroform	67-66-3	mg/kg	0.0018	U			29	N	2,000	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0044	U			201	N	1,260	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0018	U			NS	NS	2,600	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0018	U			146	N	695	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0018	U			67	N	18,300	N	NMED		

TABLE D1-D8-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID D8
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0018	U			NS	NS	288	N	NMED		
Dichlorodifluoromethane	75-71-8	mg/kg	0.0018	U			NS	NS	865	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0018	U			29,000	N	368	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0018	U			52	N	916	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0018	U			NS	NS	14,200	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0044	U			NS	NS	3,730	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0018	U			4,820	N	178,000	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.0089	U			14,400	N	5,130	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0018	U			NS	NS	58,000	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0018	U			NS	NS	24,000	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0018	U			108	N	843	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0022	U			NS	NS	3,940	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0018	U			NS	NS	14,200	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0018	U			NS	NS	120,000	N	RSL		
Styrene	100-42-5	mg/kg	0.0018	U			NS	NS	51,300	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0018	U			NS	NS	120,000	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0018	U			1,650	N	629	N	NMED		
Toluene	108-88-3	mg/kg	0.0018	U			NS	NS	61,300	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0018	U			NS	NS	1,100	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0018	U			146	N	695	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0018	U			112	N	37	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0018	U			NS	NS	6,030	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0018	U			28	N	46	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	U			1,250	N	423	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	U			NS	NS	13,000	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	U			6,730	N	90,800	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	U			6,730	N	90,800	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	U			NS	NS	91,600	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	U			2,330	N	916	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	U			NS	NS	2,750	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	U			NS	NS	18,300	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	U			NS	NS	1,830	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	U			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	U			17	N	276	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	U			NS	NS	104,000	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.17	U			NS	NS	6,490	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.17	U			NS	NS	3,370	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	U			NS	NS	41,000	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.17	U			NS	NS	8,000	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.17	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	U			NS	NS	410	N	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.17	U			1,100	N	3,300	N	RSL[S]		

TABLE D1-D8-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID D8
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	U			NS	NS	73	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	U			NS	NS	NS	NS	NS		
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	U			NS	NS	82,000	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.17	U			110	N	410	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.17	U			1,100	N	3,300	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.17	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.17	U			NS	NS	50,500	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.17	U			NS	NS	25,300	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.17	U			NS	NS	253,000	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.17	U			32	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.13	U			24	N	251	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	U			32	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	U			NS	NS	25,300	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	U			323	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.17	U			NS	NS	3,300,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.17	U			NS	NS	82,000	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	U			NS	NS	2,500	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	U			16	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	U			519	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	U			1,830	N	18,300	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.17	U			12,000	N	160,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.17	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.17	U			3,230	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.17	U			NS	NS	91,600	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.17	U			NS	NS	8,200	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	U			3	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.17	U			NS	NS	1,200	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.17	U			NS	NS	733,000	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.17	U			NS	NS	916,000	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.17	U			NS	NS	33,700	N	NMED		
Fluorene	86-73-7	mg/kg	0.17	U			NS	NS	33,700	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.17	U			16	N	733	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	U			52	N	916	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.17	U			641	N	641	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	U			32	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.17	U			27,000	N	183,000	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	U			3	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.02	UJ			1	N	7	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	U			5,240	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.17	U			108	N	843	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.17	U			293	N	1,540	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.17	U			45	N	3,180	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.17	U			NS	NS	27,500	N	NMED		
Phenol	108-95-2	mg/kg	0.17	U			NS	NS	275,000	N	NMED		
Pyrene	129-00-0	mg/kg	0.17	U			NS	NS	25,300	N	NMED		

TABLE D1-D8-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID D8
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U			NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.22				428	N	4,890	N	NMED	5.14E-09	4.50E-05
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U			NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U			293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U			1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			5,300	N	7,400	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.019	U			304	N	57	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.019	U			9	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.0096	U			9	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.0096	U			11	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.0096	U			11	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.0096	U			11	N	16	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.0096	U			11	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000029	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000012	J	0.0000041	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.000000091	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.00000067	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000011	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000029	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000035	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000034	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000035	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.000000047	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.000000029	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000004	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000054	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.000000048	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.000000093	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg	0.000000033	J	0.00000033	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.00000004	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.000000034				0.000238	N	0.000808	N	NMED	1.44E-09	4.24E-05

TABLE D1-D8-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID D8
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	6,200				NS	NS	1,290,000	N	NMED		4.81E-03
Antimony	7440-36-0	mg/kg	0.2				NS	NS	519	N	NMED		3.85E-04
Arsenic	7440-38-2	mg/kg	1.9				36	N	208	N	NMED	5.29E-07	9.13E-03
Barium	7440-39-3	mg/kg	100				NS	NS	255,000	N	NMED		3.92E-04
Beryllium	7440-41-7	mg/kg	0.3	J			313,000	N	2,580	N	NMED	9.58E-12	1.16E-04
Cadmium	7440-43-9	mg/kg	0.38				417,000	N	1,110	N	NMED	9.11E-12	3.42E-04
Calcium	7440-70-2	mg/kg	10,000				NS	NS	32,400,000	N	NMED		3.09E-04
Chromium (Total) (3)	7440-47-3	mg/kg	7.3				505	N	314,000	N	NMED	1.45E-07	2.32E-05
Cobalt	7440-48-4	mg/kg	2.5				83,400	N	388	N	NMED	3.00E-10	6.44E-03
Copper	7440-50-8	mg/kg	76				NS	NS	51,900	N	NMED		1.46E-03
Iron	7439-89-6	mg/kg	6,500				NS	NS	908,000	N	NMED		7.16E-03
Lead	7439-92-1	mg/kg	9.4				NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	2,300				NS	NS	5,680,000	N	NMED		4.05E-04
Manganese	7439-96-5	mg/kg	200				NS	NS	160,000	N	NMED		1.25E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.019	J			NS	NS	112	N	NMED		1.70E-04
Nickel	7440-02-0	mg/kg	5.7				2,890,000	N	25,700	N	NMED	1.97E-11	2.22E-04
Potassium	7440-09-7	mg/kg	1,400				NS	NS	76,200,000	N	NMED		1.84E-05
Selenium	7782-49-2	mg/kg	0.66				NS	NS	6,490	N	NMED		1.02E-04
Silver	7440-22-4	mg/kg	0.056	J			NS	NS	6,490	N	NMED		8.63E-06
Sodium	7440-23-5	mg/kg	25				NS	NS	37,300,000	N	NMED		6.70E-07
Thallium	7440-28-0	mg/kg	0.058	J			NS	NS	13	N	NMED		4.46E-03
Vanadium	7440-62-2	mg/kg	11				NS	NS	6,530	N	NMED		1.68E-03
Zinc	7440-66-6	mg/kg	19				NS	NS	38,900	N	NMED		4.88E-04

TABLE D1-D8-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID D8
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.29	U			NS	NS	63	N	NMED		
Nitrate	14797-55-8	mg/kg	4.6	J			NS	NS	2,080,000	N	NMED		2.21E-06
Perchlorate	14797-73-0	mg/kg	0.0041	U			NS	NS	908	N	NMED		
										Cumulative Risk/Hazard		**7E-07**	**0.04**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
IEUBK = Integrated Exposure Uptake Biokentic Model
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect

TABLE D1-D8-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID D8
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0018	U			659	N	10,600	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0018	U			NS	NS	13,600	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0018	U			197	N	7,080	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0018	U			4,300	N	2	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0018	U			1,820	N	70,800	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0018	U			NS	NS	424	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0018	U			781	N	130	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0018	U			NS	NS	283	N	NMED[C]		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0044	U			8	N	6	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0018	U			8,540	N	79	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0018	U			NS	NS	492	N	NMED[C]		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0044	U			6	N	8	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0018	U			16	N	140	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0018	U			NS	NS	2,500	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0018	U			195	N	54	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0018	U			415	N	25	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0018	U			NS	NS	422	N	NMED[C]		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0018	U			45,900	N	24,800	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0018	U			NS	NS	7,080	N	NMED[C]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0018	U			45,900	N	24,800	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0018	U			415	N	25	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0027	U			NS	NS	90,700	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0018	U			NS	NS	7,080	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0018	U			NS	NS	599	N	NMED[C]		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0018	U			NS	NS	7,080	N	NMED[C]		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0018	U			NS	NS	20,400	N	NMED[C]		
Acetone	67-64-1	mg/kg	0.23				NS	NS	242,000	N	NMED		9.50E-07
Benzene	71-43-2	mg/kg	0.0018	U			423	N	142	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0018	U			NS	NS	538	N	NMED[C]		
Bromochloromethane	74-97-5	mg/kg	0.0018	U			NS	NS	296	N	NMED[C]		
Bromodichloromethane	75-27-4	mg/kg	0.0018	U			143	N	7,080	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0018	U			23,700	N	5,380	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0018	U			NS	NS	18	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0018	U			NS	NS	1,620	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0018	U			252	N	202	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0018	U			NS	NS	412	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0018	U			NS	NS	16,600	N	NMED		
Chloroform	67-66-3	mg/kg	0.0018	U			134	N	391	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0044	U			956	N	235	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0018	U			NS	NS	708	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0018	U			781	N	130	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0018	U			340	N	5,380	N	NMED		
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0018	U			NS	NS	54	N	NMED		

TABLE D1-D8-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID D8
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dichlorodifluoromethane	75-71-8	mg/kg	0.0018	U			NS	NS	161	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0018	U			1,770	N	5,800	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0018	U			2,400	N	269	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0018	U			NS	NS	2,740	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0044	U			NS	NS	696	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0018	U			24,200	N	33,100	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.0089	U			89,600	N	1,210	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0018	U			NS	NS	17,700	N	NMED[C]		
n-Propylbenzene	103-65-1	mg/kg	0.0018	U			NS	NS	6,730	N	NMED[C]		
Naphthalene	91-20-3	mg/kg	0.0018	U			633	N	159	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0022	U			NS	NS	736	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0018	U			NS	NS	2,740	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0018	U			NS	NS	35,400	N	NMED[C]		
Styrene	100-42-5	mg/kg	0.0018	U			NS	NS	10,200	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0018	U			NS	NS	35,400	N	NMED[C]		
Tetrachloroethene	127-18-4	mg/kg	0.0018	U			7,910	N	120	N	NMED		
Toluene	108-88-3	mg/kg	0.0018	U			NS	NS	14,000	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0018	U			NS	NS	206	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0018	U			781	N	130	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0018	U			5,370	N	7	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0018	U			NS	NS	1,130	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0018	U			161	N	162	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	U			8,540	N	79	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	U			NS	NS	2,500	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	U			45,900	N	24,800	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	U			45,900	N	24,800	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	U			NS	NS	26,900	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	U			17,000	N	269	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	U			NS	NS	807	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	U			NS	NS	5,380	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	U			NS	NS	538	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	U			600	N	536	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	U			165	N	81	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	U			NS	NS	28,300	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.17	U			NS	NS	1,770	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.17	U			NS	NS	1,000	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	U			NS	NS	13,500	N	NMED[C]		
2-Nitroaniline	88-74-4	mg/kg	0.17	U			NS	NS	2,690	N	NMED[C]		
2-Nitrophenol	88-75-5	mg/kg	0.17	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	U			410	N	NS	NS	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.17	U			135	N	1,080	N	NMED[SC]		
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	U			NS	NS	22	N	NMED		

TABLE D1-D8-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID D8
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	U			NS	NS	NS	NS	NS		
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	U			NS	NS	26,900	N	NMED[C]		
4-Chloroaniline	106-47-8	mg/kg	0.17	U			14	N	135	N	NMED[C]		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.17	U			135	N	1,080	N	NMED[C]		
4-Nitrophenol	100-02-7	mg/kg	0.17	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.17	U			NS	NS	15,100	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.17	U			NS	NS	7,530	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.17	U			NS	NS	75,300	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.17	U			240	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.13	U			173	N	15	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	U			240	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	U			NS	NS	7,530	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	U			2,310	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.17	U			NS	NS	1,080,000	N	NMED[C]		
Benzyl Alcohol	100-51-6	mg/kg	0.17	U			NS	NS	26,900	N	NMED[C]		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	U			NS	NS	807	N	NMED[C]		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	U			2	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	U			3,540	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	U			13,400	N	5,380	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.17	U			1,420	N	53,800	N	NMED[C]		
Carbazole	86-74-8	mg/kg	0.17	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.17	U			23,100	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.17	U			NS	NS	26,900	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.17	U			NS	NS	2,690	N	NMED[C]		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	U			24	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.17	U			NS	NS	269	N	NMED[C]		
Diethylphthalate	84-66-2	mg/kg	0.17	U			NS	NS	215,000	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.17	U			NS	NS	269,000	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.17	U			NS	NS	10,000	N	NMED		
Fluorene	86-73-7	mg/kg	0.17	U			NS	NS	10,000	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.17	U			117	N	215	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	U			2,400	N	269	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.17	U			4,670	N	188	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	U			240	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.17	U			198,000	N	53,700	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	U			0.38	N	NA	N	NMED[C]		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.02	UJ			4	N	2	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	U			37,900	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.17	U			633	N	159	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.17	U			1,350	N	353	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.17	U			346	N	989	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.17	U			NS	NS	8,070	N	NMED		
Phenol	108-95-2	mg/kg	0.17	U			NS	NS	77,400	N	NMED		
Pyrene	129-00-0	mg/kg	0.17	U			NS	NS	7,530	N	NMED		

TABLE D1-D8-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID D8
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	8,070	N	NMED[C]		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	27	N	NMED[C]		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			7,500	N	161	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			600	N	536	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			165	N	81	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	17	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			1,130	N	319	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	27	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U			NS	NS	17	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			11,800	N	1,080	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.22				2,960	N	1,350	N	NMED	7.43E-10	1.63E-04
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U			NS	NS	706	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U			1,350	N	353	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U			11,100	N	27	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NS	NS	17,400	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			626	N	2,420	N	NMED[C]		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.019	U			2,440	N	17	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.019	U			55	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.0096	U			58	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.0096	U			85	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.0096	U			85	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.0096	U			85	N	5	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.0096	U			85	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (3)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000029	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000012	J	0.0000041	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.000000091	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.00000067	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000011	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000029	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000035	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000034	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000035	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.000000047	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.000000029	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000004	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000054	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.000000048	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.000000093	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg	0.000000033	J	0.00000033	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.00000004	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.000000034				0.00172	N	0.000226	N	NMED	1.99E-10	1.51E-04

TABLE D1-D8-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID D8
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	6,200				NS	NS	41,400	N	NMED		1.50E-01
Antimony	7440-36-0	mg/kg	0.2				NS	NS	142	N	NMED		1.41E-03
Arsenic	7440-38-2	mg/kg	1.9				216	N	41	N	NMED	8.80E-08	4.61E-02
Barium	7440-39-3	mg/kg	100				NS	NS	4,390	N	NMED		2.28E-02
Beryllium	7440-41-7	mg/kg	0.3	J			2,710	N	148	N	NMED	1.11E-09	2.03E-03
Cadmium	7440-43-9	mg/kg	0.38				3,610	N	72	N	NMED	1.05E-09	5.27E-03
Calcium	7440-70-2	mg/kg	10,000				NS	NS	8,850,000	N	NMED		1.13E-03
Chromium (Total) (4)	7440-47-3	mg/kg	7.3				468	N	134	N	NMED	1.56E-07	5.45E-02
Cobalt	7440-48-4	mg/kg	2.5				722	N	37	N	NMED	3.46E-08	6.81E-02
Copper	7440-50-8	mg/kg	76				NS	NS	14,200	N	NMED		5.35E-03
Iron	7439-89-6	mg/kg	6,500				NS	NS	248,000	N	NMED		2.62E-02
Lead	7439-92-1	mg/kg	9.4				NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	2,300				NS	NS	1,550,000	N	NMED		1.48E-03
Manganese	7439-96-5	mg/kg	200				NS	NS	464	N	NMED		4.31E-01
Mercury (Elemental)	7439-97-6	mg/kg	0.019	J			NS	NS	21	N	NMED		9.18E-04
Nickel	7440-02-0	mg/kg	5.7				20,500	N	753	N	NMED	2.78E-09	7.57E-03
Potassium	7440-09-7	mg/kg	1,400				NS	NS	20,800,000	N	NMED		6.73E-05
Selenium	7782-49-2	mg/kg	0.66				NS	NS	1,750	N	NMED		3.77E-04
Silver	7440-22-4	mg/kg	0.056	J			NS	NS	1,770	N	NMED		3.16E-05
Sodium	7440-23-5	mg/kg	25				NS	NS	10,200,000	N	NMED		2.45E-06
Thallium	7440-28-0	mg/kg	0.058	J			NS	NS	4	N	NMED		1.64E-02
Vanadium	7440-62-2	mg/kg	11				NS	NS	614	N	NMED		1.79E-02
Zinc	7440-66-6	mg/kg	19				NS	NS	106,000	N	NMED		1.79E-04

TABLE D1-D8-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID D8
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.29	U			NS	NS	12	N	NMED		
Nitrate	14797-55-8	mg/kg	4.6	J			NS	NS	566,000	N	NMED		8.13E-06
Perchlorate	14797-73-0	mg/kg	0.0041	U			NS	NS	248	N	NMED		
										Cumulative Risk/Hazard		**3E-07**	**0.9**
										Exceeds Target Level		**N**	**N**

Notes:

[s] = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update).

2) NMED[C] = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

3) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

4) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect

TABLE D1-D22-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID D22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0023	U			28.1	N	2,350	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0023	U			NS	NS	14,400	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0023	U			7.98	N	1,560	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0023	U			18.8	N	2.61	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0023	U			78.6	N	15,600	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0023	U			NS	NS	440	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0023	U			29.3	N	141	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0023	U			NS	NS	63	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0059	U			0.051	N	7.09	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0023	U			240	N	82.9	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0023	U			NS	NS	300	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0059	U			0.0858	N	5.88	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0023	U			0.672	N	135	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0023	U			NS	NS	2,150	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0023	U			8.32	N	55.6	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0023	U			17.8	N	29	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0023	U			NS	NS	270	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0023	U			1,290	N	5,480	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0023	U			NS	NS	1,600	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0023	U			1,290	N	5,480	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0023	U			17.8	N	29	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0035	U			NS	NS	37,400	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0023	U			NS	NS	1,560	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0023	U			NS	NS	200	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0023	U			NS	NS	1,600	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0023	U			NS	NS	5,810	N	RSL		
Acetone	67-64-1	mg/kg	0.0059	U			NS	NS	66,300	N	NMED		
Benzene	71-43-2	mg/kg	0.0023	U			17.8	N	114	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0023	U			NS	NS	290	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0023	U			NS	NS	150	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0023	U			6.19	N	1,560	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0023	U			674	N	1,230	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0023	U			NS	NS	17.7	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0023	U			NS	NS	1,550	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0023	U			10.7	N	144	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0023	U			NS	NS	378	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0023	U			NS	NS	19,000	N	NMED		
Chloroform	67-66-3	mg/kg	0.0023	U			5.9	N	306	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0059	U			41.1	N	268	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0023	U			NS	NS	156	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0023	U			29.3	N	141	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0023	U			13.9	N	1,230	N	NMED		
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0023	U			NS	NS	57.9	N	NMED		

TABLE D1-D22-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID D22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dichlorodifluoromethane	75-71-8	mg/kg	0.0023	U			NS	NS	182	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0023	U			75.1	N	3,930	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0023	U			68.3	N	61.6	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0023	U			NS	NS	2,360	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0059	U			NS	NS	764	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0023	U			975	N	37,800	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.012	U			766	N	409	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0023	U			NS	NS	3,900	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0023	U			NS	NS	3,800	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0023	U			22.6	N	162	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0029	U			NS	NS	805	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0023	U			NS	NS	2,360	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0023	U			NS	NS	7,800	N	RSL		
Styrene	100-42-5	mg/kg	0.0023	U			NS	NS	7,260	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0023	U			NS	NS	7,800	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0023	U			337	N	111	N	NMED		
Toluene	108-88-3	mg/kg	0.0023	U			NS	NS	5,230	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0023	U			NS	NS	210	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0023	U			29.3	N	141	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0023	U			15.5	N	6.77	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0023	U			NS	NS	1,230	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0023	U			0.742	N	113	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.19	U			240	N	82.9	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.19	U			NS	NS	2,150	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.19	U			1,290	N	5,480	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.19	U			1,290	N	5,480	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.19	U			NS	NS	6,160	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.19	U			484	N	61.6	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.19	U			NS	NS	185	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.19	U			NS	NS	1,230	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.19	U			NS	NS	123	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.19	U			17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.19	U			3.56	N	18.5	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.19	U			NS	NS	6,260	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.19	U			NS	NS	391	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.19	U			NS	NS	232	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.19	U			NS	NS	3,200	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.19	U			NS	NS	630	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.19	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.19	U			11.8	N	NS	NS	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.19	U			270	N	250	N	RSL[S]		
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.19	U			NS	NS	4.93	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.19	U			NS	NS	NS	NS	NS		

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HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID D22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.19	U			NS	NS	6,300	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.19	U			27	N	32	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.19	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.19	U			270	N	250	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.19	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.19	U			NS	NS	3,480	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.19	U			NS	NS	1,740	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.19	U			NS	NS	17,400	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.19	U			1.53	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.15	U			1.12	N	17.4	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.19	U			1.53	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.19	U			NS	NS	1,740	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.19	U			15.3	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.19	U			NS	NS	250,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.19	U			NS	NS	6,300	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.19	U			NS	NS	190	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.19	U			3.11	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.19	U			99.3	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.19	U			380	N	1,230	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.19	U			2,900	N	13,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.19	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.19	U			153	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.19	U			NS	NS	6,160	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.19	U			NS	NS	630	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.15	U			0.153	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.19	U			NS	NS	78	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.19	U			NS	NS	49,300	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.19	U			NS	NS	61,600	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.19	U			NS	NS	2,320	N	NMED		
Fluorene	86-73-7	mg/kg	0.19	U			NS	NS	2,320	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.19	U			3.33	N	49.3	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.19	U			68.3	N	61.6	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.19	U			133	N	43.1	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.19	U			1.53	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.19	U			5,610	N	12,300	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.19	U			0.78	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.023	UJ			0.0234	N	0.493	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.19	U			1,090	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.19	U			22.6	N	162	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.19	U			60.4	N	131	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.19	U			9.85	N	234	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.19	U			NS	NS	1,740	N	NMED		
Phenol	108-95-2	mg/kg	0.19	U			NS	NS	18,500	N	NMED		
Pyrene	129-00-0	mg/kg	0.19	U			NS	NS	1,740	N	NMED		

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HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID D22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U			NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U			83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U			NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U			60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U			313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			1,300	N	570	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.022	U			69.6	N	3.98	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.022	U			1.81	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.011	U			1.86	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.011	U			2.43	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.011	U			2.43	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.011	U			2.43	N	1.14	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.011	U			2.43	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000081	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000054	J	0.000018	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000049	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.00000002	J	0.000002	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000012	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.0000001	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000097	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000091	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.00000014	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000014	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000015	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000083	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg	0.0000000094	J	0.000000094	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000016	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000017	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000096	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.000000035				0.000049	N	0.0000506	N	NMED	7.10E-09	6.88E-04

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HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID D22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	16,000				NS	NS	78,000	N	NMED		2.05E-01
Antimony	7440-36-0	mg/kg	0.21				NS	NS	31.3	N	NMED		6.71E-03
Arsenic	7440-38-2	mg/kg	1.5				7.07	N	13	N	NMED	2.12E-06	1.15E-01
Barium	7440-39-3	mg/kg	210				NS	NS	15,600	N	NMED		1.35E-02
Beryllium	7440-41-7	mg/kg	0.65	J			64,400	N	156	N	NMED	1.01E-10	4.17E-03
Cadmium	7440-43-9	mg/kg	0.59				85,900	N	70.5	N	NMED	6.87E-11	8.37E-03
Calcium	7440-70-2	mg/kg	8,700				NS	NS	13,000,000	N	NMED		6.69E-04
Chromium (Total) (3)	7440-47-3	mg/kg	11				96.6	N	45,200	N	NMED	1.14E-06	2.43E-04
Cobalt	7440-48-4	mg/kg	3.7				17,200	N	23.4	N	NMED	2.15E-09	1.58E-01
Copper	7440-50-8	mg/kg	98				NS	NS	3,130	N	NMED		3.13E-02
Iron	7439-89-6	mg/kg	8,500				NS	NS	54,800	N	NMED		1.55E-01
Lead	7439-92-1	mg/kg	9.6				NS	NS	200	N	RSL		
Magnesium	7439-95-4	mg/kg	4,800				NS	NS	15,600,000	N	NMED		3.08E-04
Manganese	7439-96-5	mg/kg	430				NS	NS	10,500	N	NMED		4.10E-02
Mercury (Elemental)	7439-97-6	mg/kg	0.03	J			NS	NS	23.8	N	NMED		1.26E-03
Nickel	7440-02-0	mg/kg	8.7				595,000	N	1,560	N	NMED	1.46E-10	5.58E-03
Potassium	7440-09-7	mg/kg	1,600				NS	NS	15,600,000	N	NMED		1.03E-04
Selenium	7782-49-2	mg/kg	1				NS	NS	391	N	NMED		2.56E-03
Silver	7440-22-4	mg/kg	0.074	J			NS	NS	391	N	NMED		1.89E-04
Sodium	7440-23-5	mg/kg	83	J			NS	NS	7,820,000	N	NMED		1.06E-05
Thallium	7440-28-0	mg/kg	0.06	J			NS	NS	0.782	N	NMED		7.67E-02
Vanadium	7440-62-2	mg/kg	12				NS	NS	394	N	NMED		3.05E-02
Zinc	7440-66-6	mg/kg	24				NS	NS	23,500	N	NMED		1.02E-03

TABLE D1-D22-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID D22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.35	U			NS	NS	11.2	N	NMED		
Nitrate	14797-55-8	mg/kg	7.2	J			NS	NS	125,000	N	NMED		5.76E-05
Perchlorate	14797-73-0	mg/kg	0.0046	U			NS	NS	54.8	N	NMED		
										Cumulative Risk/Hazard		**3E-06**	**0.9**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect

TABLE D1-D22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID D22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0023	U			137	N	39,400	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0023	U			NS	NS	72,500	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0023	U			39	N	26,000	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0023	U			92	N	12	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0023	U			383	N	260,000	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0023	U			NS	NS	2,260	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0023	U			146	N	695	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0023	U			NS	NS	930	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0059	U			1	N	34	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0023	U			1,250	N	423	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0023	U			NS	NS	1,800	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0059	U			1	N	41	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0023	U			3	N	738	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0023	U			NS	NS	13,000	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0023	U			41	N	286	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0023	U			87	N	137	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0023	U			NS	NS	1,500	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0023	U			6,730	N	90,800	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0023	U			NS	NS	23,000	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0023	U			6,730	N	90,800	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0023	U			87	N	137	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0035	U			NS	NS	411,000	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0023	U			NS	NS	26,000	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0023	U			NS	NS	1,300	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0023	U			NS	NS	23,000	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0023	U			NS	NS	81,600	N	RSL		
Acetone	67-64-1	mg/kg	0.0059	U			NS	NS	960,000	N	NMED		
Benzene	71-43-2	mg/kg	0.0023	U			87	N	729	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0023	U			NS	NS	1,800	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0023	U			NS	NS	630	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0023	U			30	N	26,000	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0023	U			1,760	N	18,300	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0023	U			NS	NS	95	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0023	U			NS	NS	8,540	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0023	U			53	N	1,020	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0023	U			NS	NS	2,160	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0023	U			NS	NS	89,500	N	NMED		
Chloroform	67-66-3	mg/kg	0.0023	U			29	N	2,000	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0059	U			201	N	1,260	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0023	U			NS	NS	2,600	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0023	U			146	N	695	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0023	U			67	N	18,300	N	NMED		

TABLE D1-D22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID D22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0023	U			NS	NS	288	N	NMED		
Dichlorodifluoromethane	75-71-8	mg/kg	0.0023	U			NS	NS	865	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0023	U			29,000	N	368	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0023	U			52	N	916	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0023	U			NS	NS	14,200	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0059	U			NS	NS	3,730	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0023	U			4,820	N	178,000	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.012	U			14,400	N	5,130	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0023	U			NS	NS	58,000	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0023	U			NS	NS	24,000	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0023	U			108	N	843	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0029	U			NS	NS	3,940	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0023	U			NS	NS	14,200	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0023	U			NS	NS	120,000	N	RSL		
Styrene	100-42-5	mg/kg	0.0023	U			NS	NS	51,300	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0023	U			NS	NS	120,000	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0023	U			1,650	N	629	N	NMED		
Toluene	108-88-3	mg/kg	0.0023	U			NS	NS	61,300	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0023	U			NS	NS	1,100	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0023	U			146	N	695	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0023	U			112	N	37	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0023	U			NS	NS	6,030	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0023	U			28	N	46	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.19	U			1,250	N	423	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.19	U			NS	NS	13,000	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.19	U			6,730	N	90,800	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.19	U			6,730	N	90,800	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.19	U			NS	NS	91,600	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.19	U			2,330	N	916	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.19	U			NS	NS	2,750	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.19	U			NS	NS	18,300	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.19	U			NS	NS	1,830	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.19	U			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.19	U			17	N	276	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.19	U			NS	NS	104,000	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.19	U			NS	NS	6,490	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.19	U			NS	NS	3,370	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.19	U			NS	NS	41,000	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.19	U			NS	NS	8,000	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.19	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.19	U			NS	NS	410	N	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.19	U			1,100	N	3,300	N	RSL[S]		

TABLE D1-D22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID D22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.19	U			NS	NS	73	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.19	U			NS	NS	NS	NS	NS		
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.19	U			NS	NS	82,000	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.19	U			110	N	410	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.19	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.19	U			1,100	N	3,300	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.19	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.19	U			NS	NS	50,500	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.19	U			NS	NS	25,300	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.19	U			NS	NS	253,000	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.19	U			32	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.15	U			24	N	251	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.19	U			32	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.19	U			NS	NS	25,300	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.19	U			323	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.19	U			NS	NS	3,300,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.19	U			NS	NS	82,000	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.19	U			NS	NS	2,500	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.19	U			16	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.19	U			519	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.19	U			1,830	N	18,300	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.19	U			12,000	N	160,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.19	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.19	U			3,230	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.19	U			NS	NS	91,600	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.19	U			NS	NS	8,200	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.15	U			3	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.19	U			NS	NS	1,200	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.19	U			NS	NS	733,000	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.19	U			NS	NS	916,000	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.19	U			NS	NS	33,700	N	NMED		
Fluorene	86-73-7	mg/kg	0.19	U			NS	NS	33,700	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.19	U			16	N	733	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.19	U			52	N	916	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.19	U			641	N	641	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.19	U			32	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.19	U			27,000	N	183,000	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.19	U			3	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.023	UJ			1	N	7	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.19	U			5,240	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.19	U			108	N	843	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.19	U			293	N	1,540	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.19	U			45	N	3,180	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.19	U			NS	NS	27,500	N	NMED		
Phenol	108-95-2	mg/kg	0.19	U			NS	NS	275,000	N	NMED		
Pyrene	129-00-0	mg/kg	0.19	U			NS	NS	25,300	N	NMED		

TABLE D1-D22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID D22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U			NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U			428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U			NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U			293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U			1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			5,300	N	7,400	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.022	U			304	N	57	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.022	U			9	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.011	U			9	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.011	U			11	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.011	U			11	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.011	U			11	N	16	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.011	U			11	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000081	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000054	J	0.000018	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000049	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.00000002	J	0.000002	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000012	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.0000001	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000097	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000091	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.00000014	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000014	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000015	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000083	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg	0.0000000094	J	0.000000094	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000016	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000017	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000096	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.000000035				0.000238	N	0.000808	N	NMED	1.46E-09	4.31E-05

TABLE D1-D22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID D22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	16,000				NS	NS	1,290,000	N	NMED		1.24E-02
Antimony	7440-36-0	mg/kg	0.21				NS	NS	519	N	NMED		4.05E-04
Arsenic	7440-38-2	mg/kg	1.5				36	N	208	N	NMED	4.18E-07	7.21E-03
Barium	7440-39-3	mg/kg	210				NS	NS	255,000	N	NMED		8.24E-04
Beryllium	7440-41-7	mg/kg	0.65	J			313,000	N	2,580	N	NMED	2.08E-11	2.52E-04
Cadmium	7440-43-9	mg/kg	0.59				417,000	N	1,110	N	NMED	1.41E-11	5.32E-04
Calcium	7440-70-2	mg/kg	8,700				NS	NS	32,400,000	N	NMED		2.69E-04
Chromium (Total) (3)	7440-47-3	mg/kg	11				505	N	314,000	N	NMED	2.18E-07	3.50E-05
Cobalt	7440-48-4	mg/kg	3.7				83,400	N	388	N	NMED	4.44E-10	9.54E-03
Copper	7440-50-8	mg/kg	98				NS	NS	51,900	N	NMED		1.89E-03
Iron	7439-89-6	mg/kg	8,500				NS	NS	908,000	N	NMED		9.36E-03
Lead	7439-92-1	mg/kg	9.6				NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	4,800				NS	NS	5,680,000	N	NMED		8.45E-04
Manganese	7439-96-5	mg/kg	430				NS	NS	160,000	N	NMED		2.69E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.03	J			NS	NS	112	N	NMED		2.68E-04
Nickel	7440-02-0	mg/kg	8.7				2,890,000	N	25,700	N	NMED	3.01E-11	3.39E-04
Potassium	7440-09-7	mg/kg	1,600				NS	NS	76,200,000	N	NMED		2.10E-05
Selenium	7782-49-2	mg/kg	1				NS	NS	6,490	N	NMED		1.54E-04
Silver	7440-22-4	mg/kg	0.074	J			NS	NS	6,490	N	NMED		1.14E-05
Sodium	7440-23-5	mg/kg	83	J			NS	NS	37,300,000	N	NMED		2.23E-06
Thallium	7440-28-0	mg/kg	0.06	J			NS	NS	13	N	NMED		4.62E-03
Vanadium	7440-62-2	mg/kg	12				NS	NS	6,530	N	NMED		1.84E-03
Zinc	7440-66-6	mg/kg	24				NS	NS	38,900	N	NMED		6.17E-04

TABLE D1-D22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID D22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.35	U			NS	NS	63	N	NMED		
Nitrate	14797-55-8	mg/kg	7.2	J			NS	NS	2,080,000	N	NMED		3.46E-06
Perchlorate	14797-73-0	mg/kg	0.0046	U			NS	NS	908	N	NMED		
										Cumulative Risk/Hazard		**6E-07**	**0.05**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service

IEUBK = Integrated Exposure Uptake Biokentic Model

J = Estimated

mg/kg = milligrams per kilogram

NS = No Standard

U = Nondetect

UJ = Estimated Nondetect

TABLE D1-D22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID D22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0023	U			659	N	10,600	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0023	U			NS	NS	13,600	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0023	U			197	N	7,080	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0023	U			4,300	N	2	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0023	U			1,820	N	70,800	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0023	U			NS	NS	424	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0023	U			781	N	130	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0023	U			NS	NS	283	N	NMED[C]			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0059	U			8	N	6	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0023	U			8,540	N	79	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0023	U			NS	NS	492	N	NMED[C]			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0059	U			6	N	8	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0023	U			16	N	140	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0023	U			NS	NS	2,500	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0023	U			195	N	54	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0023	U			415	N	25	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0023	U			NS	NS	422	N	NMED[C]			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0023	U			45,900	N	24,800	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0023	U			NS	NS	7,080	N	NMED[C]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0023	U			45,900	N	24,800	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0023	U			415	N	25	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.0035	U			NS	NS	90,700	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0023	U			NS	NS	7,080	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.0023	U			NS	NS	599	N	NMED[C]			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0023	U			NS	NS	7,080	N	NMED[C]			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0023	U			NS	NS	20,400	N	NMED[C]			
Acetone	67-64-1	mg/kg	0.0059	U			NS	NS	242,000	N	NMED			
Benzene	71-43-2	mg/kg	0.0023	U			423	N	142	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.0023	U			NS	NS	538	N	NMED[C]			
Bromochloromethane	74-97-5	mg/kg	0.0023	U			NS	NS	296	N	NMED[C]			
Bromodichloromethane	75-27-4	mg/kg	0.0023	U			143	N	7,080	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0023	U			23,700	N	5,380	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0023	U			NS	NS	18	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.0023	U			NS	NS	1,620	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0023	U			252	N	202	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0023	U			NS	NS	412	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0023	U			NS	NS	16,600	N	NMED			
Chloroform	67-66-3	mg/kg	0.0023	U			134	N	391	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0059	U			956	N	235	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0023	U			NS	NS	708	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0023	U			781	N	130	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0023	U			340	N	5,380	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0023	U			NS	NS	54	N	NMED			

TABLE D1-D22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID D22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Dichlorodifluoromethane	75-71-8	mg/kg	0.0023	U			NS	NS	161	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.0023	U			1,770	N	5,800	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0023	U			2,400	N	269	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0023	U			NS	NS	2,740	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0059	U			NS	NS	696	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0023	U			24,200	N	33,100	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.012	U			89,600	N	1,210	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0023	U			NS	NS	17,700	N	NMED[C]			
n-Propylbenzene	103-65-1	mg/kg	0.0023	U			NS	NS	6,730	N	NMED[C]			
Naphthalene	91-20-3	mg/kg	0.0023	U			633	N	159	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0029	U			NS	NS	736	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.0023	U			NS	NS	2,740	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.0023	U			NS	NS	35,400	N	NMED[C]			
Styrene	100-42-5	mg/kg	0.0023	U			NS	NS	10,200	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0023	U			NS	NS	35,400	N	NMED[C]			
Tetrachloroethene	127-18-4	mg/kg	0.0023	U			7,910	N	120	N	NMED			
Toluene	108-88-3	mg/kg	0.0023	U			NS	NS	14,000	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0023	U			NS	NS	206	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0023	U			781	N	130	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0023	U			5,370	N	7	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0023	U			NS	NS	1,130	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0023	U			161	N	162	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.19	U			8,540	N	79	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.19	U			NS	NS	2,500	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.19	U			45,900	N	24,800	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.19	U			45,900	N	24,800	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.19	U			NS	NS	26,900	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.19	U			17,000	N	269	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.19	U			NS	NS	807	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.19	U			NS	NS	5,380	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.19	U			NS	NS	538	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.19	U			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.19	U			165	N	81	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.19	U			NS	NS	28,300	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.19	U			NS	NS	1,770	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.19	U			NS	NS	1,000	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.19	U			NS	NS	13,500	N	NMED[C]			
2-Nitroaniline	88-74-4	mg/kg	0.19	U			NS	NS	2,690	N	NMED[C]			
2-Nitrophenol	88-75-5	mg/kg	0.19	U			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.19	U			410	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.19	U			135	N	1,080	N	NMED[SC]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.19	U			NS	NS	22	N	NMED			

TABLE D1-D22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID D22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.19	U			NS	NS	NS	NS	NS			
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.19	U			NS	NS	26,900	N	NMED[C]			
4-Chloroaniline	106-47-8	mg/kg	0.19	U			14	N	135	N	NMED[C]			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.19	U			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.19	U			135	N	1,080	N	NMED[C]			
4-Nitrophenol	100-02-7	mg/kg	0.19	U			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.19	U			NS	NS	15,100	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.19	U			NS	NS	7,530	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.19	U			NS	NS	75,300	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.19	U			240	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.15	U			173	N	15	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.19	U			240	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.19	U			NS	NS	7,530	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.19	U			2,310	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.19	U			NS	NS	1,080,000	N	NMED[C]			
Benzyl Alcohol	100-51-6	mg/kg	0.19	U			NS	NS	26,900	N	NMED[C]			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.19	U			NS	NS	807	N	NMED[C]			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.19	U			2	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.19	U			3,540	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.19	U			13,400	N	5,380	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.19	U			1,420	N	53,800	N	NMED[C]			
Carbazole	86-74-8	mg/kg	0.19	U			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.19	U			23,100	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.19	U			NS	NS	26,900	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.19	U			NS	NS	2,690	N	NMED[C]			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.15	U			24	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.19	U			NS	NS	269	N	NMED[C]			
Diethylphthalate	84-66-2	mg/kg	0.19	U			NS	NS	215,000	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.19	U			NS	NS	269,000	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.19	U			NS	NS	10,000	N	NMED			
Fluorene	86-73-7	mg/kg	0.19	U			NS	NS	10,000	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.19	U			117	N	215	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.19	U			2,400	N	269	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.19	U			4,670	N	188	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.19	U			240	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.19	U			198,000	N	53,700	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.19	U			0.38	N	NA	N	NMED[C]			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.023	UJ			4	N	2	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.19	U			37,900	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.19	U			633	N	159	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.19	U			1,350	N	353	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.19	U			346	N	989	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.19	U			NS	NS	8,070	N	NMED			
Phenol	108-95-2	mg/kg	0.19	U			NS	NS	77,400	N	NMED			
Pyrene	129-00-0	mg/kg	0.19	U			NS	NS	7,530	N	NMED			

TABLE D1-D22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID D22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	8,070	N	NMED[C]			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	27	N	NMED[C]			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U			NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U			2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U			NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U			1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U			11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			626	N	2,420	N	NMED[C]			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.022	U			2,440	N	17	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.022	U			55	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.011	U			58	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.011	U			85	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.011	U			85	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.011	U			85	N	5	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.011	U			85	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (4)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000081	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000054	J	0.000018	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000049	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.00000002	J	0.000002	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000012	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.0000001	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000097	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000091	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.00000014	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000014	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000015	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000083	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg	0.0000000094	J	0.000000094	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000016	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000017	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000096	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.000000035				0.00172	N	0.000226	N	NMED	2.02E-10	1.54E-04	

TABLE D1-D22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID D22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	16,000				NS	NS	41,400	N	NMED		3.86E-01	Nervous
Antimony	7440-36-0	mg/kg	0.21				NS	NS	142	N	NMED		1.48E-03	
Arsenic	7440-38-2	mg/kg	1.5				216	N	41	N	NMED	6.94E-08	3.64E-02	
Barium	7440-39-3	mg/kg	210				NS	NS	4,390	N	NMED		4.78E-02	
Beryllium	7440-41-7	mg/kg	0.65	J			2,710	N	148	N	NMED	2.40E-09	4.39E-03	
Cadmium	7440-43-9	mg/kg	0.59				3,610	N	72	N	NMED	1.63E-09	8.18E-03	
Calcium	7440-70-2	mg/kg	8,700				NS	NS	8,850,000	N	NMED		9.83E-04	
Chromium (Total) (5)	7440-47-3	mg/kg	11				468	N	134	N	NMED	2.35E-07	8.21E-02	
Cobalt	7440-48-4	mg/kg	3.7				722	N	37	N	NMED	5.12E-08	1.01E-01	Endocrine
Copper	7440-50-8	mg/kg	98				NS	NS	14,200	N	NMED		6.90E-03	
Iron	7439-89-6	mg/kg	8,500				NS	NS	248,000	N	NMED		3.43E-02	
Lead	7439-92-1	mg/kg	9.6				NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	4,800				NS	NS	1,550,000	N	NMED		3.10E-03	
Manganese	7439-96-5	mg/kg	430				NS	NS	464	N	NMED		9.27E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.03	J			NS	NS	21	N	NMED		1.45E-03	
Nickel	7440-02-0	mg/kg	8.7				20,500	N	753	N	NMED	4.24E-09	1.16E-02	
Potassium	7440-09-7	mg/kg	1,600				NS	NS	20,800,000	N	NMED		7.69E-05	
Selenium	7782-49-2	mg/kg	1				NS	NS	1,750	N	NMED		5.71E-04	
Silver	7440-22-4	mg/kg	0.074	J			NS	NS	1,770	N	NMED		4.18E-05	
Sodium	7440-23-5	mg/kg	83	J			NS	NS	10,200,000	N	NMED		8.14E-06	
Thallium	7440-28-0	mg/kg	0.06	J			NS	NS	4	N	NMED		1.69E-02	
Vanadium	7440-62-2	mg/kg	12				NS	NS	614	N	NMED		1.95E-02	
Zinc	7440-66-6	mg/kg	24				NS	NS	106,000	N	NMED		2.26E-04	

TABLE D1-D22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID D22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.35	U			NS	NS	12	N	NMED			
Nitrate	14797-55-8	mg/kg	7.2	J			NS	NS	566,000	N	NMED		1.27E-05	
Perchlorate	14797-73-0	mg/kg	0.0046	U			NS	NS	248	N	NMED			
										Cumulative Risk/Hazard		**4E-07**	**1.7**	
										Exceeds Target Level		**N**	Y	

System	Hazard Quotient
Nervous	1.3
Endocrine	0.10
All Others	1.65

Notes:

[s] = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update).

2) NMED[C] = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

3) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

4) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect

TABLE D1-E22-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID E22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0023	U			28.1	N	2,350	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0023	U			NS	NS	14,400	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0023	U			7.98	N	1,560	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0023	U			18.8	N	2.61	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0023	U			78.6	N	15,600	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0023	U			NS	NS	440	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0023	U			29.3	N	141	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0023	U			NS	NS	63	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0059	U			0.051	N	7.09	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0023	U			240	N	82.9	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0023	U			NS	NS	300	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0059	U			0.0858	N	5.88	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0023	U			0.672	N	135	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0023	U			NS	NS	2,150	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0023	U			8.32	N	55.6	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0023	U			17.8	N	29	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0023	U			NS	NS	270	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0023	U			1,290	N	5,480	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0023	U			NS	NS	1,600	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0023	U			1,290	N	5,480	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0023	U			17.8	N	29	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0035	U			NS	NS	37,400	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0023	U			NS	NS	1,560	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0023	U			NS	NS	200	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0023	U			NS	NS	1,600	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0023	U			NS	NS	5,810	N	RSL		
Acetone	67-64-1	mg/kg	0.0059	U			NS	NS	66,300	N	NMED		
Benzene	71-43-2	mg/kg	0.0023	U			17.8	N	114	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0023	U			NS	NS	290	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0023	U			NS	NS	150	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0023	U			6.19	N	1,560	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0023	U			674	N	1,230	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0023	U			NS	NS	17.7	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0023	U			NS	NS	1,550	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0023	U			10.7	N	144	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0023	U			NS	NS	378	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0023	U			NS	NS	19,000	N	NMED		
Chloroform	67-66-3	mg/kg	0.0023	U			5.9	N	306	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0059	U			41.1	N	268	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0023	U			NS	NS	156	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0023	U			29.3	N	141	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0023	U			13.9	N	1,230	N	NMED		
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0023	U			NS	NS	57.9	N	NMED		

TABLE D1-E22-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID E22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dichlorodifluoromethane	75-71-8	mg/kg	0.0023	U			NS	NS	182	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0023	U			75.1	N	3,930	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0023	U			68.3	N	61.6	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0023	U			NS	NS	2,360	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0059	U			NS	NS	764	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0023	U			975	N	37,800	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.012	U			766	N	409	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0023	U			NS	NS	3,900	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0023	U			NS	NS	3,800	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0023	U			22.6	N	162	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0029	U			NS	NS	805	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0023	U			NS	NS	2,360	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0023	U			NS	NS	7,800	N	RSL		
Styrene	100-42-5	mg/kg	0.0023	U			NS	NS	7,260	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0023	U			NS	NS	7,800	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0023	U			337	N	111	N	NMED		
Toluene	108-88-3	mg/kg	0.0023	U			NS	NS	5,230	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0023	U			NS	NS	210	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0023	U			29.3	N	141	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0023	U			15.5	N	6.77	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0023	U			NS	NS	1,230	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0023	U			0.742	N	113	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.2	U			240	N	82.9	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.2	U			NS	NS	2,150	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.2	U			1,290	N	5,480	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.2	U			1,290	N	5,480	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.2	U			NS	NS	6,160	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.2	U			484	N	61.6	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.2	U			NS	NS	185	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.2	U			NS	NS	1,230	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.2	U			NS	NS	123	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.2	U			17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.2	U			3.56	N	18.5	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.2	U			NS	NS	6,260	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.2	U			NS	NS	391	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.2	U			NS	NS	232	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.2	U			NS	NS	3,200	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.2	U			NS	NS	630	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.2	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.2	U			11.8	N	NS	NS	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.2	U			270	N	250	N	RSL[S]		
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.2	U			NS	NS	4.93	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.2	U			NS	NS	NS	NS	NS		

TABLE D1-E22-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID E22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.2	U			NS	NS	6,300	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.2	U			27	N	32	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.2	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.2	U			270	N	250	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.2	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.2	U			NS	NS	3,480	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.2	U			NS	NS	1,740	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.2	U			NS	NS	17,400	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.2	U			1.53	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.16	U			1.12	N	17.4	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.2	U			1.53	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.2	U			NS	NS	1,740	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.2	U			15.3	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.2	U			NS	NS	250,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.2	U			NS	NS	6,300	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.2	U			NS	NS	190	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.2	U			3.11	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.2	U			99.3	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.2	U			380	N	1,230	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.2	U			2,900	N	13,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.2	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.2	U			153	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.2	U			NS	NS	6,160	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.2	U			NS	NS	630	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.16	U			0.153	Y	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.2	U			NS	NS	78	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.2	U			NS	NS	49,300	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.2	U			NS	NS	61,600	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.2	U			NS	NS	2,320	N	NMED		
Fluorene	86-73-7	mg/kg	0.2	U			NS	NS	2,320	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.2	U			3.33	N	49.3	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.2	U			68.3	N	61.6	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.2	U			133	N	43.1	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.2	U			1.53	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.2	U			5,610	N	12,300	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.2	U			0.78	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.024	UJ			0.0234	Y	0.493	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.2	U			1,090	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.2	U			22.6	N	162	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.2	U			60.4	N	131	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.2	U			9.85	N	234	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.2	U			NS	NS	1,740	N	NMED		
Phenol	108-95-2	mg/kg	0.2	U			NS	NS	18,500	N	NMED		
Pyrene	129-00-0	mg/kg	0.2	U			NS	NS	1,740	N	NMED		

TABLE D1-E22-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID E22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U			NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U			83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U			NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U			60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U			313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			1,300	N	570	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.023	U			69.6	N	3.98	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.023	U			1.81	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.012	U			1.86	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.012	U			2.43	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.012	U			2.43	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.012	U			2.43	N	1.14	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.012	U			2.43	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000017	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg		U	0.000004	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000016	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.00000071	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000011	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.0000001	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000011	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg	0.0000000091	J	0.000000091	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.00000011	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000011	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.000000081	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000058	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.000000083	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000015	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000078	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.0000000091				0.000049	N	0.0000506	N	NMED	1.86E-09	1.80E-04

TABLE D1-E22-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID E22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	16,000				NS	NS	78,000	N	NMED		2.05E-01
Antimony	7440-36-0	mg/kg	0.53				NS	NS	31.3	N	NMED		1.69E-02
Arsenic	7440-38-2	mg/kg	1.8				7.07	N	13	N	NMED	2.55E-06	1.38E-01
Barium	7440-39-3	mg/kg	240				NS	NS	15,600	N	NMED		1.54E-02
Beryllium	7440-41-7	mg/kg	0.62	J			64,400	N	156	N	NMED	9.63E-11	3.97E-03
Cadmium	7440-43-9	mg/kg	0.77				85,900	N	70.5	N	NMED	8.96E-11	1.09E-02
Calcium	7440-70-2	mg/kg	7,900				NS	NS	13,000,000	N	NMED		6.08E-04
Chromium (Total) (3)	7440-47-3	mg/kg	14				96.6	N	45,200	N	NMED	1.45E-06	3.10E-04
Cobalt	7440-48-4	mg/kg	3.7				17,200	N	23.4	N	NMED	2.15E-09	1.58E-01
Copper	7440-50-8	mg/kg	180				NS	NS	3,130	N	NMED		5.75E-02
Iron	7439-89-6	mg/kg	8,400				NS	NS	54,800	N	NMED		1.53E-01
Lead	7439-92-1	mg/kg	12				NS	NS	200	N	RSL		
Magnesium	7439-95-4	mg/kg	5,000				NS	NS	15,600,000	N	NMED		3.21E-04
Manganese	7439-96-5	mg/kg	410				NS	NS	10,500	N	NMED		3.90E-02
Mercury (Elemental)	7439-97-6	mg/kg	0.029	J			NS	NS	23.8	N	NMED		1.22E-03
Nickel	7440-02-0	mg/kg	10				595,000	N	1,560	N	NMED	1.68E-10	6.41E-03
Potassium	7440-09-7	mg/kg	1,600				NS	NS	15,600,000	N	NMED		1.03E-04
Selenium	7782-49-2	mg/kg	0.9				NS	NS	391	N	NMED		2.30E-03
Silver	7440-22-4	mg/kg	0.11				NS	NS	391	N	NMED		2.81E-04
Sodium	7440-23-5	mg/kg	50				NS	NS	7,820,000	N	NMED		6.39E-06
Thallium	7440-28-0	mg/kg	0.058	J			NS	NS	0.782	N	NMED		7.42E-02
Vanadium	7440-62-2	mg/kg	13				NS	NS	394	N	NMED		3.30E-02
Zinc	7440-66-6	mg/kg	26				NS	NS	23,500	N	NMED		1.11E-03

TABLE D1-E22-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID E22
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MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.37	U			NS	NS	11.2	N	NMED		
Nitrate	14797-55-8	mg/kg	13				NS	NS	125,000	N	NMED		1.04E-04
Perchlorate	14797-73-0	mg/kg	0.0049	U			NS	NS	54.8	N	NMED		
										Cumulative Risk/Hazard		**4E-06**	**0.9**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect

TABLE D1-E22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID E22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0023	U			137	N	39,400	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0023	U			NS	NS	72,500	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0023	U			39	N	26,000	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0023	U			92	N	12	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0023	U			383	N	260,000	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0023	U			NS	NS	2,260	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0023	U			146	N	695	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0023	U			NS	NS	930	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0059	U			1	N	34	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0023	U			1,250	N	423	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0023	U			NS	NS	1,800	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0059	U			1	N	41	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0023	U			3	N	738	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0023	U			NS	NS	13,000	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0023	U			41	N	286	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0023	U			87	N	137	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0023	U			NS	NS	1,500	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0023	U			6,730	N	90,800	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0023	U			NS	NS	23,000	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0023	U			6,730	N	90,800	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0023	U			87	N	137	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0035	U			NS	NS	411,000	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0023	U			NS	NS	26,000	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0023	U			NS	NS	1,300	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0023	U			NS	NS	23,000	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0023	U			NS	NS	81,600	N	RSL		
Acetone	67-64-1	mg/kg	0.0059	U			NS	NS	960,000	N	NMED		
Benzene	71-43-2	mg/kg	0.0023	U			87	N	729	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0023	U			NS	NS	1,800	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0023	U			NS	NS	630	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0023	U			30	N	26,000	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0023	U			1,760	N	18,300	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0023	U			NS	NS	95	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0023	U			NS	NS	8,540	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0023	U			53	N	1,020	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0023	U			NS	NS	2,160	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0023	U			NS	NS	89,500	N	NMED		
Chloroform	67-66-3	mg/kg	0.0023	U			29	N	2,000	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0059	U			201	N	1,260	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0023	U			NS	NS	2,600	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0023	U			146	N	695	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0023	U			67	N	18,300	N	NMED		

TABLE D1-E22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID E22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0023	U			NS	NS	288	N	NMED		
Dichlorodifluoromethane	75-71-8	mg/kg	0.0023	U			NS	NS	865	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0023	U			29,000	N	368	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0023	U			52	N	916	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0023	U			NS	NS	14,200	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0059	U			NS	NS	3,730	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0023	U			4,820	N	178,000	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.012	U			14,400	N	5,130	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0023	U			NS	NS	58,000	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0023	U			NS	NS	24,000	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0023	U			108	N	843	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0029	U			NS	NS	3,940	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0023	U			NS	NS	14,200	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0023	U			NS	NS	120,000	N	RSL		
Styrene	100-42-5	mg/kg	0.0023	U			NS	NS	51,300	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0023	U			NS	NS	120,000	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0023	U			1,650	N	629	N	NMED		
Toluene	108-88-3	mg/kg	0.0023	U			NS	NS	61,300	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0023	U			NS	NS	1,100	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0023	U			146	N	695	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0023	U			112	N	37	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0023	U			NS	NS	6,030	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0023	U			28	N	46	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.2	U			1,250	N	423	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.2	U			NS	NS	13,000	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.2	U			6,730	N	90,800	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.2	U			6,730	N	90,800	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.2	U			NS	NS	91,600	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.2	U			2,330	N	916	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.2	U			NS	NS	2,750	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.2	U			NS	NS	18,300	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.2	U			NS	NS	1,830	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.2	U			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.2	U			17	N	276	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.2	U			NS	NS	104,000	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.2	U			NS	NS	6,490	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.2	U			NS	NS	3,370	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.2	U			NS	NS	41,000	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.2	U			NS	NS	8,000	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.2	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.2	U			NS	NS	410	N	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.2	U			1,100	N	3,300	N	RSL[S]		

TABLE D1-E22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID E22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.2	U			NS	NS	73	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.2	U			NS	NS	NS	NS	NS		
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.2	U			NS	NS	82,000	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.2	U			110	N	410	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.2	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.2	U			1,100	N	3,300	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.2	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.2	U			NS	NS	50,500	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.2	U			NS	NS	25,300	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.2	U			NS	NS	253,000	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.2	U			32	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.16	U			24	N	251	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.2	U			32	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.2	U			NS	NS	25,300	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.2	U			323	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.2	U			NS	NS	3,300,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.2	U			NS	NS	82,000	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.2	U			NS	NS	2,500	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.2	U			16	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.2	U			519	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.2	U			1,830	N	18,300	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.2	U			12,000	N	160,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.2	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.2	U			3,230	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.2	U			NS	NS	91,600	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.2	U			NS	NS	8,200	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.16	U			3	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.2	U			NS	NS	1,200	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.2	U			NS	NS	733,000	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.2	U			NS	NS	916,000	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.2	U			NS	NS	33,700	N	NMED		
Fluorene	86-73-7	mg/kg	0.2	U			NS	NS	33,700	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.2	U			16	N	733	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.2	U			52	N	916	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.2	U			641	N	641	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.2	U			32	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.2	U			27,000	N	183,000	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.2	U			3	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.024	UJ			1	N	7	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.2	U			5,240	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.2	U			108	N	843	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.2	U			293	N	1,540	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.2	U			45	N	3,180	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.2	U			NS	NS	27,500	N	NMED		
Phenol	108-95-2	mg/kg	0.2	U			NS	NS	275,000	N	NMED		
Pyrene	129-00-0	mg/kg	0.2	U			NS	NS	25,300	N	NMED		

TABLE D1-E22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID E22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U			NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U			428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U			NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U			293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U			1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			5,300	N	7,400	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.023	U			304	N	57	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.023	U			9	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.012	U			9	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.012	U			11	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.012	U			11	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.012	U			11	N	16	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.012	U			11	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000017	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg		U	0.000004	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000016	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.00000071	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000011	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.0000001	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000011	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg	0.0000000091	J	0.000000091	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.00000011	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000011	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.000000081	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000058	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.000000083	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000015	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000078	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.0000000091				0.000238	N	0.000808	N	NMED	3.82E-10	1.13E-05

TABLE D1-E22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID E22
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MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	16,000				NS	NS	1,290,000	N	NMED		1.24E-02
Antimony	7440-36-0	mg/kg	0.53				NS	NS	519	N	NMED		1.02E-03
Arsenic	7440-38-2	mg/kg	1.8				36	N	208	N	NMED	5.01E-07	8.65E-03
Barium	7440-39-3	mg/kg	240				NS	NS	255,000	N	NMED		9.41E-04
Beryllium	7440-41-7	mg/kg	0.62	J			313,000	N	2,580	N	NMED	1.98E-11	2.40E-04
Cadmium	7440-43-9	mg/kg	0.77				417,000	N	1,110	N	NMED	1.85E-11	6.94E-04
Calcium	7440-70-2	mg/kg	7,900				NS	NS	32,400,000	N	NMED		2.44E-04
Chromium (Total) (3)	7440-47-3	mg/kg	14				505	N	314,000	N	NMED	2.77E-07	4.46E-05
Cobalt	7440-48-4	mg/kg	3.7				83,400	N	388	N	NMED	4.44E-10	9.54E-03
Copper	7440-50-8	mg/kg	180				NS	NS	51,900	N	NMED		3.47E-03
Iron	7439-89-6	mg/kg	8,400				NS	NS	908,000	N	NMED		9.25E-03
Lead	7439-92-1	mg/kg	12				NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	5,000				NS	NS	5,680,000	N	NMED		8.80E-04
Manganese	7439-96-5	mg/kg	410				NS	NS	160,000	N	NMED		2.56E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.029	J			NS	NS	112	N	NMED		2.59E-04
Nickel	7440-02-0	mg/kg	10				2,890,000	N	25,700	N	NMED	3.46E-11	3.89E-04
Potassium	7440-09-7	mg/kg	1,600				NS	NS	76,200,000	N	NMED		2.10E-05
Selenium	7782-49-2	mg/kg	0.9				NS	NS	6,490	N	NMED		1.39E-04
Silver	7440-22-4	mg/kg	0.11				NS	NS	6,490	N	NMED		1.69E-05
Sodium	7440-23-5	mg/kg	50				NS	NS	37,300,000	N	NMED		1.34E-06
Thallium	7440-28-0	mg/kg	0.058	J			NS	NS	13	N	NMED		4.46E-03
Vanadium	7440-62-2	mg/kg	13				NS	NS	6,530	N	NMED		1.99E-03
Zinc	7440-66-6	mg/kg	26				NS	NS	38,900	N	NMED		6.68E-04

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OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.37	U			NS	NS	63	N	NMED		
Nitrate	14797-55-8	mg/kg	13				NS	NS	2,080,000	N	NMED		6.25E-06
Perchlorate	14797-73-0	mg/kg	0.0049	U			NS	NS	908	N	NMED		
										Cumulative Risk/Hazard		**8E-07**	**0.06**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service

IEUBK = Integrated Exposure Uptake Biokentic Model

J = Estimated

mg/kg = milligrams per kilogram

NS = No Standard

U = Nondetect

UJ = Estimated Nondetect

TABLE D1-E22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID E22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0023	U			659	N	10,600	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0023	U			NS	NS	13,600	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0023	U			197	N	7,080	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0023	U			4,300	N	2	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0023	U			1,820	N	70,800	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0023	U			NS	NS	424	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0023	U			781	N	130	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0023	U			NS	NS	283	N	NMED[C]			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0059	U			8	N	6	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0023	U			8,540	N	79	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0023	U			NS	NS	492	N	NMED[C]			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0059	U			6	N	8	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0023	U			16	N	140	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0023	U			NS	NS	2,500	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0023	U			195	N	54	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0023	U			415	N	25	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0023	U			NS	NS	422	N	NMED[C]			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0023	U			45,900	N	24,800	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0023	U			NS	NS	7,080	N	NMED[C]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0023	U			45,900	N	24,800	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0023	U			415	N	25	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.0035	U			NS	NS	90,700	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0023	U			NS	NS	7,080	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.0023	U			NS	NS	599	N	NMED[C]			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0023	U			NS	NS	7,080	N	NMED[C]			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0023	U			NS	NS	20,400	N	NMED[C]			
Acetone	67-64-1	mg/kg	0.0059	U			NS	NS	242,000	N	NMED			
Benzene	71-43-2	mg/kg	0.0023	U			423	N	142	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.0023	U			NS	NS	538	N	NMED[C]			
Bromochloromethane	74-97-5	mg/kg	0.0023	U			NS	NS	296	N	NMED[C]			
Bromodichloromethane	75-27-4	mg/kg	0.0023	U			143	N	7,080	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0023	U			23,700	N	5,380	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0023	U			NS	NS	18	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.0023	U			NS	NS	1,620	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0023	U			252	N	202	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0023	U			NS	NS	412	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0023	U			NS	NS	16,600	N	NMED			
Chloroform	67-66-3	mg/kg	0.0023	U			134	N	391	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0059	U			956	N	235	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0023	U			NS	NS	708	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0023	U			781	N	130	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0023	U			340	N	5,380	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0023	U			NS	NS	54	N	NMED			

TABLE D1-E22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID E22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Dichlorodifluoromethane	75-71-8	mg/kg	0.0023	U			NS	NS	161	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.0023	U			1,770	N	5,800	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0023	U			2,400	N	269	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0023	U			NS	NS	2,740	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0059	U			NS	NS	696	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0023	U			24,200	N	33,100	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.012	U			89,600	N	1,210	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0023	U			NS	NS	17,700	N	NMED[C]			
n-Propylbenzene	103-65-1	mg/kg	0.0023	U			NS	NS	6,730	N	NMED[C]			
Naphthalene	91-20-3	mg/kg	0.0023	U			633	N	159	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0029	U			NS	NS	736	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.0023	U			NS	NS	2,740	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.0023	U			NS	NS	35,400	N	NMED[C]			
Styrene	100-42-5	mg/kg	0.0023	U			NS	NS	10,200	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0023	U			NS	NS	35,400	N	NMED[C]			
Tetrachloroethene	127-18-4	mg/kg	0.0023	U			7,910	N	120	N	NMED			
Toluene	108-88-3	mg/kg	0.0023	U			NS	NS	14,000	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0023	U			NS	NS	206	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0023	U			781	N	130	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0023	U			5,370	N	7	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0023	U			NS	NS	1,130	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0023	U			161	N	162	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.2	U			8,540	N	79	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.2	U			NS	NS	2,500	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.2	U			45,900	N	24,800	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.2	U			45,900	N	24,800	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.2	U			NS	NS	26,900	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.2	U			17,000	N	269	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.2	U			NS	NS	807	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.2	U			NS	NS	5,380	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.2	U			NS	NS	538	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.2	U			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.2	U			165	N	81	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.2	U			NS	NS	28,300	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.2	U			NS	NS	1,770	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.2	U			NS	NS	1,000	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.2	U			NS	NS	13,500	N	NMED[C]			
2-Nitroaniline	88-74-4	mg/kg	0.2	U			NS	NS	2,690	N	NMED[C]			
2-Nitrophenol	88-75-5	mg/kg	0.2	U			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.2	U			410	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.2	U			135	N	1,080	N	NMED[SC]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.2	U			NS	NS	22	N	NMED			

TABLE D1-E22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID E22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.2	U			NS	NS	NS	NS	NS			
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.2	U			NS	NS	26,900	N	NMED[C]			
4-Chloroaniline	106-47-8	mg/kg	0.2	U			14	N	135	N	NMED[C]			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.2	U			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.2	U			135	N	1,080	N	NMED[C]			
4-Nitrophenol	100-02-7	mg/kg	0.2	U			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.2	U			NS	NS	15,100	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.2	U			NS	NS	7,530	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.2	U			NS	NS	75,300	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.2	U			240	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.16	U			173	N	15	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.2	U			240	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.2	U			NS	NS	7,530	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.2	U			2,310	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.2	U			NS	NS	1,080,000	N	NMED[C]			
Benzyl Alcohol	100-51-6	mg/kg	0.2	U			NS	NS	26,900	N	NMED[C]			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.2	U			NS	NS	807	N	NMED[C]			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.2	U			2	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.2	U			3,540	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.2	U			13,400	N	5,380	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.2	U			1,420	N	53,800	N	NMED[C]			
Carbazole	86-74-8	mg/kg	0.2	U			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.2	U			23,100	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.2	U			NS	NS	26,900	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.2	U			NS	NS	2,690	N	NMED[C]			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.16	U			24	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.2	U			NS	NS	269	N	NMED[C]			
Diethylphthalate	84-66-2	mg/kg	0.2	U			NS	NS	215,000	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.2	U			NS	NS	269,000	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.2	U			NS	NS	10,000	N	NMED			
Fluorene	86-73-7	mg/kg	0.2	U			NS	NS	10,000	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.2	U			117	N	215	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.2	U			2,400	N	269	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.2	U			4,670	N	188	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.2	U			240	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.2	U			198,000	N	53,700	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.2	U			0.38	N	NA	N	NMED[C]			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.024	UJ			4	N	2	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.2	U			37,900	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.2	U			633	N	159	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.2	U			1,350	N	353	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.2	U			346	N	989	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.2	U			NS	NS	8,070	N	NMED			
Phenol	108-95-2	mg/kg	0.2	U			NS	NS	77,400	N	NMED			
Pyrene	129-00-0	mg/kg	0.2	U			NS	NS	7,530	N	NMED			

TABLE D1-E22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID E22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	8,070	N	NMED[C]			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	27	N	NMED[C]			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U			NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U			2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U			NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U			1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U			11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			626	N	2,420	N	NMED[C]			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.023	U			2,440	N	17	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.023	U			55	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.012	U			58	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.012	U			85	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.012	U			85	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.012	U			85	N	5	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.012	U			85	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (3)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000017	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg		U	0.000004	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000016	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.00000071	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000011	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.0000001	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000011	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg	0.0000000091	J	0.000000091	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.00000011	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000011	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.000000081	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000058	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.000000083	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000015	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000078	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.0000000091				0.00172	N	0.000226	N	NMED	5.29E-11	4.03E-05	

TABLE D1-E22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID E22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	16,000				NS	NS	41,400	N	NMED		3.86E-01	Nervous
Antimony	7440-36-0	mg/kg	0.53				NS	NS	142	N	NMED		3.73E-03	
Arsenic	7440-38-2	mg/kg	1.8				216	N	41	N	NMED		4.37E-02	
Barium	7440-39-3	mg/kg	240				NS	NS	4,390	N	NMED		5.47E-02	
Beryllium	7440-41-7	mg/kg	0.62	J			2,710	N	148	N	NMED		4.19E-03	
Cadmium	7440-43-9	mg/kg	0.77				3,610	N	72	N	NMED		1.07E-02	
Calcium	7440-70-2	mg/kg	7,900				NS	NS	8,850,000	N	NMED		8.93E-04	
Chromium (Total) (4)	7440-47-3	mg/kg	14				468	N	134	N	NMED		1.04E-01	GI, Blood
Cobalt	7440-48-4	mg/kg	3.7				722	N	37	N	NMED		1.01E-01	Endocrine
Copper	7440-50-8	mg/kg	180				NS	NS	14,200	N	NMED		1.27E-02	
Iron	7439-89-6	mg/kg	8,400				NS	NS	248,000	N	NMED		3.39E-02	
Lead	7439-92-1	mg/kg	12				NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	5,000				NS	NS	1,550,000	N	NMED		3.23E-03	
Manganese	7439-96-5	mg/kg	410				NS	NS	464	N	NMED		8.84E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.029	J			NS	NS	21	N	NMED		1.40E-03	
Nickel	7440-02-0	mg/kg	10				20,500	N	753	N	NMED		1.33E-02	
Potassium	7440-09-7	mg/kg	1,600				NS	NS	20,800,000	N	NMED		7.69E-05	
Selenium	7782-49-2	mg/kg	0.9				NS	NS	1,750	N	NMED		5.14E-04	
Silver	7440-22-4	mg/kg	0.11				NS	NS	1,770	N	NMED		6.21E-05	
Sodium	7440-23-5	mg/kg	50				NS	NS	10,200,000	N	NMED		4.90E-06	
Thallium	7440-28-0	mg/kg	0.058	J			NS	NS	4	N	NMED		1.64E-02	
Vanadium	7440-62-2	mg/kg	13				NS	NS	614	N	NMED		2.12E-02	
Zinc	7440-66-6	mg/kg	26				NS	NS	106,000	N	NMED		2.45E-04	

TABLE D1-E22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID E22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.37	U			NS	NS	12	N	NMED			
Nitrate	14797-55-8	mg/kg	13				NS	NS	566,000	N	NMED		2.30E-05	
Perchlorate	14797-73-0	mg/kg	0.0049	U			NS	NS	248	N	NMED			
										Cumulative Risk/Hazard		**5E-11**	**1.7**	
										Exceeds Target Level		**N**	**Y**	

Notes:

[s] = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

System	Hazard Quotient
Nervous	1.3
Endocrine	0.10
GI	0.10
Blood	0.10
All Others	0.22

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update).

2) NMED[C] = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

3) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

4) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect

TABLE D1-E23-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID E23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0022	U			28.1	N	2,350	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0022	U			NS	NS	14,400	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0022	U			7.98	N	1,560	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0022	U			18.8	N	2.61	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0022	U			78.6	N	15,600	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0022	U			NS	NS	440	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0022	U			29.3	N	141	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0022	U			NS	NS	63	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0054	U			0.051	N	7.09	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0022	U			240	N	82.9	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0022	U			NS	NS	300	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0054	U			0.0858	N	5.88	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0022	U			0.672	N	135	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0022	U			NS	NS	2,150	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0022	U			8.32	N	55.6	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0022	U			17.8	N	29	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0022	U			NS	NS	270	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0022	U			1,290	N	5,480	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0022	U			NS	NS	1,600	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0022	U			1,290	N	5,480	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0022	U			17.8	N	29	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0032	U			NS	NS	37,400	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0022	U			NS	NS	1,560	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.17	J			NS	NS	200	N	RSL		8.50E-04
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0022	U			NS	NS	1,600	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0022	U			NS	NS	5,810	N	RSL		
Acetone	67-64-1	mg/kg	0.34	J			NS	NS	66,300	N	NMED		5.13E-06
Benzene	71-43-2	mg/kg	0.0022	U			17.8	N	114	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0022	U			NS	NS	290	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0022	U			NS	NS	150	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0022	U			6.19	N	1,560	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0022	U			674	N	1,230	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0022	U			NS	NS	17.7	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0022	U			NS	NS	1,550	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0022	U			10.7	N	144	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0022	U			NS	NS	378	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0022	U			NS	NS	19,000	N	NMED		
Chloroform	67-66-3	mg/kg	0.0022	U			5.9	N	306	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0054	U			41.1	N	268	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0022	U			NS	NS	156	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0022	U			29.3	N	141	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0022	U			13.9	N	1,230	N	NMED		
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0022	U			NS	NS	57.9	N	NMED		

TABLE D1-E23-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID E23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dichlorodifluoromethane	75-71-8	mg/kg	0.0022	U			NS	NS	182	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0022	U			75.1	N	3,930	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0022	U			68.3	N	61.6	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0022	U			NS	NS	2,360	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0054	U			NS	NS	764	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0022	U			975	N	37,800	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.011	U			766	N	409	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0022	U			NS	NS	3,900	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0022	U			NS	NS	3,800	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0022	U			22.6	N	162	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0027	U			NS	NS	805	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0022	R			NS	NS	2,360	N	NMED[S]		9.32E-07
sec-Butylbenzene	135-98-8	mg/kg	0.0022	U			NS	NS	7,800	N	RSL		
Styrene	100-42-5	mg/kg	0.0022	U			NS	NS	7,260	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0022	U			NS	NS	7,800	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0022	U			337	N	111	N	NMED		
Toluene	108-88-3	mg/kg	0.0022	U			NS	NS	5,230	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0022	U			NS	NS	210	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0022	U			29.3	N	141	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0022	U			15.5	N	6.77	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0022	U			NS	NS	1,230	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0022	U			0.742	N	113	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	U			240	N	82.9	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	U			NS	NS	2,150	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	U			1,290	N	5,480	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	U			1,290	N	5,480	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	U			NS	NS	6,160	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	U			484	N	61.6	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	U			NS	NS	185	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	U			NS	NS	1,230	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	U			NS	NS	123	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	U			17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	U			3.56	N	18.5	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	U			NS	NS	6,260	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.17	U			NS	NS	391	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.17	U			NS	NS	232	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	U			NS	NS	3,200	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.17	U			NS	NS	630	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.17	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	U			11.8	N	NS	NS	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.17	U			270	N	250	N	RSL[S]		
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	U			NS	NS	4.93	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	U			NS	NS	NS	NS	NS		

TABLE D1-E23-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID E23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	U			NS	NS	6,300	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.17	U			27	N	32	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.17	U			270	N	250	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.17	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.17	U			NS	NS	3,480	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.17	U			NS	NS	1,740	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.17	U			NS	NS	17,400	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.17	U			1.53	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.13	U			1.12	N	17.4	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	U			1.53	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	U			NS	NS	1,740	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	U			15.3	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.17	U			NS	NS	250,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.17	U			NS	NS	6,300	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	U			NS	NS	190	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	U			3.11	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	U			99.3	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	U			380	N	1,230	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.17	U			2,900	N	13,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.17	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.17	U			153	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.17	U			NS	NS	6,160	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.17	U			NS	NS	630	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	U			0.153	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.17	U			NS	NS	78	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.17	U			NS	NS	49,300	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.17	U			NS	NS	61,600	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.17	U			NS	NS	2,320	N	NMED		
Fluorene	86-73-7	mg/kg	0.17	U			NS	NS	2,320	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.17	U			3.33	N	49.3	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	U			68.3	N	61.6	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.17	U			133	N	43.1	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	U			1.53	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.17	U			5,610	N	12,300	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	U			0.78	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	U			0.0234	N	0.493	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	U			1,090	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.17	U			22.6	N	162	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.17	U			60.4	N	131	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.17	U			9.85	N	234	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.17	U			NS	NS	1,740	N	NMED		
Phenol	108-95-2	mg/kg	0.17	U			NS	NS	18,500	N	NMED		
Pyrene	129-00-0	mg/kg	0.17	U			NS	NS	1,740	N	NMED		

TABLE D1-E23-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID E23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.13				NS	NS	7.64	N	NMED		1.70E-02
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U			83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U			60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U			313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			1,300	N	570	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.021	U			69.6	N	3.98	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.021	U			1.81	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.01	U			1.86	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.01	U			2.43	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.01	U			2.43	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.01	U			2.43	N	1.14	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.01	U			2.43	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (3)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.000000089	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.00000000063	J	0.0000021	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.000000076	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.00000017	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.000000033	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000025	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000073	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000025	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000041	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.000000047	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.000000062	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.000000059	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000046	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.000000039	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000007	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000028	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000063	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.00000000063				0.000049	N	0.0000506	N	NMED	1.29E-10	1.25E-05

TABLE D1-E23-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID E23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	15,000				NS	NS	78,000	N	NMED		1.92E-01
Antimony	7440-36-0	mg/kg	0.31				NS	NS	31.3	N	NMED		9.90E-03
Arsenic	7440-38-2	mg/kg	1.3				7.07	N	13	N	NMED	1.84E-06	1.00E-01
Barium	7440-39-3	mg/kg	200				NS	NS	15,600	N	NMED		1.28E-02
Beryllium	7440-41-7	mg/kg	0.56	J			64,400	N	156	N	NMED	8.70E-11	3.59E-03
Cadmium	7440-43-9	mg/kg	0.38				85,900	N	70.5	N	NMED	4.42E-11	5.39E-03
Calcium	7440-70-2	mg/kg	5,300				NS	NS	13,000,000	N	NMED		4.08E-04
Chromium (Total) (4)	7440-47-3	mg/kg	11				96.6	N	45,200	N	NMED	1.14E-06	2.43E-04
Cobalt	7440-48-4	mg/kg	3.7				17,200	N	23.4	N	NMED	2.15E-09	1.58E-01
Copper	7440-50-8	mg/kg	77				NS	NS	3,130	N	NMED		2.46E-02
Iron	7439-89-6	mg/kg	8,200				NS	NS	54,800	N	NMED		1.50E-01
Lead	7439-92-1	mg/kg	8.2				NS	NS	200	N	RSL		
Magnesium	7439-95-4	mg/kg	4,700				NS	NS	15,600,000	N	NMED		3.01E-04
Manganese	7439-96-5	mg/kg	380				NS	NS	10,500	N	NMED		3.62E-02
Mercury (Elemental)	7439-97-6	mg/kg	0.019	J			NS	NS	23.8	N	NMED		7.98E-04
Nickel	7440-02-0	mg/kg	7.5				595,000	N	1,560	N	NMED	1.26E-10	4.81E-03
Potassium	7440-09-7	mg/kg	1,500				NS	NS	15,600,000	N	NMED		9.62E-05
Selenium	7782-49-2	mg/kg	0.79				NS	NS	391	N	NMED		2.02E-03
Silver	7440-22-4	mg/kg	0.065	J			NS	NS	391	N	NMED		1.66E-04
Sodium	7440-23-5	mg/kg	34				NS	NS	7,820,000	N	NMED		4.35E-06
Thallium	7440-28-0	mg/kg	0.068	J			NS	NS	0.782	N	NMED		8.70E-02
Vanadium	7440-62-2	mg/kg	15				NS	NS	394	N	NMED		3.81E-02
Zinc	7440-66-6	mg/kg	21				NS	NS	23,500	N	NMED		8.94E-04

TABLE D1-E23-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID E23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.33	U			NS	NS	11.2	N	NMED		
Nitrate	14797-55-8	mg/kg	10	J			NS	NS	125,000	N	NMED		8.00E-05
Perchlorate	14797-73-0	mg/kg	0.0042	U			NS	NS	54.8	N	NMED		
										Cumulative Risk/Hazard		**3E-06**	**0.8**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect

TABLE D1-E23-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID E23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0022	U			137	N	39,400	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0022	U			NS	NS	72,500	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0022	U			39	N	26,000	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0022	U			92	N	12	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0022	U			383	N	260,000	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0022	U			NS	NS	2,260	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0022	U			146	N	695	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0022	U			NS	NS	930	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0054	U			1	N	34	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0022	U			1,250	N	423	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0022	U			NS	NS	1,800	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0054	U			1	N	41	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0022	U			3	N	738	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0022	U			NS	NS	13,000	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0022	U			41	N	286	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0022	U			87	N	137	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0022	U			NS	NS	1,500	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0022	U			6,730	N	90,800	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0022	U			NS	NS	23,000	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0022	U			6,730	N	90,800	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0022	U			87	N	137	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0032	U			NS	NS	411,000	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0022	U			NS	NS	26,000	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.17	J			NS	NS	1,300	N	RSL		1.31E-04
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0022	U			NS	NS	23,000	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0022	U			NS	NS	81,600	N	RSL		
Acetone	67-64-1	mg/kg	0.34	J			NS	NS	960,000	N	NMED		3.54E-07
Benzene	71-43-2	mg/kg	0.0022	U			87	N	729	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0022	U			NS	NS	1,800	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0022	U			NS	NS	630	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0022	U			30	N	26,000	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0022	U			1,760	N	18,300	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0022	U			NS	NS	95	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0022	U			NS	NS	8,540	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0022	U			53	N	1,020	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0022	U			NS	NS	2,160	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0022	U			NS	NS	89,500	N	NMED		
Chloroform	67-66-3	mg/kg	0.0022	U			29	N	2,000	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0054	U			201	N	1,260	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0022	U			NS	NS	2,600	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0022	U			146	N	695	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0022	U			67	N	18,300	N	NMED		

TABLE D1-E23-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID E23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0022	U			NS	NS	288	N	NMED		
Dichlorodifluoromethane	75-71-8	mg/kg	0.0022	U			NS	NS	865	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0022	U			29,000	N	368	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0022	U			52	N	916	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0022	U			NS	NS	14,200	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0054	U			NS	NS	3,730	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0022	U			4,820	N	178,000	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.011	U			14,400	N	5,130	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0022	U			NS	NS	58,000	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0022	U			NS	NS	24,000	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0022	U			108	N	843	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0027	U			NS	NS	3,940	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0022	R			NS	NS	14,200	N	NMED[S]		1.55E-07
sec-Butylbenzene	135-98-8	mg/kg	0.0022	U			NS	NS	120,000	N	RSL		
Styrene	100-42-5	mg/kg	0.0022	U			NS	NS	51,300	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0022	U			NS	NS	120,000	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0022	U			1,650	N	629	N	NMED		
Toluene	108-88-3	mg/kg	0.0022	U			NS	NS	61,300	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0022	U			NS	NS	1,100	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0022	U			146	N	695	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0022	U			112	N	37	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0022	U			NS	NS	6,030	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0022	U			28	N	46	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	U			1,250	N	423	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	U			NS	NS	13,000	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	U			6,730	N	90,800	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	U			6,730	N	90,800	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	U			NS	NS	91,600	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	U			2,330	N	916	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	U			NS	NS	2,750	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	U			NS	NS	18,300	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	U			NS	NS	1,830	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	U			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	U			17	N	276	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	U			NS	NS	104,000	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.17	U			NS	NS	6,490	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.17	U			NS	NS	3,370	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	U			NS	NS	41,000	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.17	U			NS	NS	8,000	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.17	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	U			NS	NS	410	N	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.17	U			1,100	N	3,300	N	RSL[S]		

TABLE D1-E23-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID E23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	U			NS	NS	73	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	U			NS	NS	NS	NS	NS		
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	U			NS	NS	82,000	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.17	U			110	N	410	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.17	U			1,100	N	3,300	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.17	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.17	U			NS	NS	50,500	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.17	U			NS	NS	25,300	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.17	U			NS	NS	253,000	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.17	U			32	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.13	U			24	N	251	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	U			32	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	U			NS	NS	25,300	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	U			323	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.17	U			NS	NS	3,300,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.17	U			NS	NS	82,000	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	U			NS	NS	2,500	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	U			16	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	U			519	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	U			1,830	N	18,300	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.17	U			12,000	N	160,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.17	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.17	U			3,230	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.17	U			NS	NS	91,600	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.17	U			NS	NS	8,200	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	U			3	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.17	U			NS	NS	1,200	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.17	U			NS	NS	733,000	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.17	U			NS	NS	916,000	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.17	U			NS	NS	33,700	N	NMED		
Fluorene	86-73-7	mg/kg	0.17	U			NS	NS	33,700	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.17	U			16	N	733	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	U			52	N	916	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.17	U			641	N	641	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	U			32	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.17	U			27,000	N	183,000	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	U			3	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	U			1	N	7	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	U			5,240	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.17	U			108	N	843	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.17	U			293	N	1,540	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.17	U			45	N	3,180	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.17	U			NS	NS	27,500	N	NMED		
Phenol	108-95-2	mg/kg	0.17	U			NS	NS	275,000	N	NMED		
Pyrene	129-00-0	mg/kg	0.17	U			NS	NS	25,300	N	NMED		

TABLE D1-E23-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID E23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.13				NS	NS	125	N	NMED		1.04E-03
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U			428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U			293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U			1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			5,300	N	7,400	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.021	U			304	N	57	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.021	U			9	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.01	U			9	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.01	U			11	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.01	U			11	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.01	U			11	N	16	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.01	U			11	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.000000089	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.00000000063	J	0.0000021	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.000000076	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.00000017	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.000000033	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000025	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000073	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000025	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000041	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.000000047	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.000000062	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.000000059	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000046	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.000000039	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000007	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000028	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000063	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.00000000063				0.000238	N	0.000808	N	NMED	2.65E-11	7.80E-07

TABLE D1-E23-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID E23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	15,000				NS	NS	1,290,000	N	NMED		1.16E-02
Antimony	7440-36-0	mg/kg	0.31				NS	NS	519	N	NMED		5.97E-04
Arsenic	7440-38-2	mg/kg	1.3				36	N	208	N	NMED	3.62E-07	6.25E-03
Barium	7440-39-3	mg/kg	200				NS	NS	255,000	N	NMED		7.84E-04
Beryllium	7440-41-7	mg/kg	0.56	J			313,000	N	2,580	N	NMED	1.79E-11	2.17E-04
Cadmium	7440-43-9	mg/kg	0.38				417,000	N	1,110	N	NMED	9.11E-12	3.42E-04
Calcium	7440-70-2	mg/kg	5,300				NS	NS	32,400,000	N	NMED		1.64E-04
Chromium (Total) (3)	7440-47-3	mg/kg	11				505	N	314,000	N	NMED	2.18E-07	3.50E-05
Cobalt	7440-48-4	mg/kg	3.7				83,400	N	388	N	NMED	4.44E-10	9.54E-03
Copper	7440-50-8	mg/kg	77				NS	NS	51,900	N	NMED		1.48E-03
Iron	7439-89-6	mg/kg	8,200				NS	NS	908,000	N	NMED		9.03E-03
Lead	7439-92-1	mg/kg	8.2				NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	4,700				NS	NS	5,680,000	N	NMED		8.27E-04
Manganese	7439-96-5	mg/kg	380				NS	NS	160,000	N	NMED		2.38E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.019	J			NS	NS	112	N	NMED		1.70E-04
Nickel	7440-02-0	mg/kg	7.5				2,890,000	N	25,700	N	NMED	2.60E-11	2.92E-04
Potassium	7440-09-7	mg/kg	1,500				NS	NS	76,200,000	N	NMED		1.97E-05
Selenium	7782-49-2	mg/kg	0.79				NS	NS	6,490	N	NMED		1.22E-04
Silver	7440-22-4	mg/kg	0.065	J			NS	NS	6,490	N	NMED		1.00E-05
Sodium	7440-23-5	mg/kg	34				NS	NS	37,300,000	N	NMED		9.12E-07
Thallium	7440-28-0	mg/kg	0.068	J			NS	NS	13	N	NMED		5.23E-03
Vanadium	7440-62-2	mg/kg	15				NS	NS	6,530	N	NMED		2.30E-03
Zinc	7440-66-6	mg/kg	21				NS	NS	38,900	N	NMED		5.40E-04

TABLE D1-E23-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID E23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.33	U			NS	NS	63	N	NMED		
Nitrate	14797-55-8	mg/kg	10	J			NS	NS	2,080,000	N	NMED		4.81E-06
Perchlorate	14797-73-0	mg/kg	0.0042	U			NS	NS	908	N	NMED		
										Cumulative Risk/Hazard		**6E-07**	**0.05**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service

IEUBK = Integrated Exposure Uptake Biokentic Model

J = Estimated

mg/kg = milligrams per kilogram

NS = No Standard

U = Nondetect

UJ = Estimated Nondetect

TABLE D1-E23-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID E23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0022	U			659	N	10,600	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0022	U			NS	NS	13,600	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0022	U			197	N	7,080	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0022	U			4,300	N	2	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0022	U			1,820	N	70,800	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0022	U			NS	NS	424	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0022	U			781	N	130	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0022	U			NS	NS	283	N	NMED[C]			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0054	U			8	N	6	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0022	U			8,540	N	79	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0022	U			NS	NS	492	N	NMED[C]			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0054	U			6	N	8	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0022	U			16	N	140	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0022	U			NS	NS	2,500	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0022	U			195	N	54	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0022	U			415	N	25	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0022	U			NS	NS	422	N	NMED[C]			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0022	U			45,900	N	24,800	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0022	U			NS	NS	7,080	N	NMED[C]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0022	U			45,900	N	24,800	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0022	U			415	N	25	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.0032	U			NS	NS	90,700	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0022	U			NS	NS	7,080	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.17	J			NS	NS	599	N	NMED[C]		2.84E-04	
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0022	U			NS	NS	7,080	N	NMED[C]			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0022	U			NS	NS	20,400	N	NMED[C]			
Acetone	67-64-1	mg/kg	0.34	J			NS	NS	242,000	N	NMED		1.40E-06	
Benzene	71-43-2	mg/kg	0.0022	U			423	N	142	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.0022	U			NS	NS	538	N	NMED[C]			
Bromochloromethane	74-97-5	mg/kg	0.0022	U			NS	NS	296	N	NMED[C]			
Bromodichloromethane	75-27-4	mg/kg	0.0022	U			143	N	7,080	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0022	U			23,700	N	5,380	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0022	U			NS	NS	18	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.0022	U			NS	NS	1,620	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0022	U			252	N	202	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0022	U			NS	NS	412	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0022	U			NS	NS	16,600	N	NMED			
Chloroform	67-66-3	mg/kg	0.0022	U			134	N	391	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0054	U			956	N	235	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0022	U			NS	NS	708	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0022	U			781	N	130	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0022	U			340	N	5,380	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0022	U			NS	NS	54	N	NMED			

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FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Dichlorodifluoromethane	75-71-8	mg/kg	0.0022	U			NS	NS	161	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.0022	U			1,770	N	5,800	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0022	U			2,400	N	269	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0022	U			NS	NS	2,740	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0054	U			NS	NS	696	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0022	U			24,200	N	33,100	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.011	U			89,600	N	1,210	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0022	U			NS	NS	17,700	N	NMED[C]			
n-Propylbenzene	103-65-1	mg/kg	0.0022	U			NS	NS	6,730	N	NMED[C]			
Naphthalene	91-20-3	mg/kg	0.0022	U			633	N	159	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0027	U			NS	NS	736	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.0022	R			NS	NS	2,740	N	NMED[S]		8.03E-07	
sec-Butylbenzene	135-98-8	mg/kg	0.0022	U			NS	NS	35,400	N	NMED[C]			
Styrene	100-42-5	mg/kg	0.0022	U			NS	NS	10,200	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0022	U			NS	NS	35,400	N	NMED[C]			
Tetrachloroethene	127-18-4	mg/kg	0.0022	U			7,910	N	120	N	NMED			
Toluene	108-88-3	mg/kg	0.0022	U			NS	NS	14,000	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0022	U			NS	NS	206	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0022	U			781	N	130	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0022	U			5,370	N	7	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0022	U			NS	NS	1,130	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0022	U			161	N	162	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	U			8,540	N	79	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	U			NS	NS	2,500	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	U			45,900	N	24,800	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	U			45,900	N	24,800	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	U			NS	NS	26,900	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	U			17,000	N	269	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	U			NS	NS	807	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	U			NS	NS	5,380	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	U			NS	NS	538	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	U			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	U			165	N	81	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	U			NS	NS	28,300	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.17	U			NS	NS	1,770	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.17	U			NS	NS	1,000	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	U			NS	NS	13,500	N	NMED[C]			
2-Nitroaniline	88-74-4	mg/kg	0.17	U			NS	NS	2,690	N	NMED[C]			
2-Nitrophenol	88-75-5	mg/kg	0.17	U			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	U			410	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.17	U			135	N	1,080	N	NMED[SC]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	U			NS	NS	22	N	NMED			

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FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	U			NS	NS	NS	NS	NS			
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	U			NS	NS	26,900	N	NMED[C]			
4-Chloroaniline	106-47-8	mg/kg	0.17	U			14	N	135	N	NMED[C]			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	U			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.17	U			135	N	1,080	N	NMED[C]			
4-Nitrophenol	100-02-7	mg/kg	0.17	U			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.17	U			NS	NS	15,100	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.17	U			NS	NS	7,530	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.17	U			NS	NS	75,300	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.17	U			240	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.13	U			173	N	15	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	U			240	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	U			NS	NS	7,530	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	U			2,310	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.17	U			NS	NS	1,080,000	N	NMED[C]			
Benzyl Alcohol	100-51-6	mg/kg	0.17	U			NS	NS	26,900	N	NMED[C]			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	U			NS	NS	807	N	NMED[C]			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	U			2	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	U			3,540	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	U			13,400	N	5,380	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.17	U			1,420	N	53,800	N	NMED[C]			
Carbazole	86-74-8	mg/kg	0.17	U			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.17	U			23,100	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.17	U			NS	NS	26,900	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.17	U			NS	NS	2,690	N	NMED[C]			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	U			24	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.17	U			NS	NS	269	N	NMED[C]			
Diethylphthalate	84-66-2	mg/kg	0.17	U			NS	NS	215,000	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.17	U			NS	NS	269,000	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.17	U			NS	NS	10,000	N	NMED			
Fluorene	86-73-7	mg/kg	0.17	U			NS	NS	10,000	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.17	U			117	N	215	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	U			2,400	N	269	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.17	U			4,670	N	188	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	U			240	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.17	U			198,000	N	53,700	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	U			0.38	N	NA	N	NMED[C]			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	U			4	N	2	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	U			37,900	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.17	U			633	N	159	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.17	U			1,350	N	353	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.17	U			346	N	989	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.17	U			NS	NS	8,070	N	NMED			
Phenol	108-95-2	mg/kg	0.17	U			NS	NS	77,400	N	NMED			
Pyrene	129-00-0	mg/kg	0.17	U			NS	NS	7,530	N	NMED			

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	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	8,070	N	NMED[C]			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	27	N	NMED[C]			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.13				NS	NS	17	N	NMED		7.51E-03	
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U			2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U			1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U			11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			626	N	2,420	N	NMED[C]			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.021	U			2,440	N	17	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.021	U			55	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.01	U			58	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.01	U			85	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.01	U			85	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.01	U			85	N	5	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.01	U			85	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (4)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.000000089	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.00000000063	J	0.0000021	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.000000076	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.00000017	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.000000033	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000025	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000073	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000025	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000041	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.000000047	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.000000062	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.000000059	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000046	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.000000039	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000007	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000028	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000063	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.00000000063				0.00172	N	0.000226	N	NMED	3.66E-12	2.79E-06	

TABLE D1-E23-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID E23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	15,000				NS	NS	41,400	N	NMED		3.62E-01	Nervous
Antimony	7440-36-0	mg/kg	0.31				NS	NS	142	N	NMED		2.18E-03	
Arsenic	7440-38-2	mg/kg	1.3				216	N	41	N	NMED	6.02E-08	3.16E-02	
Barium	7440-39-3	mg/kg	200				NS	NS	4,390	N	NMED		4.56E-02	
Beryllium	7440-41-7	mg/kg	0.56	J			2,710	N	148	N	NMED	2.07E-09	3.78E-03	
Cadmium	7440-43-9	mg/kg	0.38				3,610	N	72	N	NMED	1.05E-09	5.27E-03	
Calcium	7440-70-2	mg/kg	5,300				NS	NS	8,850,000	N	NMED		5.99E-04	
Chromium (Total) (5)	7440-47-3	mg/kg	11				468	N	134	N	NMED	2.35E-07	8.21E-02	
Cobalt	7440-48-4	mg/kg	3.7				722	N	37	N	NMED	5.12E-08	1.01E-01	Endocrine
Copper	7440-50-8	mg/kg	77				NS	NS	14,200	N	NMED		5.42E-03	
Iron	7439-89-6	mg/kg	8,200				NS	NS	248,000	N	NMED		3.31E-02	
Lead	7439-92-1	mg/kg	8.2				NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	4,700				NS	NS	1,550,000	N	NMED		3.03E-03	
Manganese	7439-96-5	mg/kg	380				NS	NS	464	N	NMED		8.19E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.019	J			NS	NS	21	N	NMED		9.18E-04	
Nickel	7440-02-0	mg/kg	7.5				20,500	N	753	N	NMED	3.66E-09	9.96E-03	
Potassium	7440-09-7	mg/kg	1,500				NS	NS	20,800,000	N	NMED		7.21E-05	
Selenium	7782-49-2	mg/kg	0.79				NS	NS	1,750	N	NMED		4.51E-04	
Silver	7440-22-4	mg/kg	0.065	J			NS	NS	1,770	N	NMED		3.67E-05	
Sodium	7440-23-5	mg/kg	34				NS	NS	10,200,000	N	NMED		3.33E-06	
Thallium	7440-28-0	mg/kg	0.068	J			NS	NS	4	N	NMED		1.92E-02	
Vanadium	7440-62-2	mg/kg	15				NS	NS	614	N	NMED		2.44E-02	
Zinc	7440-66-6	mg/kg	21				NS	NS	106,000	N	NMED		1.98E-04	

TABLE D1-E23-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID E23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.33	U			NS	NS	12	N	NMED			
Nitrate	14797-55-8	mg/kg	10	J			NS	NS	566,000	N	NMED		1.77E-05	
Perchlorate	14797-73-0	mg/kg	0.0042	U			NS	NS	248	N	NMED			
										Cumulative Risk/Hazard		**4E-07**	**1.6**	
										Exceeds Target Level		**N**	Y	

System	Hazard Quotient
Nervous	1.2
Endocrine	0.10
All Others	0.28

Notes:

[s] = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update).

2) NMED[C] = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

3) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

4) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect

TABLE D1-E24-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID E24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0019	U			28.1	N	2,350	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0019	U			NS	NS	14,400	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0019	U			7.98	N	1,560	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0019	U			18.8	N	2.61	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0019	U			78.6	N	15,600	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0019	U			NS	NS	440	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0019	U			29.3	N	141	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0019	U			NS	NS	63	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0047	U			0.051	N	7.09	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0019	U			240	N	82.9	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0019	U			NS	NS	300	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0047	U			0.0858	N	5.88	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0019	U			0.672	N	135	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0019	U			NS	NS	2,150	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0019	U			8.32	N	55.6	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0019	U			17.8	N	29	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0019	U			NS	NS	270	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0019	U			1,290	N	5,480	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0019	U			NS	NS	1,600	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0019	U			1,290	N	5,480	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0019	U			17.8	N	29	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0028	U			NS	NS	37,400	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0019	U			NS	NS	1,560	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0019	U			NS	NS	200	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0019	U			NS	NS	1,600	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0019	U			NS	NS	5,810	N	RSL		
Acetone	67-64-1	mg/kg	0.049				NS	NS	66,300	N	NMED		7.39E-07
Benzene	71-43-2	mg/kg	0.0019	U			17.8	N	114	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0019	U			NS	NS	290	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0019	U			NS	NS	150	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0019	U			6.19	N	1,560	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0019	U			674	N	1,230	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0019	U			NS	NS	17.7	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0019	U			NS	NS	1,550	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0019	U			10.7	N	144	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0019	U			NS	NS	378	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0019	U			NS	NS	19,000	N	NMED		
Chloroform	67-66-3	mg/kg	0.0019	U			5.9	N	306	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0047	U			41.1	N	268	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0019	U			NS	NS	156	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0019	U			29.3	N	141	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0019	U			13.9	N	1,230	N	NMED		
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0019	U			NS	NS	57.9	N	NMED		

TABLE D1-E24-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID E24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dichlorodifluoromethane	75-71-8	mg/kg	0.0019	U			NS	NS	182	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0019	U			75.1	N	3,930	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0019	U			68.3	N	61.6	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0019	U			NS	NS	2,360	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0047	U			NS	NS	764	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0019	U			975	N	37,800	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.0095	U			766	N	409	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0019	U			NS	NS	3,900	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0019	U			NS	NS	3,800	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0019	U			22.6	N	162	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0024	U			NS	NS	805	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0019	U			NS	NS	2,360	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0019	U			NS	NS	7,800	N	RSL		
Styrene	100-42-5	mg/kg	0.0019	U			NS	NS	7,260	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0019	U			NS	NS	7,800	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0019	U			337	N	111	N	NMED		
Toluene	108-88-3	mg/kg	0.0019	U			NS	NS	5,230	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0019	U			NS	NS	210	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0019	U			29.3	N	141	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0019	U			15.5	N	6.77	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0019	U			NS	NS	1,230	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0019	U			0.742	N	113	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	U			240	N	82.9	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	U			NS	NS	2,150	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	U			1,290	N	5,480	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	U			1,290	N	5,480	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	U			NS	NS	6,160	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	U			484	N	61.6	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	U			NS	NS	185	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	U			NS	NS	1,230	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	U			NS	NS	123	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	U			17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	U			3.56	N	18.5	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	U			NS	NS	6,260	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.17	U			NS	NS	391	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.17	U			NS	NS	232	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	U			NS	NS	3,200	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.17	U			NS	NS	630	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.17	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	U			11.8	N	NS	NS	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.17	U			270	N	250	N	RSL[S]		
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	U			NS	NS	4.93	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	U			NS	NS	NS	NS	NS		

TABLE D1-E24-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID E24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	U			NS	NS	6,300	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.17	U			27	N	32	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.17	U			270	N	250	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.17	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.17	U			NS	NS	3,480	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.17	U			NS	NS	1,740	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.17	U			NS	NS	17,400	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.17	U			1.53	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.13	U			1.12	N	17.4	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	U			1.53	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	U			NS	NS	1,740	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	U			15.3	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.17	U			NS	NS	250,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.17	U			NS	NS	6,300	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	U			NS	NS	190	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	U			3.11	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	U			99.3	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	U			380	N	1,230	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.17	U			2,900	N	13,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.17	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.17	U			153	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.17	U			NS	NS	6,160	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.17	U			NS	NS	630	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	U			0.153	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.17	U			NS	NS	78	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.17	U			NS	NS	49,300	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.17	U			NS	NS	61,600	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.17	U			NS	NS	2,320	N	NMED		
Fluorene	86-73-7	mg/kg	0.17	U			NS	NS	2,320	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.17	U			3.33	N	49.3	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	U			68.3	N	61.6	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.17	U			133	N	43.1	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	U			1.53	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.17	U			5,610	N	12,300	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	U			0.78	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.02	UJ			0.0234	N	0.493	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	U			1,090	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.17	U			22.6	N	162	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.17	U			60.4	N	131	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.17	U			9.85	N	234	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.17	U			NS	NS	1,740	N	NMED		
Phenol	108-95-2	mg/kg	0.17	U			NS	NS	18,500	N	NMED		
Pyrene	129-00-0	mg/kg	0.17	U			NS	NS	1,740	N	NMED		

TABLE D1-E24-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID E24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U			NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U			83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U			NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U			60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U			313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			1,300	N	570	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.019	U			69.6	N	3.98	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.019	U			1.81	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.0097	U			1.86	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.0097	U			2.43	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.0097	U			2.43	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.0097	U			2.43	N	1.14	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.0097	U			2.43	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000039	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg		U	0.0000036	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.000000096	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.000000012	J	0.0000012	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg	0.0000000025	J	0.00000025	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.00000011	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.00000011	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000072	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.00000014	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.000000073	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000013	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000077	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.00000011	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000013	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg	0.00000004	J	0.0000004	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000085	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.000000055				0.000049	N	0.0000506	N	NMED	1.11E-08	1.08E-03

TABLE D1-E24-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID E24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	18,000				NS	NS	78,000	N	NMED		2.31E-01
Antimony	7440-36-0	mg/kg	0.15	U			NS	NS	31.3	N	NMED		
Arsenic	7440-38-2	mg/kg	1.6				7.07	N	13	N	NMED	2.26E-06	1.23E-01
Barium	7440-39-3	mg/kg	170				NS	NS	15,600	N	NMED		1.09E-02
Beryllium	7440-41-7	mg/kg	0.72	J			64,400	N	156	N	NMED	1.12E-10	4.62E-03
Cadmium	7440-43-9	mg/kg	0.3				85,900	N	70.5	N	NMED	3.49E-11	4.26E-03
Calcium	7440-70-2	mg/kg	4,800				NS	NS	13,000,000	N	NMED		3.69E-04
Chromium (Total) (3)	7440-47-3	mg/kg	11				96.6	N	45,200	N	NMED	1.14E-06	2.43E-04
Cobalt	7440-48-4	mg/kg	4				17,200	N	23.4	N	NMED	2.33E-09	1.71E-01
Copper	7440-50-8	mg/kg	59				NS	NS	3,130	N	NMED		1.88E-02
Iron	7439-89-6	mg/kg	9,000				NS	NS	54,800	N	NMED		1.64E-01
Lead	7439-92-1	mg/kg	8.3				NS	NS	200	N	RSL		
Magnesium	7439-95-4	mg/kg	5,600				NS	NS	15,600,000	N	NMED		3.59E-04
Manganese	7439-96-5	mg/kg	400				NS	NS	10,500	N	NMED		3.81E-02
Mercury (Elemental)	7439-97-6	mg/kg	0.023	J			NS	NS	23.8	N	NMED		9.66E-04
Nickel	7440-02-0	mg/kg	7.9				595,000	N	1,560	N	NMED	1.33E-10	5.06E-03
Potassium	7440-09-7	mg/kg	1,300				NS	NS	15,600,000	N	NMED		8.33E-05
Selenium	7782-49-2	mg/kg	1				NS	NS	391	N	NMED		2.56E-03
Silver	7440-22-4	mg/kg	0.054	J			NS	NS	391	N	NMED		1.38E-04
Sodium	7440-23-5	mg/kg	33				NS	NS	7,820,000	N	NMED		4.22E-06
Thallium	7440-28-0	mg/kg	0.067	J			NS	NS	0.782	N	NMED		8.57E-02
Vanadium	7440-62-2	mg/kg	16				NS	NS	394	N	NMED		4.06E-02
Zinc	7440-66-6	mg/kg	22				NS	NS	23,500	N	NMED		9.36E-04

TABLE D1-E24-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID E24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.32	U			NS	NS	11.2	N	NMED		
Nitrate	14797-55-8	mg/kg	6.2	J			NS	NS	125,000	N	NMED		4.96E-05
Perchlorate	14797-73-0	mg/kg	0.0042	U			NS	NS	54.8	N	NMED		
										Cumulative Risk/Hazard		**3E-06**	**0.9**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect

TABLE D1-E24-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID E24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0019	U			137	N	39,400	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0019	U			NS	NS	72,500	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0019	U			39	N	26,000	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0019	U			92	N	12	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0019	U			383	N	260,000	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0019	U			NS	NS	2,260	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0019	U			146	N	695	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0019	U			NS	NS	930	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0047	U			1	N	34	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0019	U			1,250	N	423	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0019	U			NS	NS	1,800	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0047	U			1	N	41	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0019	U			3	N	738	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0019	U			NS	NS	13,000	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0019	U			41	N	286	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0019	U			87	N	137	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0019	U			NS	NS	1,500	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0019	U			6,730	N	90,800	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0019	U			NS	NS	23,000	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0019	U			6,730	N	90,800	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0019	U			87	N	137	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0028	U			NS	NS	411,000	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0019	U			NS	NS	26,000	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0019	U			NS	NS	1,300	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0019	U			NS	NS	23,000	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0019	U			NS	NS	81,600	N	RSL		
Acetone	67-64-1	mg/kg	0.049				NS	NS	960,000	N	NMED		5.10E-08
Benzene	71-43-2	mg/kg	0.0019	U			87	N	729	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0019	U			NS	NS	1,800	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0019	U			NS	NS	630	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0019	U			30	N	26,000	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0019	U			1,760	N	18,300	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0019	U			NS	NS	95	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0019	U			NS	NS	8,540	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0019	U			53	N	1,020	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0019	U			NS	NS	2,160	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0019	U			NS	NS	89,500	N	NMED		
Chloroform	67-66-3	mg/kg	0.0019	U			29	N	2,000	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0047	U			201	N	1,260	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0019	U			NS	NS	2,600	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0019	U			146	N	695	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0019	U			67	N	18,300	N	NMED		

TABLE D1-E24-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID E24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0019	U			NS	NS	288	N	NMED		
Dichlorodifluoromethane	75-71-8	mg/kg	0.0019	U			NS	NS	865	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0019	U			29,000	N	368	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0019	U			52	N	916	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0019	U			NS	NS	14,200	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0047	U			NS	NS	3,730	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0019	U			4,820	N	178,000	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.0095	U			14,400	N	5,130	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0019	U			NS	NS	58,000	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0019	U			NS	NS	24,000	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0019	U			108	N	843	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0024	U			NS	NS	3,940	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0019	U			NS	NS	14,200	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0019	U			NS	NS	120,000	N	RSL		
Styrene	100-42-5	mg/kg	0.0019	U			NS	NS	51,300	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0019	U			NS	NS	120,000	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0019	U			1,650	N	629	N	NMED		
Toluene	108-88-3	mg/kg	0.0019	U			NS	NS	61,300	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0019	U			NS	NS	1,100	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0019	U			146	N	695	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0019	U			112	N	37	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0019	U			NS	NS	6,030	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0019	U			28	N	46	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	U			1,250	N	423	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	U			NS	NS	13,000	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	U			6,730	N	90,800	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	U			6,730	N	90,800	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	U			NS	NS	91,600	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	U			2,330	N	916	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	U			NS	NS	2,750	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	U			NS	NS	18,300	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	U			NS	NS	1,830	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	U			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	U			17	N	276	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	U			NS	NS	104,000	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.17	U			NS	NS	6,490	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.17	U			NS	NS	3,370	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	U			NS	NS	41,000	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.17	U			NS	NS	8,000	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.17	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	U			NS	NS	410	N	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.17	U			1,100	N	3,300	N	RSL[S]		

TABLE D1-E24-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID E24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	U			NS	NS	73	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	U			NS	NS	NS	NS	NS		
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	U			NS	NS	82,000	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.17	U			110	N	410	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.17	U			1,100	N	3,300	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.17	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.17	U			NS	NS	50,500	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.17	U			NS	NS	25,300	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.17	U			NS	NS	253,000	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.17	U			32	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.13	U			24	N	251	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	U			32	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	U			NS	NS	25,300	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	U			323	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.17	U			NS	NS	3,300,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.17	U			NS	NS	82,000	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	U			NS	NS	2,500	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	U			16	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	U			519	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	U			1,830	N	18,300	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.17	U			12,000	N	160,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.17	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.17	U			3,230	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.17	U			NS	NS	91,600	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.17	U			NS	NS	8,200	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	U			3	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.17	U			NS	NS	1,200	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.17	U			NS	NS	733,000	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.17	U			NS	NS	916,000	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.17	U			NS	NS	33,700	N	NMED		
Fluorene	86-73-7	mg/kg	0.17	U			NS	NS	33,700	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.17	U			16	N	733	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	U			52	N	916	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.17	U			641	N	641	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	U			32	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.17	U			27,000	N	183,000	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	U			3	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.02	UJ			1	N	7	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	U			5,240	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.17	U			108	N	843	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.17	U			293	N	1,540	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.17	U			45	N	3,180	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.17	U			NS	NS	27,500	N	NMED		
Phenol	108-95-2	mg/kg	0.17	U			NS	NS	275,000	N	NMED		
Pyrene	129-00-0	mg/kg	0.17	U			NS	NS	25,300	N	NMED		

TABLE D1-E24-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID E24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U			NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U			428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U			NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U			293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U			1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			5,300	N	7,400	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.019	U			304	N	57	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.019	U			9	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.0097	U			9	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.0097	U			11	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.0097	U			11	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.0097	U			11	N	16	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.0097	U			11	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000039	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg		U	0.0000036	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.000000096	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.000000012	J	0.0000012	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg	0.0000000025	J	0.00000025	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.00000011	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.00000011	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000072	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.00000014	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.000000073	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000013	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000077	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.00000011	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000013	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg	0.00000004	J	0.0000004	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000085	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.000000055				0.000238	N	0.000808	N	NMED	2.29E-09	6.75E-05

TABLE D1-E24-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID E24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	18,000				NS	NS	1,290,000	N	NMED		1.40E-02
Antimony	7440-36-0	mg/kg	0.15	U			NS	NS	519	N	NMED		
Arsenic	7440-38-2	mg/kg	1.6				36	N	208	N	NMED	4.46E-07	7.69E-03
Barium	7440-39-3	mg/kg	170				NS	NS	255,000	N	NMED		6.67E-04
Beryllium	7440-41-7	mg/kg	0.72	J			313,000	N	2,580	N	NMED	2.30E-11	2.79E-04
Cadmium	7440-43-9	mg/kg	0.3				417,000	N	1,110	N	NMED	7.19E-12	2.70E-04
Calcium	7440-70-2	mg/kg	4,800				NS	NS	32,400,000	N	NMED		1.48E-04
Chromium (Total) (3)	7440-47-3	mg/kg	11				505	N	314,000	N	NMED	2.18E-07	3.50E-05
Cobalt	7440-48-4	mg/kg	4				83,400	N	388	N	NMED	4.80E-10	1.03E-02
Copper	7440-50-8	mg/kg	59				NS	NS	51,900	N	NMED		1.14E-03
Iron	7439-89-6	mg/kg	9,000				NS	NS	908,000	N	NMED		9.91E-03
Lead	7439-92-1	mg/kg	8.3				NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	5,600				NS	NS	5,680,000	N	NMED		9.86E-04
Manganese	7439-96-5	mg/kg	400				NS	NS	160,000	N	NMED		2.50E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.023	J			NS	NS	112	N	NMED		2.05E-04
Nickel	7440-02-0	mg/kg	7.9				2,890,000	N	25,700	N	NMED	2.73E-11	3.07E-04
Potassium	7440-09-7	mg/kg	1,300				NS	NS	76,200,000	N	NMED		1.71E-05
Selenium	7782-49-2	mg/kg	1				NS	NS	6,490	N	NMED		1.54E-04
Silver	7440-22-4	mg/kg	0.054	J			NS	NS	6,490	N	NMED		8.32E-06
Sodium	7440-23-5	mg/kg	33				NS	NS	37,300,000	N	NMED		8.85E-07
Thallium	7440-28-0	mg/kg	0.067	J			NS	NS	13	N	NMED		5.15E-03
Vanadium	7440-62-2	mg/kg	16				NS	NS	6,530	N	NMED		2.45E-03
Zinc	7440-66-6	mg/kg	22				NS	NS	38,900	N	NMED		5.66E-04

TABLE D1-E24-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID E24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.32	U			NS	NS	63	N	NMED		
Nitrate	14797-55-8	mg/kg	6.2	J			NS	NS	2,080,000	N	NMED		2.98E-06
Perchlorate	14797-73-0	mg/kg	0.0042	U			NS	NS	908	N	NMED		
										Cumulative Risk/Hazard		**7E-07**	**0.06**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
IEUBK = Integrated Exposure Uptake Biokentic Model
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect

TABLE D1-E24-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID E24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0019	U			659	N	10,600	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0019	U			NS	NS	13,600	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0019	U			197	N	7,080	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0019	U			4,300	N	2	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0019	U			1,820	N	70,800	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0019	U			NS	NS	424	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0019	U			781	N	130	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0019	U			NS	NS	283	N	NMED[C]			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0047	U			8	N	6	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0019	U			8,540	N	79	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0019	U			NS	NS	492	N	NMED[C]			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0047	U			6	N	8	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0019	U			16	N	140	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0019	U			NS	NS	2,500	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0019	U			195	N	54	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0019	U			415	N	25	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0019	U			NS	NS	422	N	NMED[C]			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0019	U			45,900	N	24,800	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0019	U			NS	NS	7,080	N	NMED[C]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0019	U			45,900	N	24,800	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0019	U			415	N	25	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.0028	U			NS	NS	90,700	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0019	U			NS	NS	7,080	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.0019	U			NS	NS	599	N	NMED[C]			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0019	U			NS	NS	7,080	N	NMED[C]			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0019	U			NS	NS	20,400	N	NMED[C]			
Acetone	67-64-1	mg/kg	0.049				NS	NS	242,000	N	NMED		2.02E-07	
Benzene	71-43-2	mg/kg	0.0019	U			423	N	142	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.0019	U			NS	NS	538	N	NMED[C]			
Bromochloromethane	74-97-5	mg/kg	0.0019	U			NS	NS	296	N	NMED[C]			
Bromodichloromethane	75-27-4	mg/kg	0.0019	U			143	N	7,080	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0019	U			23,700	N	5,380	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0019	U			NS	NS	18	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.0019	U			NS	NS	1,620	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0019	U			252	N	202	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0019	U			NS	NS	412	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0019	U			NS	NS	16,600	N	NMED			
Chloroform	67-66-3	mg/kg	0.0019	U			134	N	391	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0047	U			956	N	235	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0019	U			NS	NS	708	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0019	U			781	N	130	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0019	U			340	N	5,380	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0019	U			NS	NS	54	N	NMED			

TABLE D1-E24-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID E24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Dichlorodifluoromethane	75-71-8	mg/kg	0.0019	U			NS	NS	161	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.0019	U			1,770	N	5,800	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0019	U			2,400	N	269	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0019	U			NS	NS	2,740	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0047	U			NS	NS	696	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0019	U			24,200	N	33,100	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.0095	U			89,600	N	1,210	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0019	U			NS	NS	17,700	N	NMED[C]			
n-Propylbenzene	103-65-1	mg/kg	0.0019	U			NS	NS	6,730	N	NMED[C]			
Naphthalene	91-20-3	mg/kg	0.0019	U			633	N	159	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0024	U			NS	NS	736	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.0019	U			NS	NS	2,740	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.0019	U			NS	NS	35,400	N	NMED[C]			
Styrene	100-42-5	mg/kg	0.0019	U			NS	NS	10,200	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0019	U			NS	NS	35,400	N	NMED[C]			
Tetrachloroethene	127-18-4	mg/kg	0.0019	U			7,910	N	120	N	NMED			
Toluene	108-88-3	mg/kg	0.0019	U			NS	NS	14,000	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0019	U			NS	NS	206	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0019	U			781	N	130	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0019	U			5,370	N	7	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0019	U			NS	NS	1,130	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0019	U			161	N	162	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	U			8,540	N	79	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	U			NS	NS	2,500	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	U			45,900	N	24,800	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	U			45,900	N	24,800	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	U			NS	NS	26,900	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	U			17,000	N	269	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	U			NS	NS	807	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	U			NS	NS	5,380	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	U			NS	NS	538	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	U			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	U			165	N	81	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	U			NS	NS	28,300	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.17	U			NS	NS	1,770	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.17	U			NS	NS	1,000	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	U			NS	NS	13,500	N	NMED[C]			
2-Nitroaniline	88-74-4	mg/kg	0.17	U			NS	NS	2,690	N	NMED[C]			
2-Nitrophenol	88-75-5	mg/kg	0.17	U			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	U			410	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.17	U			135	N	1,080	N	NMED[SC]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	U			NS	NS	22	N	NMED			

TABLE D1-E24-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID E24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	U			NS	NS	NS	NS	NS			
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	U			NS	NS	26,900	N	NMED[C]			
4-Chloroaniline	106-47-8	mg/kg	0.17	U			14	N	135	N	NMED[C]			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	U			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.17	U			135	N	1,080	N	NMED[C]			
4-Nitrophenol	100-02-7	mg/kg	0.17	U			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.17	U			NS	NS	15,100	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.17	U			NS	NS	7,530	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.17	U			NS	NS	75,300	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.17	U			240	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.13	U			173	N	15	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	U			240	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	U			NS	NS	7,530	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	U			2,310	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.17	U			NS	NS	1,080,000	N	NMED[C]			
Benzyl Alcohol	100-51-6	mg/kg	0.17	U			NS	NS	26,900	N	NMED[C]			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	U			NS	NS	807	N	NMED[C]			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	U			2	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	U			3,540	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	U			13,400	N	5,380	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.17	U			1,420	N	53,800	N	NMED[C]			
Carbazole	86-74-8	mg/kg	0.17	U			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.17	U			23,100	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.17	U			NS	NS	26,900	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.17	U			NS	NS	2,690	N	NMED[C]			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	U			24	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.17	U			NS	NS	269	N	NMED[C]			
Diethylphthalate	84-66-2	mg/kg	0.17	U			NS	NS	215,000	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.17	U			NS	NS	269,000	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.17	U			NS	NS	10,000	N	NMED			
Fluorene	86-73-7	mg/kg	0.17	U			NS	NS	10,000	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.17	U			117	N	215	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	U			2,400	N	269	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.17	U			4,670	N	188	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	U			240	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.17	U			198,000	N	53,700	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	U			0.38	N	NA	N	NMED[C]			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.02	UJ			4	N	2	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	U			37,900	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.17	U			633	N	159	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.17	U			1,350	N	353	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.17	U			346	N	989	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.17	U			NS	NS	8,070	N	NMED			
Phenol	108-95-2	mg/kg	0.17	U			NS	NS	77,400	N	NMED			
Pyrene	129-00-0	mg/kg	0.17	U			NS	NS	7,530	N	NMED			

TABLE D1-E24-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID E24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	8,070	N	NMED[C]			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	27	N	NMED[C]			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U			NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U			2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U			NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U			1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U			11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			626	N	2,420	N	NMED[C]			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.019	U			2,440	N	17	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.019	U			55	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.0097	U			58	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.0097	U			85	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.0097	U			85	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.0097	U			85	N	5	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.0097	U			85	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (3)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000039	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg		U	0.0000036	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.000000096	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.000000012	J	0.0000012	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg	0.0000000025	J	0.00000025	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.00000011	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.00000011	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000072	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.00000014	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.000000073	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000013	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000077	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.00000011	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000013	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg	0.00000004	J	0.0000004	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000085	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.000000055				0.00172	N	0.000226	N	NMED	3.17E-10	2.41E-04	

TABLE D1-E24-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID E24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	18,000				NS	NS	41,400	N	NMED		4.35E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	U			NS	NS	142	N	NMED			
Arsenic	7440-38-2	mg/kg	1.6				216	N	41	N	NMED	7.41E-08	3.88E-02	
Barium	7440-39-3	mg/kg	170				NS	NS	4,390	N	NMED		3.87E-02	
Beryllium	7440-41-7	mg/kg	0.72	J			2,710	N	148	N	NMED	2.66E-09	4.86E-03	
Cadmium	7440-43-9	mg/kg	0.3				3,610	N	72	N	NMED	8.31E-10	4.16E-03	
Calcium	7440-70-2	mg/kg	4,800				NS	NS	8,850,000	N	NMED		5.42E-04	
Chromium (Total) (4)	7440-47-3	mg/kg	11				468	N	134	N	NMED	2.35E-07	8.21E-02	
Cobalt	7440-48-4	mg/kg	4				722	N	37	N	NMED	5.54E-08	1.09E-01	Endocrine
Copper	7440-50-8	mg/kg	59				NS	NS	14,200	N	NMED		4.15E-03	
Iron	7439-89-6	mg/kg	9,000				NS	NS	248,000	N	NMED		3.63E-02	
Lead	7439-92-1	mg/kg	8.3				NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	5,600				NS	NS	1,550,000	N	NMED		3.61E-03	
Manganese	7439-96-5	mg/kg	400				NS	NS	464	N	NMED		8.62E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.023	J			NS	NS	21	N	NMED		1.11E-03	
Nickel	7440-02-0	mg/kg	7.9				20,500	N	753	N	NMED	3.85E-09	1.05E-02	
Potassium	7440-09-7	mg/kg	1,300				NS	NS	20,800,000	N	NMED		6.25E-05	
Selenium	7782-49-2	mg/kg	1				NS	NS	1,750	N	NMED		5.71E-04	
Silver	7440-22-4	mg/kg	0.054	J			NS	NS	1,770	N	NMED		3.05E-05	
Sodium	7440-23-5	mg/kg	33				NS	NS	10,200,000	N	NMED		3.24E-06	
Thallium	7440-28-0	mg/kg	0.067	J			NS	NS	4	N	NMED		1.89E-02	
Vanadium	7440-62-2	mg/kg	16				NS	NS	614	N	NMED		2.61E-02	
Zinc	7440-66-6	mg/kg	22				NS	NS	106,000	N	NMED		2.08E-04	

TABLE D1-E24-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID E24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.32	U			NS	NS	12	N	NMED			
Nitrate	14797-55-8	mg/kg	6.2	J			NS	NS	566,000	N	NMED		1.10E-05	
Perchlorate	14797-73-0	mg/kg	0.0042	U			NS	NS	248	N	NMED			
										Cumulative Risk/Hazard		**4E-07**	**1.7**	
										Exceeds Target Level		**N**	Y	

System	Hazard Quotient
Nervous	1.3
Endocrine	0.11
All Others	0.27

Notes:

[s] = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update).

2) NMED[C] = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

3) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

4) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect

TABLE D1-E25-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID E25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0021	U			28.1	N	2,350	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0021	U			NS	NS	14,400	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0021	U			7.98	N	1,560	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0021	U			18.8	N	2.61	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0021	U			78.6	N	15,600	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0021	U			NS	NS	440	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0021	U			29.3	N	141	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0021	U			NS	NS	63	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0054	U			0.051	N	7.09	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0021	U			240	N	82.9	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0021	U			NS	NS	300	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0054	U			0.0858	N	5.88	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0021	U			0.672	N	135	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0021	U			NS	NS	2,150	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0021	U			8.32	N	55.6	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0021	U			17.8	N	29	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0021	U			NS	NS	270	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0021	U			1,290	N	5,480	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0021	U			NS	NS	1,600	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0021	U			1,290	N	5,480	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0021	U			17.8	N	29	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0032	U			NS	NS	37,400	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0021	U			NS	NS	1,560	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0021	U			NS	NS	200	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0021	U			NS	NS	1,600	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0021	U			NS	NS	5,810	N	RSL		
Acetone	67-64-1	mg/kg	0.025	J			NS	NS	66,300	N	NMED		3.77E-07
Benzene	71-43-2	mg/kg	0.0021	U			17.8	N	114	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0021	U			NS	NS	290	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0021	U			NS	NS	150	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0021	U			6.19	N	1,560	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0021	U			674	N	1,230	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0021	U			NS	NS	17.7	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0021	U			NS	NS	1,550	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0021	U			10.7	N	144	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0021	U			NS	NS	378	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0021	U			NS	NS	19,000	N	NMED		
Chloroform	67-66-3	mg/kg	0.0021	U			5.9	N	306	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0054	U			41.1	N	268	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0021	U			NS	NS	156	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0021	U			29.3	N	141	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0021	U			13.9	N	1,230	N	NMED		
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0021	U			NS	NS	57.9	N	NMED		

TABLE D1-E25-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID E25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dichlorodifluoromethane	75-71-8	mg/kg	0.0021	U			NS	NS	182	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0021	U			75.1	N	3,930	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0021	U			68.3	N	61.6	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0021	U			NS	NS	2,360	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0054	U			NS	NS	764	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0021	U			975	N	37,800	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.011	U			766	N	409	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0021	U			NS	NS	3,900	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0021	U			NS	NS	3,800	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0021	U			22.6	N	162	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0027	U			NS	NS	805	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0021	U			NS	NS	2,360	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0021	U			NS	NS	7,800	N	RSL		
Styrene	100-42-5	mg/kg	0.0021	U			NS	NS	7,260	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0021	U			NS	NS	7,800	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0021	U			337	N	111	N	NMED		
Toluene	108-88-3	mg/kg	0.0021	U			NS	NS	5,230	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0021	U			NS	NS	210	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0021	U			29.3	N	141	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0021	U			15.5	N	6.77	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0021	U			NS	NS	1,230	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0021	U			0.742	N	113	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	U			240	N	82.9	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	U			NS	NS	2,150	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	U			1,290	N	5,480	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	U			1,290	N	5,480	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	U			NS	NS	6,160	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	U			484	N	61.6	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	U			NS	NS	185	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	U			NS	NS	1,230	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	U			NS	NS	123	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	U			17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	U			3.56	N	18.5	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	U			NS	NS	6,260	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.17	U			NS	NS	391	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.17	U			NS	NS	232	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	U			NS	NS	3,200	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.17	U			NS	NS	630	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.17	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	U			11.8	N	NS	NS	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.17	U			270	N	250	N	RSL[S]		
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	U			NS	NS	4.93	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	U			NS	NS	NS	NS	NS		

TABLE D1-E25-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID E25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	U			NS	NS	6,300	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.17	U			27	N	32	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.17	U			270	N	250	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.17	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.17	U			NS	NS	3,480	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.17	U			NS	NS	1,740	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.17	U			NS	NS	17,400	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.17	U			1.53	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.13	U			1.12	N	17.4	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	U			1.53	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	U			NS	NS	1,740	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	U			15.3	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.17	U			NS	NS	250,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.17	U			NS	NS	6,300	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	U			NS	NS	190	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	U			3.11	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	U			99.3	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	U			380	N	1,230	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.17	U			2,900	N	13,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.17	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.17	U			153	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.17	U			NS	NS	6,160	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.17	U			NS	NS	630	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	U			0.153	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.17	U			NS	NS	78	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.17	U			NS	NS	49,300	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.17	U			NS	NS	61,600	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.17	U			NS	NS	2,320	N	NMED		
Fluorene	86-73-7	mg/kg	0.17	U			NS	NS	2,320	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.17	U			3.33	N	49.3	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	U			68.3	N	61.6	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.17	U			133	N	43.1	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	U			1.53	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.17	U			5,610	N	12,300	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	U			0.78	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.02	UJ			0.0234	N	0.493	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	U			1,090	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.17	U			22.6	N	162	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.17	U			60.4	N	131	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.17	U			9.85	N	234	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.17	U			NS	NS	1,740	N	NMED		
Phenol	108-95-2	mg/kg	0.17	U			NS	NS	18,500	N	NMED		
Pyrene	129-00-0	mg/kg	0.17	U			NS	NS	1,740	N	NMED		

TABLE D1-E25-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID E25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U			NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U			83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U			NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U			60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U			313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			1,300	N	570	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.02	U			69.6	N	3.98	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.02	U			1.81	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.01	U			1.86	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.01	U			2.43	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.01	U			2.43	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.01	U			2.43	N	1.14	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.01	U			2.43	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (3)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000018	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000013	J	0.0000042	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000017	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.00000078	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000022	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000077	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000063	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000074	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000063	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.000000095	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.000000064	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000011	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.00000011	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.000000042	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.000000085	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000033	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000069	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.0000000013				0.000049	N	0.0000506	N	NMED	2.57E-10	2.49E-05

TABLE D1-E25-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID E25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	17,000				NS	NS	78,000	N	NMED		2.18E-01
Antimony	7440-36-0	mg/kg	0.15	U			NS	NS	31.3	N	NMED		
Arsenic	7440-38-2	mg/kg	1.3				7.07	N	13	N	NMED	1.84E-06	1.00E-01
Barium	7440-39-3	mg/kg	170				NS	NS	15,600	N	NMED		1.09E-02
Beryllium	7440-41-7	mg/kg	0.6	J			64,400	N	156	N	NMED	9.32E-11	3.85E-03
Cadmium	7440-43-9	mg/kg	0.35				85,900	N	70.5	N	NMED	4.07E-11	4.96E-03
Calcium	7440-70-2	mg/kg	5,100				NS	NS	13,000,000	N	NMED		3.92E-04
Chromium (Total) (4)	7440-47-3	mg/kg	11				96.6	N	45,200	N	NMED	1.14E-06	2.43E-04
Cobalt	7440-48-4	mg/kg	3.8				17,200	N	23.4	N	NMED	2.21E-09	1.62E-01
Copper	7440-50-8	mg/kg	85				NS	NS	3,130	N	NMED		2.72E-02
Iron	7439-89-6	mg/kg	9,100				NS	NS	54,800	N	NMED		1.66E-01
Lead	7439-92-1	mg/kg	7.6				NS	NS	200	N	RSL		
Magnesium	7439-95-4	mg/kg	5,600				NS	NS	15,600,000	N	NMED		3.59E-04
Manganese	7439-96-5	mg/kg	360				NS	NS	10,500	N	NMED		3.43E-02
Mercury (Elemental)	7439-97-6	mg/kg	0.023	J			NS	NS	23.8	N	NMED		9.66E-04
Nickel	7440-02-0	mg/kg	8.1				595,000	N	1,560	N	NMED	1.36E-10	5.19E-03
Potassium	7440-09-7	mg/kg	1,600				NS	NS	15,600,000	N	NMED		1.03E-04
Selenium	7782-49-2	mg/kg	0.99				NS	NS	391	N	NMED		2.53E-03
Silver	7440-22-4	mg/kg	0.057	J			NS	NS	391	N	NMED		1.46E-04
Sodium	7440-23-5	mg/kg	36				NS	NS	7,820,000	N	NMED		4.60E-06
Thallium	7440-28-0	mg/kg	0.058	J			NS	NS	0.782	N	NMED		7.42E-02
Vanadium	7440-62-2	mg/kg	15				NS	NS	394	N	NMED		3.81E-02
Zinc	7440-66-6	mg/kg	22				NS	NS	23,500	N	NMED		9.36E-04

TABLE D1-E25-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID E25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.32	U			NS	NS	11.2	N	NMED		
Nitrate	14797-55-8	mg/kg	3.2	J			NS	NS	125,000	N	NMED		2.56E-05
Perchlorate	14797-73-0	mg/kg	0.0041	U			NS	NS	54.8	N	NMED		
										Cumulative Risk/Hazard		**3E-06**	**0.9**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect

TABLE D1-E25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID E25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0021	U			137	N	39,400	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0021	U			NS	NS	72,500	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0021	U			39	N	26,000	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0021	U			92	N	12	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0021	U			383	N	260,000	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0021	U			NS	NS	2,260	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0021	U			146	N	695	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0021	U			NS	NS	930	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0054	U			1	N	34	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0021	U			1,250	N	423	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0021	U			NS	NS	1,800	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0054	U			1	N	41	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0021	U			3	N	738	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0021	U			NS	NS	13,000	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0021	U			41	N	286	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0021	U			87	N	137	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0021	U			NS	NS	1,500	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0021	U			6,730	N	90,800	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0021	U			NS	NS	23,000	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0021	U			6,730	N	90,800	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0021	U			87	N	137	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0032	U			NS	NS	411,000	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0021	U			NS	NS	26,000	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0021	U			NS	NS	1,300	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0021	U			NS	NS	23,000	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0021	U			NS	NS	81,600	N	RSL		
Acetone	67-64-1	mg/kg	0.025	J			NS	NS	960,000	N	NMED		2.60E-08
Benzene	71-43-2	mg/kg	0.0021	U			87	N	729	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0021	U			NS	NS	1,800	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0021	U			NS	NS	630	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0021	U			30	N	26,000	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0021	U			1,760	N	18,300	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0021	U			NS	NS	95	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0021	U			NS	NS	8,540	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0021	U			53	N	1,020	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0021	U			NS	NS	2,160	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0021	U			NS	NS	89,500	N	NMED		
Chloroform	67-66-3	mg/kg	0.0021	U			29	N	2,000	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0054	U			201	N	1,260	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0021	U			NS	NS	2,600	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0021	U			146	N	695	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0021	U			67	N	18,300	N	NMED		

TABLE D1-E25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID E25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0021	U			NS	NS	288	N	NMED		
Dichlorodifluoromethane	75-71-8	mg/kg	0.0021	U			NS	NS	865	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0021	U			29,000	N	368	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0021	U			52	N	916	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0021	U			NS	NS	14,200	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0054	U			NS	NS	3,730	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0021	U			4,820	N	178,000	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.011	U			14,400	N	5,130	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0021	U			NS	NS	58,000	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0021	U			NS	NS	24,000	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0021	U			108	N	843	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0027	U			NS	NS	3,940	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0021	U			NS	NS	14,200	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0021	U			NS	NS	120,000	N	RSL		
Styrene	100-42-5	mg/kg	0.0021	U			NS	NS	51,300	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0021	U			NS	NS	120,000	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0021	U			1,650	N	629	N	NMED		
Toluene	108-88-3	mg/kg	0.0021	U			NS	NS	61,300	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0021	U			NS	NS	1,100	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0021	U			146	N	695	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0021	U			112	N	37	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0021	U			NS	NS	6,030	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0021	U			28	N	46	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	U			1,250	N	423	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	U			NS	NS	13,000	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	U			6,730	N	90,800	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	U			6,730	N	90,800	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	U			NS	NS	91,600	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	U			2,330	N	916	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	U			NS	NS	2,750	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	U			NS	NS	18,300	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	U			NS	NS	1,830	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	U			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	U			17	N	276	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	U			NS	NS	104,000	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.17	U			NS	NS	6,490	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.17	U			NS	NS	3,370	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	U			NS	NS	41,000	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.17	U			NS	NS	8,000	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.17	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	U			NS	NS	410	N	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.17	U			1,100	N	3,300	N	RSL[S]		

TABLE D1-E25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID E25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	U			NS	NS	73	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	U			NS	NS	NS	NS	NS		
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	U			NS	NS	82,000	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.17	U			110	N	410	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.17	U			1,100	N	3,300	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.17	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.17	U			NS	NS	50,500	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.17	U			NS	NS	25,300	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.17	U			NS	NS	253,000	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.17	U			32	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.13	U			24	N	251	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	U			32	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	U			NS	NS	25,300	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	U			323	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.17	U			NS	NS	3,300,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.17	U			NS	NS	82,000	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	U			NS	NS	2,500	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	U			16	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	U			519	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	U			1,830	N	18,300	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.17	U			12,000	N	160,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.17	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.17	U			3,230	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.17	U			NS	NS	91,600	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.17	U			NS	NS	8,200	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	U			3	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.17	U			NS	NS	1,200	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.17	U			NS	NS	733,000	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.17	U			NS	NS	916,000	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.17	U			NS	NS	33,700	N	NMED		
Fluorene	86-73-7	mg/kg	0.17	U			NS	NS	33,700	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.17	U			16	N	733	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	U			52	N	916	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.17	U			641	N	641	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	U			32	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.17	U			27,000	N	183,000	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	U			3	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.02	UJ			1	N	7	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	U			5,240	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.17	U			108	N	843	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.17	U			293	N	1,540	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.17	U			45	N	3,180	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.17	U			NS	NS	27,500	N	NMED		
Phenol	108-95-2	mg/kg	0.17	U			NS	NS	275,000	N	NMED		
Pyrene	129-00-0	mg/kg	0.17	U			NS	NS	25,300	N	NMED		

TABLE D1-E25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID E25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U			NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U			428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U			NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U			293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U			1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			5,300	N	7,400	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.02	U			304	N	57	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.02	U			9	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.01	U			9	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.01	U			11	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.01	U			11	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.01	U			11	N	16	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.01	U			11	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000018	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000013	J	0.0000042	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000017	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.00000078	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000022	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000077	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000063	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000074	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000063	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.000000095	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.000000064	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000011	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.00000011	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.000000042	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.000000085	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000033	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000069	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.0000000013				0.000238	N	0.000808	N	NMED	5.29E-11	1.56E-06

TABLE D1-E25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID E25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	17,000				NS	NS	1,290,000	N	NMED		1.32E-02
Antimony	7440-36-0	mg/kg	0.15	U			NS	NS	519	N	NMED		
Arsenic	7440-38-2	mg/kg	1.3				36	N	208	N	NMED	3.62E-07	6.25E-03
Barium	7440-39-3	mg/kg	170				NS	NS	255,000	N	NMED		6.67E-04
Beryllium	7440-41-7	mg/kg	0.6	J			313,000	N	2,580	N	NMED	1.92E-11	2.33E-04
Cadmium	7440-43-9	mg/kg	0.35				417,000	N	1,110	N	NMED	8.39E-12	3.15E-04
Calcium	7440-70-2	mg/kg	5,100				NS	NS	32,400,000	N	NMED		1.57E-04
Chromium (Total) (3)	7440-47-3	mg/kg	11				505	N	314,000	N	NMED	2.18E-07	3.50E-05
Cobalt	7440-48-4	mg/kg	3.8				83,400	N	388	N	NMED	4.56E-10	9.79E-03
Copper	7440-50-8	mg/kg	85				NS	NS	51,900	N	NMED		1.64E-03
Iron	7439-89-6	mg/kg	9,100				NS	NS	908,000	N	NMED		1.00E-02
Lead	7439-92-1	mg/kg	7.6				NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	5,600				NS	NS	5,680,000	N	NMED		9.86E-04
Manganese	7439-96-5	mg/kg	360				NS	NS	160,000	N	NMED		2.25E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.023	J			NS	NS	112	N	NMED		2.05E-04
Nickel	7440-02-0	mg/kg	8.1				2,890,000	N	25,700	N	NMED	2.80E-11	3.15E-04
Potassium	7440-09-7	mg/kg	1,600				NS	NS	76,200,000	N	NMED		2.10E-05
Selenium	7782-49-2	mg/kg	0.99				NS	NS	6,490	N	NMED		1.53E-04
Silver	7440-22-4	mg/kg	0.057	J			NS	NS	6,490	N	NMED		8.78E-06
Sodium	7440-23-5	mg/kg	36				NS	NS	37,300,000	N	NMED		9.65E-07
Thallium	7440-28-0	mg/kg	0.058	J			NS	NS	13	N	NMED		4.46E-03
Vanadium	7440-62-2	mg/kg	15				NS	NS	6,530	N	NMED		2.30E-03
Zinc	7440-66-6	mg/kg	22				NS	NS	38,900	N	NMED		5.66E-04

TABLE D1-E25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID E25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.32	U			NS	NS	63	N	NMED		
Nitrate	14797-55-8	mg/kg	3.2	J			NS	NS	2,080,000	N	NMED		1.54E-06
Perchlorate	14797-73-0	mg/kg	0.0041	U			NS	NS	908	N	NMED		
										Cumulative Risk/Hazard		**6E-07**	**0.05**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
IEUBK = Integrated Exposure Uptake Biokentic Model
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect

TABLE D1-E25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID E25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2,3)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0021	U			659	N	10,600	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0021	U			NS	NS	13,600	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0021	U			197	N	7,080	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0021	U			4,300	N	2	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0021	U			1,820	N	70,800	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0021	U			NS	NS	424	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0021	U			781	N	130	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0021	U			NS	NS	283	N	NMED[C]			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0054	U			8	N	6	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0021	U			8,540	N	79	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0021	U			NS	NS	492	N	NMED[C]			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0054	U			6	N	8	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0021	U			16	N	140	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0021	U			NS	NS	2,500	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0021	U			195	N	54	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0021	U			415	N	25	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0021	U			NS	NS	422	N	NMED[C]			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0021	U			45,900	N	24,800	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0021	U			NS	NS	7,080	N	NMED[C]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0021	U			45,900	N	24,800	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0021	U			415	N	25	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.0032	U			NS	NS	90,700	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0021	U			NS	NS	7,080	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.0021	U			NS	NS	599	N	NMED[C]			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0021	U			NS	NS	7,080	N	NMED[C]			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0021	U			NS	NS	20,400	N	NMED[C]			
Acetone	67-64-1	mg/kg	0.025	J			NS	NS	242,000	N	NMED		1.03E-07	
Benzene	71-43-2	mg/kg	0.0021	U			423	N	142	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.0021	U			NS	NS	538	N	NMED[C]			
Bromochloromethane	74-97-5	mg/kg	0.0021	U			NS	NS	296	N	NMED[C]			
Bromodichloromethane	75-27-4	mg/kg	0.0021	U			143	N	7,080	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0021	U			23,700	N	5,380	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0021	U			NS	NS	18	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.0021	U			NS	NS	1,620	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0021	U			252	N	202	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0021	U			NS	NS	412	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0021	U			NS	NS	16,600	N	NMED			
Chloroform	67-66-3	mg/kg	0.0021	U			134	N	391	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0054	U			956	N	235	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0021	U			NS	NS	708	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0021	U			781	N	130	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0021	U			340	N	5,380	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0021	U			NS	NS	54	N	NMED			

TABLE D1-E25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID E25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2,3)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Dichlorodifluoromethane	75-71-8	mg/kg	0.0021	U			NS	NS	161	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.0021	U			1,770	N	5,800	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0021	U			2,400	N	269	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0021	U			NS	NS	2,740	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0054	U			NS	NS	696	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0021	U			24,200	N	33,100	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.011	U			89,600	N	1,210	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0021	U			NS	NS	17,700	N	NMED[C]			
n-Propylbenzene	103-65-1	mg/kg	0.0021	U			NS	NS	6,730	N	NMED[C]			
Naphthalene	91-20-3	mg/kg	0.0021	U			633	N	159	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0027	U			NS	NS	736	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.0021	U			NS	NS	2,740	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.0021	U			NS	NS	35,400	N	NMED[C]			
Styrene	100-42-5	mg/kg	0.0021	U			NS	NS	10,200	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0021	U			NS	NS	35,400	N	NMED[C]			
Tetrachloroethene	127-18-4	mg/kg	0.0021	U			7,910	N	120	N	NMED			
Toluene	108-88-3	mg/kg	0.0021	U			NS	NS	14,000	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0021	U			NS	NS	206	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0021	U			781	N	130	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0021	U			5,370	N	7	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0021	U			NS	NS	1,130	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0021	U			161	N	162	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	U			8,540	N	79	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	U			NS	NS	2,500	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	U			45,900	N	24,800	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	U			45,900	N	24,800	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	U			NS	NS	26,900	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	U			17,000	N	269	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	U			NS	NS	807	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	U			NS	NS	5,380	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	U			NS	NS	538	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	U			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	U			165	N	81	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	U			NS	NS	28,300	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.17	U			NS	NS	1,770	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.17	U			NS	NS	1,000	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	U			NS	NS	13,500	N	NMED[C]			
2-Nitroaniline	88-74-4	mg/kg	0.17	U			NS	NS	2,690	N	NMED[C]			
2-Nitrophenol	88-75-5	mg/kg	0.17	U			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	U			410	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.17	U			135	N	1,080	N	NMED[SC]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	U			NS	NS	22	N	NMED			

TABLE D1-E25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID E25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2,3)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	U			NS	NS	NS	NS	NS			
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	U			NS	NS	26,900	N	NMED[C]			
4-Chloroaniline	106-47-8	mg/kg	0.17	U			14	N	135	N	NMED[C]			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	U			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.17	U			135	N	1,080	N	NMED[C]			
4-Nitrophenol	100-02-7	mg/kg	0.17	U			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.17	U			NS	NS	15,100	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.17	U			NS	NS	7,530	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.17	U			NS	NS	75,300	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.17	U			240	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.13	U			173	N	15	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	U			240	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	U			NS	NS	7,530	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	U			2,310	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.17	U			NS	NS	1,080,000	N	NMED[C]			
Benzyl Alcohol	100-51-6	mg/kg	0.17	U			NS	NS	26,900	N	NMED[C]			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	U			NS	NS	807	N	NMED[C]			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	U			2	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	U			3,540	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	U			13,400	N	5,380	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.17	U			1,420	N	53,800	N	NMED[C]			
Carbazole	86-74-8	mg/kg	0.17	U			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.17	U			23,100	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.17	U			NS	NS	26,900	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.17	U			NS	NS	2,690	N	NMED[C]			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	U			24	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.17	U			NS	NS	269	N	NMED[C]			
Diethylphthalate	84-66-2	mg/kg	0.17	U			NS	NS	215,000	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.17	U			NS	NS	269,000	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.17	U			NS	NS	10,000	N	NMED			
Fluorene	86-73-7	mg/kg	0.17	U			NS	NS	10,000	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.17	U			117	N	215	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	U			2,400	N	269	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.17	U			4,670	N	188	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	U			240	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.17	U			198,000	N	53,700	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	U			0.38	N	NA	N	NMED[C]			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.02	UJ			4	N	2	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	U			37,900	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.17	U			633	N	159	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.17	U			1,350	N	353	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.17	U			346	N	989	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.17	U			NS	NS	8,070	N	NMED			
Phenol	108-95-2	mg/kg	0.17	U			NS	NS	77,400	N	NMED			
Pyrene	129-00-0	mg/kg	0.17	U			NS	NS	7,530	N	NMED			

TABLE D1-E25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID E25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2,3)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	8,070	N	NMED[C]			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	27	N	NMED[C]			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U			NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U			2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U			NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U			1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U			11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			626	N	2,420	N	NMED[C]			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.02	U			2,440	N	17	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.02	U			55	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.01	U			58	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.01	U			85	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.01	U			85	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.01	U			85	N	5	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.01	U			85	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (4)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000018	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000013	J	0.0000042	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000017	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.00000078	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000022	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000077	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000063	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000074	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000063	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.000000095	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.000000064	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000011	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.00000011	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.000000042	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.000000085	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000033	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000069	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.0000000013				0.00172	N	0.000226	N	NMED	7.33E-12	5.58E-06	

TABLE D1-E25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID E25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2,3)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	17,000				NS	NS	41,400	N	NMED		4.11E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	U			NS	NS	142	N	NMED			
Arsenic	7440-38-2	mg/kg	1.3				216	N	41	N	NMED		3.16E-02	
Barium	7440-39-3	mg/kg	170				NS	NS	4,390	N	NMED		3.87E-02	
Beryllium	7440-41-7	mg/kg	0.6	J			2,710	N	148	N	NMED		4.05E-03	
Cadmium	7440-43-9	mg/kg	0.35				3,610	N	72	N	NMED		4.85E-03	
Calcium	7440-70-2	mg/kg	5,100				NS	NS	8,850,000	N	NMED		5.76E-04	
Chromium (Total) (5)	7440-47-3	mg/kg	11				468	N	134	N	NMED		8.21E-02	
Cobalt	7440-48-4	mg/kg	3.8				722	N	37	N	NMED		1.04E-01	Endocrine
Copper	7440-50-8	mg/kg	85				NS	NS	14,200	N	NMED		5.99E-03	
Iron	7439-89-6	mg/kg	9,100				NS	NS	248,000	N	NMED		3.67E-02	
Lead	7439-92-1	mg/kg	7.6				NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	5,600				NS	NS	1,550,000	N	NMED		3.61E-03	
Manganese	7439-96-5	mg/kg	360				NS	NS	464	N	NMED		7.76E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.023	J			NS	NS	21	N	NMED		1.11E-03	
Nickel	7440-02-0	mg/kg	8.1				20,500	N	753	N	NMED		1.08E-02	
Potassium	7440-09-7	mg/kg	1,600				NS	NS	20,800,000	N	NMED		7.69E-05	
Selenium	7782-49-2	mg/kg	0.99				NS	NS	1,750	N	NMED		5.66E-04	
Silver	7440-22-4	mg/kg	0.057	J			NS	NS	1,770	N	NMED		3.22E-05	
Sodium	7440-23-5	mg/kg	36				NS	NS	10,200,000	N	NMED		3.53E-06	
Thallium	7440-28-0	mg/kg	0.058	J			NS	NS	4	N	NMED		1.64E-02	
Vanadium	7440-62-2	mg/kg	15				NS	NS	614	N	NMED		2.44E-02	
Zinc	7440-66-6	mg/kg	22				NS	NS	106,000	N	NMED		2.08E-04	

TABLE D1-E25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID E25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2,3)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.32	U			NS	NS	12	N	NMED			
Nitrate	14797-55-8	mg/kg	3.2	J			NS	NS	566,000	N	NMED		5.65E-06	
Perchlorate	14797-73-0	mg/kg	0.0041	U			NS	NS	248	N	NMED			
										Cumulative Risk/Hazard		**7E-12**	**1.6**	
										Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	1.2
Endocrine	0.10
All Others	0.26

Notes:

[s] = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update).

2) NMED[C] = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

3) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

5) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect

TABLE D1-E26-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID E26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0021	U			28.1	N	2,350	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0021	U			NS	NS	14,400	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0021	U			7.98	N	1,560	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0021	U			18.8	N	2.61	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0021	U			78.6	N	15,600	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0021	U			NS	NS	440	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0021	U			29.3	N	141	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0021	U			NS	NS	63	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0053	U			0.051	N	7.09	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0021	U			240	N	82.9	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0021	U			NS	NS	300	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0053	U			0.0858	N	5.88	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0021	U			0.672	N	135	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0021	U			NS	NS	2,150	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0021	U			8.32	N	55.6	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0021	U			17.8	N	29	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0021	U			NS	NS	270	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0021	U			1,290	N	5,480	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0021	U			NS	NS	1,600	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0021	U			1,290	N	5,480	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0021	U			17.8	N	29	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0032	U			NS	NS	37,400	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0021	U			NS	NS	1,560	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0021	U			NS	NS	200	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0021	U			NS	NS	1,600	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0021	U			NS	NS	5,810	N	RSL		
Acetone	67-64-1	mg/kg	0.39	J			NS	NS	66,300	N	NMED		5.88E-06
Benzene	71-43-2	mg/kg	0.0021	U			17.8	N	114	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0021	U			NS	NS	290	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0021	U			NS	NS	150	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0021	U			6.19	N	1,560	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0021	U			674	N	1,230	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0021	U			NS	NS	17.7	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0021	U			NS	NS	1,550	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0021	U			10.7	N	144	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0021	U			NS	NS	378	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0021	U			NS	NS	19,000	N	NMED		
Chloroform	67-66-3	mg/kg	0.0021	U			5.9	N	306	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0053	U			41.1	N	268	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0021	U			NS	NS	156	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0021	U			29.3	N	141	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0021	U			13.9	N	1,230	N	NMED		
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0021	U			NS	NS	57.9	N	NMED		

TABLE D1-E26-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID E26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dichlorodifluoromethane	75-71-8	mg/kg	0.0021	U			NS	NS	182	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0021	U			75.1	N	3,930	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0021	U			68.3	N	61.6	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0021	U			NS	NS	2,360	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0053	U			NS	NS	764	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0021	U			975	N	37,800	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.011	U			766	N	409	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0021	U			NS	NS	3,900	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0021	U			NS	NS	3,800	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0021	U			22.6	N	162	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0026	U			NS	NS	805	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0021	U			NS	NS	2,360	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0021	U			NS	NS	7,800	N	RSL		
Styrene	100-42-5	mg/kg	0.0021	U			NS	NS	7,260	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0021	U			NS	NS	7,800	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0021	U			337	N	111	N	NMED		
Toluene	108-88-3	mg/kg	0.0021	U			NS	NS	5,230	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0021	U			NS	NS	210	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0021	U			29.3	N	141	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0021	U			15.5	N	6.77	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0021	U			NS	NS	1,230	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0021	U			0.742	N	113	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.18	U			240	N	82.9	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.18	U			NS	NS	2,150	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.18	U			1,290	N	5,480	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.18	U			1,290	N	5,480	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.18	U			NS	NS	6,160	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.18	U			484	N	61.6	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.18	U			NS	NS	185	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.18	U			NS	NS	1,230	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.18	U			NS	NS	123	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.18	U			17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.18	U			3.56	N	18.5	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.18	U			NS	NS	6,260	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.18	U			NS	NS	391	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.18	U			NS	NS	232	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.18	U			NS	NS	3,200	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.18	U			NS	NS	630	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.18	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.18	U			11.8	N	NS	NS	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.18	U			270	N	250	N	RSL[S]		
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.18	U			NS	NS	4.93	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.18	U			NS	NS	NS	NS	NS		

TABLE D1-E26-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID E26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.18	U			NS	NS	6,300	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.18	U			27	N	32	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.18	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.18	U			270	N	250	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.18	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.18	U			NS	NS	3,480	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.18	U			NS	NS	1,740	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.18	U			NS	NS	17,400	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.18	U			1.53	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			1.12	N	17.4	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.18	U			1.53	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.18	U			NS	NS	1,740	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.18	U			15.3	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.18	U			NS	NS	250,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.18	U			NS	NS	6,300	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.18	U			NS	NS	190	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.18	U			3.11	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.18	U			99.3	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.18	U			380	N	1,230	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.18	U			2,900	N	13,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.18	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.18	U			153	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.18	U			NS	NS	6,160	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.18	U			NS	NS	630	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			0.153	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.18	U			NS	NS	78	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.18	U			NS	NS	49,300	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.18	U			NS	NS	61,600	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.18	U			NS	NS	2,320	N	NMED		
Fluorene	86-73-7	mg/kg	0.18	U			NS	NS	2,320	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.18	U			3.33	N	49.3	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.18	U			68.3	N	61.6	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.18	U			133	N	43.1	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.18	U			1.53	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.18	U			5,610	N	12,300	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.18	U			0.78	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	UJ			0.0234	N	0.493	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.18	U			1,090	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.18	U			22.6	N	162	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.18	U			60.4	N	131	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.18	U			9.85	N	234	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.18	U			NS	NS	1,740	N	NMED		
Phenol	108-95-2	mg/kg	0.18	U			NS	NS	18,500	N	NMED		
Pyrene	129-00-0	mg/kg	0.18	U			NS	NS	1,740	N	NMED		

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MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			1,300	N	570	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.02	U			69.6	N	3.98	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.02	U			1.81	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.01	U			1.86	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.01	U			2.43	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.01	U			2.43	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.01	U			2.43	N	1.14	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.01	U			2.43	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000017	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg		U	0.000025	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.000000095	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.00000045	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000012	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000037	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000063	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000071	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000063	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.000000091	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg	0.0000000078	J	0.000000078	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.000000092	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000074	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.000000076	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.000000061	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000055	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.0000000078				0.000049	N	0.0000506	N	NMED	1.59E-09	1.54E-04

TABLE D1-E26-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID E26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	21,000				NS	NS	78,000	N	NMED		2.69E-01
Antimony	7440-36-0	mg/kg	0.2				NS	NS	31.3	N	NMED		6.39E-03
Arsenic	7440-38-2	mg/kg	1.1				7.07	N	13	N	NMED	1.56E-06	8.46E-02
Barium	7440-39-3	mg/kg	400				NS	NS	15,600	N	NMED		2.56E-02
Beryllium	7440-41-7	mg/kg	0.84	J			64,400	N	156	N	NMED	1.30E-10	5.38E-03
Cadmium	7440-43-9	mg/kg	0.34				85,900	N	70.5	N	NMED	3.96E-11	4.82E-03
Calcium	7440-70-2	mg/kg	12,000				NS	NS	13,000,000	N	NMED		9.23E-04
Chromium (Total) (3)	7440-47-3	mg/kg	11				96.6	N	45,200	N	NMED	1.14E-06	2.43E-04
Cobalt	7440-48-4	mg/kg	4.2				17,200	N	23.4	N	NMED	2.44E-09	1.79E-01
Copper	7440-50-8	mg/kg	88				NS	NS	3,130	N	NMED		2.81E-02
Iron	7439-89-6	mg/kg	11,000				NS	NS	54,800	N	NMED		2.01E-01
Lead	7439-92-1	mg/kg	10				NS	NS	200	N	RSL		
Magnesium	7439-95-4	mg/kg	7,300				NS	NS	15,600,000	N	NMED		4.68E-04
Manganese	7439-96-5	mg/kg	480				NS	NS	10,500	N	NMED		4.57E-02
Mercury (Elemental)	7439-97-6	mg/kg	0.035	J			NS	NS	23.8	N	NMED		1.47E-03
Nickel	7440-02-0	mg/kg	8.9				595,000	N	1,560	N	NMED	1.50E-10	5.71E-03
Potassium	7440-09-7	mg/kg	1,800				NS	NS	15,600,000	N	NMED		1.15E-04
Selenium	7782-49-2	mg/kg	1.1				NS	NS	391	N	NMED		2.81E-03
Silver	7440-22-4	mg/kg	0.041	J			NS	NS	391	N	NMED		1.05E-04
Sodium	7440-23-5	mg/kg	49				NS	NS	7,820,000	N	NMED		6.27E-06
Thallium	7440-28-0	mg/kg	0.072	J			NS	NS	0.782	N	NMED		9.21E-02
Vanadium	7440-62-2	mg/kg	14				NS	NS	394	N	NMED		3.55E-02
Zinc	7440-66-6	mg/kg	26				NS	NS	23,500	N	NMED		1.11E-03

TABLE D1-E26-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID E26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.33	U			NS	NS	11.2	N	NMED		
Nitrate	14797-55-8	mg/kg	10	J			NS	NS	125,000	N	NMED		8.00E-05
Perchlorate	14797-73-0	mg/kg	0.0042	U			NS	NS	54.8	N	NMED		
										Cumulative Risk/Hazard		**3E-06**	**0.99**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect

TABLE D1-E26-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID E26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0021	U			137	N	39,400	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0021	U			NS	NS	72,500	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0021	U			39	N	26,000	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0021	U			92	N	12	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0021	U			383	N	260,000	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0021	U			NS	NS	2,260	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0021	U			146	N	695	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0021	U			NS	NS	930	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0053	U			1	N	34	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0021	U			1,250	N	423	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0021	U			NS	NS	1,800	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0053	U			1	N	41	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0021	U			3	N	738	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0021	U			NS	NS	13,000	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0021	U			41	N	286	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0021	U			87	N	137	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0021	U			NS	NS	1,500	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0021	U			6,730	N	90,800	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0021	U			NS	NS	23,000	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0021	U			6,730	N	90,800	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0021	U			87	N	137	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0032	U			NS	NS	411,000	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0021	U			NS	NS	26,000	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0021	U			NS	NS	1,300	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0021	U			NS	NS	23,000	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0021	U			NS	NS	81,600	N	RSL		
Acetone	67-64-1	mg/kg	0.39	J			NS	NS	960,000	N	NMED		4.06E-07
Benzene	71-43-2	mg/kg	0.0021	U			87	N	729	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0021	U			NS	NS	1,800	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0021	U			NS	NS	630	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0021	U			30	N	26,000	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0021	U			1,760	N	18,300	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0021	U			NS	NS	95	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0021	U			NS	NS	8,540	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0021	U			53	N	1,020	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0021	U			NS	NS	2,160	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0021	U			NS	NS	89,500	N	NMED		
Chloroform	67-66-3	mg/kg	0.0021	U			29	N	2,000	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0053	U			201	N	1,260	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0021	U			NS	NS	2,600	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0021	U			146	N	695	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0021	U			67	N	18,300	N	NMED		

TABLE D1-E26-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID E26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0021	U			NS	NS	288	N	NMED		
Dichlorodifluoromethane	75-71-8	mg/kg	0.0021	U			NS	NS	865	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0021	U			29,000	N	368	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0021	U			52	N	916	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0021	U			NS	NS	14,200	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0053	U			NS	NS	3,730	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0021	U			4,820	N	178,000	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.011	U			14,400	N	5,130	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0021	U			NS	NS	58,000	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0021	U			NS	NS	24,000	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0021	U			108	N	843	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0026	U			NS	NS	3,940	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0021	U			NS	NS	14,200	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0021	U			NS	NS	120,000	N	RSL		
Styrene	100-42-5	mg/kg	0.0021	U			NS	NS	51,300	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0021	U			NS	NS	120,000	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0021	U			1,650	N	629	N	NMED		
Toluene	108-88-3	mg/kg	0.0021	U			NS	NS	61,300	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0021	U			NS	NS	1,100	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0021	U			146	N	695	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0021	U			112	N	37	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0021	U			NS	NS	6,030	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0021	U			28	N	46	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.18	U			1,250	N	423	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.18	U			NS	NS	13,000	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.18	U			6,730	N	90,800	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.18	U			6,730	N	90,800	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.18	U			NS	NS	91,600	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.18	U			2,330	N	916	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.18	U			NS	NS	2,750	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.18	U			NS	NS	18,300	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.18	U			NS	NS	1,830	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.18	U			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.18	U			17	N	276	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.18	U			NS	NS	104,000	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.18	U			NS	NS	6,490	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.18	U			NS	NS	3,370	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.18	U			NS	NS	41,000	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.18	U			NS	NS	8,000	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.18	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.18	U			NS	NS	410	N	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.18	U			1,100	N	3,300	N	RSL[S]		

TABLE D1-E26-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID E26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.18	U			NS	NS	73	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.18	U			NS	NS	NS	NS	NS		
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.18	U			NS	NS	82,000	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.18	U			110	N	410	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.18	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.18	U			1,100	N	3,300	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.18	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.18	U			NS	NS	50,500	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.18	U			NS	NS	25,300	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.18	U			NS	NS	253,000	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.18	U			32	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			24	N	251	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.18	U			32	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.18	U			NS	NS	25,300	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.18	U			323	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.18	U			NS	NS	3,300,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.18	U			NS	NS	82,000	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.18	U			NS	NS	2,500	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.18	U			16	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.18	U			519	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.18	U			1,830	N	18,300	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.18	U			12,000	N	160,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.18	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.18	U			3,230	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.18	U			NS	NS	91,600	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.18	U			NS	NS	8,200	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			3	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.18	U			NS	NS	1,200	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.18	U			NS	NS	733,000	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.18	U			NS	NS	916,000	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.18	U			NS	NS	33,700	N	NMED		
Fluorene	86-73-7	mg/kg	0.18	U			NS	NS	33,700	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.18	U			16	N	733	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.18	U			52	N	916	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.18	U			641	N	641	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.18	U			32	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.18	U			27,000	N	183,000	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.18	U			3	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	UJ			1	N	7	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.18	U			5,240	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.18	U			108	N	843	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.18	U			293	N	1,540	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.18	U			45	N	3,180	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.18	U			NS	NS	27,500	N	NMED		
Phenol	108-95-2	mg/kg	0.18	U			NS	NS	275,000	N	NMED		
Pyrene	129-00-0	mg/kg	0.18	U			NS	NS	25,300	N	NMED		

TABLE D1-E26-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID E26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			5,300	N	7,400	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.02	U			304	N	57	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.02	U			9	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.01	U			9	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.01	U			11	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.01	U			11	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.01	U			11	N	16	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.01	U			11	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000017	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg		U	0.000025	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.000000095	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.00000045	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000012	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000037	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000063	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000071	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000063	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.000000091	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg	0.0000000078	J	0.000000078	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.000000092	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000074	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.000000076	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.000000061	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000055	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.0000000078				0.000238	N	0.000808	N	NMED	3.28E-10	9.65E-06

TABLE D1-E26-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID E26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	21,000				NS	NS	1,290,000	N	NMED		1.63E-02
Antimony	7440-36-0	mg/kg	0.2				NS	NS	519	N	NMED		3.85E-04
Arsenic	7440-38-2	mg/kg	1.1				36	N	208	N	NMED	3.06E-07	5.29E-03
Barium	7440-39-3	mg/kg	400				NS	NS	255,000	N	NMED		1.57E-03
Beryllium	7440-41-7	mg/kg	0.84	J			313,000	N	2,580	N	NMED	2.68E-11	3.26E-04
Cadmium	7440-43-9	mg/kg	0.34				417,000	N	1,110	N	NMED	8.15E-12	3.06E-04
Calcium	7440-70-2	mg/kg	12,000				NS	NS	32,400,000	N	NMED		3.70E-04
Chromium (Total) (3)	7440-47-3	mg/kg	11				505	N	314,000	N	NMED	2.18E-07	3.50E-05
Cobalt	7440-48-4	mg/kg	4.2				83,400	N	388	N	NMED	5.04E-10	1.08E-02
Copper	7440-50-8	mg/kg	88				NS	NS	51,900	N	NMED		1.70E-03
Iron	7439-89-6	mg/kg	11,000				NS	NS	908,000	N	NMED		1.21E-02
Lead	7439-92-1	mg/kg	10				NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	7,300				NS	NS	5,680,000	N	NMED		1.29E-03
Manganese	7439-96-5	mg/kg	480				NS	NS	160,000	N	NMED		3.00E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.035	J			NS	NS	112	N	NMED		3.13E-04
Nickel	7440-02-0	mg/kg	8.9				2,890,000	N	25,700	N	NMED	3.08E-11	3.46E-04
Potassium	7440-09-7	mg/kg	1,800				NS	NS	76,200,000	N	NMED		2.36E-05
Selenium	7782-49-2	mg/kg	1.1				NS	NS	6,490	N	NMED		1.69E-04
Silver	7440-22-4	mg/kg	0.041	J			NS	NS	6,490	N	NMED		6.32E-06
Sodium	7440-23-5	mg/kg	49				NS	NS	37,300,000	N	NMED		1.31E-06
Thallium	7440-28-0	mg/kg	0.072	J			NS	NS	13	N	NMED		5.54E-03
Vanadium	7440-62-2	mg/kg	14				NS	NS	6,530	N	NMED		2.14E-03
Zinc	7440-66-6	mg/kg	26				NS	NS	38,900	N	NMED		6.68E-04

TABLE D1-E26-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID E26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.33	U			NS	NS	63	N	NMED		
Nitrate	14797-55-8	mg/kg	10	J			NS	NS	2,080,000	N	NMED		4.81E-06
Perchlorate	14797-73-0	mg/kg	0.0042	U			NS	NS	908	N	NMED		
										Cumulative Risk/Hazard		**5E-07**	**0.06**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
IEUBK = Integrated Exposure Uptake Biokentic Model
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect

TABLE D1-E26-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID E26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0021	U			659	N	10,600	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0021	U			NS	NS	13,600	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0021	U			197	N	7,080	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0021	U			4,300	N	2	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0021	U			1,820	N	70,800	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0021	U			NS	NS	424	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0021	U			781	N	130	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0021	U			NS	NS	283	N	NMED[C]			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0053	U			8	N	6	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0021	U			8,540	N	79	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0021	U			NS	NS	492	N	NMED[C]			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0053	U			6	N	8	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0021	U			16	N	140	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0021	U			NS	NS	2,500	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0021	U			195	N	54	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0021	U			415	N	25	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0021	U			NS	NS	422	N	NMED[C]			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0021	U			45,900	N	24,800	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0021	U			NS	NS	7,080	N	NMED[C]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0021	U			45,900	N	24,800	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0021	U			415	N	25	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.0032	U			NS	NS	90,700	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0021	U			NS	NS	7,080	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.0021	U			NS	NS	599	N	NMED[C]			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0021	U			NS	NS	7,080	N	NMED[C]			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0021	U			NS	NS	20,400	N	NMED[C]			
Acetone	67-64-1	mg/kg	0.39	J			NS	NS	242,000	N	NMED		1.61E-06	
Benzene	71-43-2	mg/kg	0.0021	U			423	N	142	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.0021	U			NS	NS	538	N	NMED[C]			
Bromochloromethane	74-97-5	mg/kg	0.0021	U			NS	NS	296	N	NMED[C]			
Bromodichloromethane	75-27-4	mg/kg	0.0021	U			143	N	7,080	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0021	U			23,700	N	5,380	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0021	U			NS	NS	18	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.0021	U			NS	NS	1,620	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0021	U			252	N	202	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0021	U			NS	NS	412	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0021	U			NS	NS	16,600	N	NMED			
Chloroform	67-66-3	mg/kg	0.0021	U			134	N	391	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0053	U			956	N	235	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0021	U			NS	NS	708	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0021	U			781	N	130	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0021	U			340	N	5,380	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0021	U			NS	NS	54	N	NMED			

TABLE D1-E26-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID E26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Dichlorodifluoromethane	75-71-8	mg/kg	0.0021	U			NS	NS	161	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.0021	U			1,770	N	5,800	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0021	U			2,400	N	269	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0021	U			NS	NS	2,740	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0053	U			NS	NS	696	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0021	U			24,200	N	33,100	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.011	U			89,600	N	1,210	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0021	U			NS	NS	17,700	N	NMED[C]			
n-Propylbenzene	103-65-1	mg/kg	0.0021	U			NS	NS	6,730	N	NMED[C]			
Naphthalene	91-20-3	mg/kg	0.0021	U			633	N	159	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0026	U			NS	NS	736	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.0021	U			NS	NS	2,740	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.0021	U			NS	NS	35,400	N	NMED[C]			
Styrene	100-42-5	mg/kg	0.0021	U			NS	NS	10,200	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0021	U			NS	NS	35,400	N	NMED[C]			
Tetrachloroethene	127-18-4	mg/kg	0.0021	U			7,910	N	120	N	NMED			
Toluene	108-88-3	mg/kg	0.0021	U			NS	NS	14,000	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0021	U			NS	NS	206	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0021	U			781	N	130	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0021	U			5,370	N	7	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0021	U			NS	NS	1,130	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0021	U			161	N	162	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.18	U			8,540	N	79	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.18	U			NS	NS	2,500	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.18	U			45,900	N	24,800	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.18	U			45,900	N	24,800	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.18	U			NS	NS	26,900	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.18	U			17,000	N	269	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.18	U			NS	NS	807	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.18	U			NS	NS	5,380	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.18	U			NS	NS	538	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.18	U			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.18	U			165	N	81	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.18	U			NS	NS	28,300	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.18	U			NS	NS	1,770	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.18	U			NS	NS	1,000	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.18	U			NS	NS	13,500	N	NMED[C]			
2-Nitroaniline	88-74-4	mg/kg	0.18	U			NS	NS	2,690	N	NMED[C]			
2-Nitrophenol	88-75-5	mg/kg	0.18	U			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.18	U			410	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.18	U			135	N	1,080	N	NMED[SC]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.18	U			NS	NS	22	N	NMED			

TABLE D1-E26-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID E26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.18	U			NS	NS	NS	NS	NS			
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.18	U			NS	NS	26,900	N	NMED[C]			
4-Chloroaniline	106-47-8	mg/kg	0.18	U			14	N	135	N	NMED[C]			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.18	U			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.18	U			135	N	1,080	N	NMED[C]			
4-Nitrophenol	100-02-7	mg/kg	0.18	U			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.18	U			NS	NS	15,100	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.18	U			NS	NS	7,530	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.18	U			NS	NS	75,300	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.18	U			240	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			173	N	15	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.18	U			240	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.18	U			NS	NS	7,530	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.18	U			2,310	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.18	U			NS	NS	1,080,000	N	NMED[C]			
Benzyl Alcohol	100-51-6	mg/kg	0.18	U			NS	NS	26,900	N	NMED[C]			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.18	U			NS	NS	807	N	NMED[C]			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.18	U			2	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.18	U			3,540	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.18	U			13,400	N	5,380	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.18	U			1,420	N	53,800	N	NMED[C]			
Carbazole	86-74-8	mg/kg	0.18	U			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.18	U			23,100	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.18	U			NS	NS	26,900	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.18	U			NS	NS	2,690	N	NMED[C]			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			24	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.18	U			NS	NS	269	N	NMED[C]			
Diethylphthalate	84-66-2	mg/kg	0.18	U			NS	NS	215,000	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.18	U			NS	NS	269,000	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.18	U			NS	NS	10,000	N	NMED			
Fluorene	86-73-7	mg/kg	0.18	U			NS	NS	10,000	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.18	U			117	N	215	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.18	U			2,400	N	269	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.18	U			4,670	N	188	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.18	U			240	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.18	U			198,000	N	53,700	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.18	U			0.38	N	NA	N	NMED[C]			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	UJ			4	N	2	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.18	U			37,900	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.18	U			633	N	159	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.18	U			1,350	N	353	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.18	U			346	N	989	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.18	U			NS	NS	8,070	N	NMED			
Phenol	108-95-2	mg/kg	0.18	U			NS	NS	77,400	N	NMED			
Pyrene	129-00-0	mg/kg	0.18	U			NS	NS	7,530	N	NMED			

TABLE D1-E26-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID E26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	8,070	N	NMED[C]			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	27	N	NMED[C]			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			626	N	2,420	N	NMED[C]			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.02	U			2,440	N	17	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.02	U			55	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.01	U			58	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.01	U			85	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.01	U			85	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.01	U			85	N	5	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.01	U			85	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (3)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000017	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg		U	0.000025	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.000000095	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.00000045	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000012	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000037	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000063	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000071	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000063	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.000000091	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg	0.0000000078	J	0.000000078	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.000000092	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000074	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.000000076	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.000000061	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000055	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.0000000078				0	N	0	N	NMED	4.53E-11	3.45E-05	

TABLE D1-E26-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID E26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	21,000				NS	NS	41,400	N	NMED		5.07E-01	Nervous
Antimony	7440-36-0	mg/kg	0.2				NS	NS	142	N	NMED		1.41E-03	
Arsenic	7440-38-2	mg/kg	1.1				216	N	41	N	NMED	5.09E-08	2.67E-02	
Barium	7440-39-3	mg/kg	400				NS	NS	4,390	N	NMED		9.11E-02	
Beryllium	7440-41-7	mg/kg	0.84	J			2,710	N	148	N	NMED	3.10E-09	5.68E-03	
Cadmium	7440-43-9	mg/kg	0.34				3,610	N	72	N	NMED	9.42E-10	4.72E-03	
Calcium	7440-70-2	mg/kg	12,000				NS	NS	8,850,000	N	NMED		1.36E-03	
Chromium (Total) (4)	7440-47-3	mg/kg	11				468	N	134	N	NMED	2.35E-07	8.21E-02	
Cobalt	7440-48-4	mg/kg	4.2				722	N	37	N	NMED	5.82E-08	1.14E-01	Endocrine
Copper	7440-50-8	mg/kg	88				NS	NS	14,200	N	NMED		6.20E-03	
Iron	7439-89-6	mg/kg	11,000				NS	NS	248,000	N	NMED		4.44E-02	
Lead	7439-92-1	mg/kg	10				NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	7,300				NS	NS	1,550,000	N	NMED		4.71E-03	
Manganese	7439-96-5	mg/kg	480				NS	NS	464	Y	NMED		1.03E+00	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.035	J			NS	NS	21	N	NMED		1.69E-03	
Nickel	7440-02-0	mg/kg	8.9				20,500	N	753	N	NMED	4.34E-09	1.18E-02	
Potassium	7440-09-7	mg/kg	1,800				NS	NS	20,800,000	N	NMED		8.65E-05	
Selenium	7782-49-2	mg/kg	1.1				NS	NS	1,750	N	NMED		6.29E-04	
Silver	7440-22-4	mg/kg	0.041	J			NS	NS	1,770	N	NMED		2.32E-05	
Sodium	7440-23-5	mg/kg	49				NS	NS	10,200,000	N	NMED		4.80E-06	
Thallium	7440-28-0	mg/kg	0.072	J			NS	NS	4	N	NMED		2.03E-02	
Vanadium	7440-62-2	mg/kg	14				NS	NS	614	N	NMED		2.28E-02	
Zinc	7440-66-6	mg/kg	26				NS	NS	106,000	N	NMED		2.45E-04	

TABLE D1-E26-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID E26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.33	U			NS	NS	12	N	NMED			
Nitrate	14797-55-8	mg/kg	10	J			NS	NS	566,000	N	NMED		1.77E-05	
Perchlorate	14797-73-0	mg/kg	0.0042	U			NS	NS	248	N	NMED			
										Cumulative Risk/Hazard		**4E-07**	**2.0**	
										Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	1.5
Endocrine	0.11
All Others	0.33

Notes:

[s] = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update).

2) NMED[C] = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

3) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

4) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect

TABLE D1-F26-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID F26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.002	U			28.1	N	2,350	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.002	U			NS	NS	14,400	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.002	U			7.98	N	1,560	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.002	U			18.8	N	2.61	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.002	U			78.6	N	15,600	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.002	U			NS	NS	440	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.002	U			29.3	N	141	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.002	U			NS	NS	63	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.005	U			0.051	N	7.09	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.002	U			240	N	82.9	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.002	U			NS	NS	300	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.005	U			0.0858	N	5.88	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.002	U			0.672	N	135	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.002	U			NS	NS	2,150	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.002	U			8.32	N	55.6	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.002	U			17.8	N	29	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.002	U			NS	NS	270	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.002	U			1,290	N	5,480	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.002	U			NS	NS	1,600	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.002	U			1,290	N	5,480	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.002	U			17.8	N	29	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.003	U			NS	NS	37,400	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.002	U			NS	NS	1,560	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.002	U			NS	NS	200	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.002	U			NS	NS	1,600	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.002	U			NS	NS	5,810	N	RSL		
Acetone	67-64-1	mg/kg	0.043				NS	NS	66,300	N	NMED		6.49E-07
Benzene	71-43-2	mg/kg	0.002	U			17.8	N	114	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.002	U			NS	NS	290	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.002	U			NS	NS	150	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.002	U			6.19	N	1,560	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.002	U			674	N	1,230	N	NMED		
Bromomethane	74-83-9	mg/kg	0.002	U			NS	NS	17.7	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.002	U			NS	NS	1,550	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.002	U			10.7	N	144	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.002	U			NS	NS	378	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.002	U			NS	NS	19,000	N	NMED		
Chloroform	67-66-3	mg/kg	0.002	U			5.9	N	306	N	NMED		
Chloromethane	74-87-3	mg/kg	0.005	U			41.1	N	268	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.002	U			NS	NS	156	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.002	U			29.3	N	141	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.002	U			13.9	N	1,230	N	NMED		
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.002	U			NS	NS	57.9	N	NMED		

TABLE D1-F26-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID F26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dichlorodifluoromethane	75-71-8	mg/kg	0.002	U			NS	NS	182	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.002	U			75.1	N	3,930	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.002	U			68.3	N	61.6	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.002	U			NS	NS	2,360	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.005	U			NS	NS	764	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.002	U			975	N	37,800	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.01	U			766	N	409	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.002	U			NS	NS	3,900	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.002	U			NS	NS	3,800	N	RSL		
Naphthalene	91-20-3	mg/kg	0.002	U			22.6	N	162	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0025	U			NS	NS	805	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.002	U			NS	NS	2,360	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.002	U			NS	NS	7,800	N	RSL		
Styrene	100-42-5	mg/kg	0.002	U			NS	NS	7,260	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.002	U			NS	NS	7,800	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.002	U			337	N	111	N	NMED		
Toluene	108-88-3	mg/kg	0.002	U			NS	NS	5,230	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.002	U			NS	NS	210	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.002	U			29.3	N	141	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.002	U			15.5	N	6.77	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.002	U			NS	NS	1,230	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.002	U			0.742	N	113	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.18	U			240	N	82.9	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.18	U			NS	NS	2,150	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.18	U			1,290	N	5,480	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.18	U			1,290	N	5,480	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.18	U			NS	NS	6,160	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.18	U			484	N	61.6	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.18	U			NS	NS	185	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.18	U			NS	NS	1,230	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.18	U			NS	NS	123	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.18	U			17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.18	U			3.56	N	18.5	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.18	U			NS	NS	6,260	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.18	U			NS	NS	391	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.18	U			NS	NS	232	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.18	U			NS	NS	3,200	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.18	U			NS	NS	630	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.18	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.18	U			11.8	N	NS	NS	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.18	U			270	N	250	N	RSL[S]		
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.18	U			NS	NS	4.93	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.18	U			NS	NS	NS	NS	NS		

TABLE D1-F26-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID F26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.18	U			NS	NS	6,300	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.18	U			27	N	32	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.18	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.18	U			270	N	250	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.18	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.18	U			NS	NS	3,480	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.18	U			NS	NS	1,740	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.18	U			NS	NS	17,400	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.18	U			1.53	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			1.12	N	17.4	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.18	U			1.53	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.18	U			NS	NS	1,740	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.18	U			15.3	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.18	U			NS	NS	250,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.18	U			NS	NS	6,300	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.18	U			NS	NS	190	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.18	U			3.11	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.18	U			99.3	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.18	U			380	N	1,230	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.18	U			2,900	N	13,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.18	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.18	U			153	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.18	U			NS	NS	6,160	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.18	U			NS	NS	630	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			0.153	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.18	U			NS	NS	78	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.18	U			NS	NS	49,300	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.18	U			NS	NS	61,600	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.18	U			NS	NS	2,320	N	NMED		
Fluorene	86-73-7	mg/kg	0.18	U			NS	NS	2,320	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.18	U			3.33	N	49.3	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.18	U			68.3	N	61.6	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.18	U			133	N	43.1	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.18	U			1.53	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.18	U			5,610	N	12,300	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.18	U			0.78	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.022	UJ			0.0234	N	0.493	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.18	U			1,090	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.18	U			22.6	N	162	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.18	U			60.4	N	131	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.18	U			9.85	N	234	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.18	U			NS	NS	1,740	N	NMED		
Phenol	108-95-2	mg/kg	0.18	U			NS	NS	18,500	N	NMED		
Pyrene	129-00-0	mg/kg	0.18	U			NS	NS	1,740	N	NMED		

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HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID F26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			1,300	N	570	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.022	U			69.6	N	3.98	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.022	U			1.81	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.011	U			1.86	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.011	U			2.43	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.011	U			2.43	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.011	U			2.43	N	1.14	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.011	U			2.43	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000019	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg		U	0.000025	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.000000043	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.000000065	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.000000054	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000046	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000035	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000024	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000036	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.0000001	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.000000036	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000006	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000037	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.000000048	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.000000093	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000033	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000035	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.0				0.000049	N	0.0000506	N	NMED		

TABLE D1-F26-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID F26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	16,000				NS	NS	78,000	N	NMED		2.05E-01
Antimony	7440-36-0	mg/kg	0.086	J			NS	NS	31.3	N	NMED		2.75E-03
Arsenic	7440-38-2	mg/kg	0.85				7.07	N	13	N	NMED	1.20E-06	6.54E-02
Barium	7440-39-3	mg/kg	260				NS	NS	15,600	N	NMED		1.67E-02
Beryllium	7440-41-7	mg/kg	0.82				64,400	N	156	N	NMED	1.27E-10	5.26E-03
Cadmium	7440-43-9	mg/kg	0.26				85,900	N	70.5	N	NMED	3.03E-11	3.69E-03
Calcium	7440-70-2	mg/kg	20,000				NS	NS	13,000,000	N	NMED		1.54E-03
Chromium (Total) (3)	7440-47-3	mg/kg	8.6				96.6	N	45,200	N	NMED	8.90E-07	1.90E-04
Cobalt	7440-48-4	mg/kg	3.9				17,200	N	23.4	N	NMED	2.27E-09	1.67E-01
Copper	7440-50-8	mg/kg	42				NS	NS	3,130	N	NMED		1.34E-02
Iron	7439-89-6	mg/kg	7,400				NS	NS	54,800	N	NMED		1.35E-01
Lead	7439-92-1	mg/kg	8.7				NS	NS	200	N	RSL		
Magnesium	7439-95-4	mg/kg	6,100				NS	NS	15,600,000	N	NMED		3.91E-04
Manganese	7439-96-5	mg/kg	500				NS	NS	10,500	N	NMED		4.76E-02
Mercury (Elemental)	7439-97-6	mg/kg	0.02	J			NS	NS	23.8	N	NMED		8.40E-04
Nickel	7440-02-0	mg/kg	7.6				595,000	N	1,560	N	NMED	1.28E-10	4.87E-03
Potassium	7440-09-7	mg/kg	820				NS	NS	15,600,000	N	NMED		5.26E-05
Selenium	7782-49-2	mg/kg	1.1				NS	NS	391	N	NMED		2.81E-03
Silver	7440-22-4	mg/kg	0.03	J			NS	NS	391	N	NMED		7.67E-05
Sodium	7440-23-5	mg/kg	38				NS	NS	7,820,000	N	NMED		4.86E-06
Thallium	7440-28-0	mg/kg	0.038				NS	NS	0.782	N	NMED		4.86E-02
Vanadium	7440-62-2	mg/kg	12				NS	NS	394	N	NMED		3.05E-02
Zinc	7440-66-6	mg/kg	18				NS	NS	23,500	N	NMED		7.66E-04

TABLE D1-F26-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID F26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.34	U			NS	NS	11.2	N	NMED		
Nitrate	14797-55-8	mg/kg	2	J			NS	NS	125,000	N	NMED		1.60E-05
Perchlorate	14797-73-0	mg/kg	0.0044	U			NS	NS	54.8	N	NMED		
										Cumulative Risk/Hazard		**2E-06**	**0.8**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect

TABLE D1-F26-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID F26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.002	U			137	N	39,400	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.002	U			NS	NS	72,500	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.002	U			39	N	26,000	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.002	U			92	N	12	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.002	U			383	N	260,000	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.002	U			NS	NS	2,260	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.002	U			146	N	695	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.002	U			NS	NS	930	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.005	U			1	N	34	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.002	U			1,250	N	423	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.002	U			NS	NS	1,800	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.005	U			1	N	41	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.002	U			3	N	738	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.002	U			NS	NS	13,000	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.002	U			41	N	286	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.002	U			87	N	137	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.002	U			NS	NS	1,500	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.002	U			6,730	N	90,800	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.002	U			NS	NS	23,000	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.002	U			6,730	N	90,800	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.002	U			87	N	137	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.003	U			NS	NS	411,000	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.002	U			NS	NS	26,000	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.002	U			NS	NS	1,300	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.002	U			NS	NS	23,000	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.002	U			NS	NS	81,600	N	RSL		
Acetone	67-64-1	mg/kg	0.043				NS	NS	960,000	N	NMED		4.48E-08
Benzene	71-43-2	mg/kg	0.002	U			87	N	729	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.002	U			NS	NS	1,800	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.002	U			NS	NS	630	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.002	U			30	N	26,000	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.002	U			1,760	N	18,300	N	NMED		
Bromomethane	74-83-9	mg/kg	0.002	U			NS	NS	95	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.002	U			NS	NS	8,540	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.002	U			53	N	1,020	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.002	U			NS	NS	2,160	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.002	U			NS	NS	89,500	N	NMED		
Chloroform	67-66-3	mg/kg	0.002	U			29	N	2,000	N	NMED		
Chloromethane	74-87-3	mg/kg	0.005	U			201	N	1,260	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.002	U			NS	NS	2,600	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.002	U			146	N	695	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.002	U			67	N	18,300	N	NMED		

TABLE D1-F26-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID F26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.002	U			NS	NS	288	N	NMED		
Dichlorodifluoromethane	75-71-8	mg/kg	0.002	U			NS	NS	865	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.002	U			29,000	N	368	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.002	U			52	N	916	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.002	U			NS	NS	14,200	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.005	U			NS	NS	3,730	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.002	U			4,820	N	178,000	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.01	U			14,400	N	5,130	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.002	U			NS	NS	58,000	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.002	U			NS	NS	24,000	N	RSL		
Naphthalene	91-20-3	mg/kg	0.002	U			108	N	843	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0025	U			NS	NS	3,940	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.002	U			NS	NS	14,200	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.002	U			NS	NS	120,000	N	RSL		
Styrene	100-42-5	mg/kg	0.002	U			NS	NS	51,300	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.002	U			NS	NS	120,000	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.002	U			1,650	N	629	N	NMED		
Toluene	108-88-3	mg/kg	0.002	U			NS	NS	61,300	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.002	U			NS	NS	1,100	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.002	U			146	N	695	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.002	U			112	N	37	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.002	U			NS	NS	6,030	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.002	U			28	N	46	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.18	U			1,250	N	423	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.18	U			NS	NS	13,000	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.18	U			6,730	N	90,800	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.18	U			6,730	N	90,800	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.18	U			NS	NS	91,600	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.18	U			2,330	N	916	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.18	U			NS	NS	2,750	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.18	U			NS	NS	18,300	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.18	U			NS	NS	1,830	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.18	U			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.18	U			17	N	276	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.18	U			NS	NS	104,000	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.18	U			NS	NS	6,490	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.18	U			NS	NS	3,370	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.18	U			NS	NS	41,000	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.18	U			NS	NS	8,000	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.18	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.18	U			NS	NS	410	N	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.18	U			1,100	N	3,300	N	RSL[S]		

TABLE D1-F26-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID F26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.18	U			NS	NS	73	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.18	U			NS	NS	NS	NS	NS		
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.18	U			NS	NS	82,000	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.18	U			110	N	410	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.18	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.18	U			1,100	N	3,300	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.18	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.18	U			NS	NS	50,500	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.18	U			NS	NS	25,300	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.18	U			NS	NS	253,000	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.18	U			32	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			24	N	251	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.18	U			32	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.18	U			NS	NS	25,300	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.18	U			323	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.18	U			NS	NS	3,300,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.18	U			NS	NS	82,000	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.18	U			NS	NS	2,500	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.18	U			16	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.18	U			519	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.18	U			1,830	N	18,300	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.18	U			12,000	N	160,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.18	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.18	U			3,230	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.18	U			NS	NS	91,600	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.18	U			NS	NS	8,200	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			3	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.18	U			NS	NS	1,200	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.18	U			NS	NS	733,000	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.18	U			NS	NS	916,000	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.18	U			NS	NS	33,700	N	NMED		
Fluorene	86-73-7	mg/kg	0.18	U			NS	NS	33,700	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.18	U			16	N	733	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.18	U			52	N	916	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.18	U			641	N	641	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.18	U			32	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.18	U			27,000	N	183,000	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.18	U			3	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.022	UJ			1	N	7	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.18	U			5,240	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.18	U			108	N	843	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.18	U			293	N	1,540	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.18	U			45	N	3,180	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.18	U			NS	NS	27,500	N	NMED		
Phenol	108-95-2	mg/kg	0.18	U			NS	NS	275,000	N	NMED		
Pyrene	129-00-0	mg/kg	0.18	U			NS	NS	25,300	N	NMED		

TABLE D1-F26-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID F26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			5,300	N	7,400	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.022	U			304	N	57	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.022	U			9	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.011	U			9	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.011	U			11	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.011	U			11	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.011	U			11	N	16	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.011	U			11	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000019	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg		U	0.000025	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.000000043	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.000000065	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.000000054	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000046	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000035	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000024	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000036	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.0000001	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.000000036	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000006	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000037	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.000000048	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.000000093	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000033	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000035	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.0				0.000238	N	0.000808	N	NMED		

TABLE D1-F26-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID F26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	16,000				NS	NS	1,290,000	N	NMED		1.24E-02
Antimony	7440-36-0	mg/kg	0.086	J			NS	NS	519	N	NMED		1.66E-04
Arsenic	7440-38-2	mg/kg	0.85				36	N	208	N	NMED	2.37E-07	4.09E-03
Barium	7440-39-3	mg/kg	260				NS	NS	255,000	N	NMED		1.02E-03
Beryllium	7440-41-7	mg/kg	0.82				313,000	N	2,580	N	NMED	2.62E-11	3.18E-04
Cadmium	7440-43-9	mg/kg	0.26				417,000	N	1,110	N	NMED	6.24E-12	2.34E-04
Calcium	7440-70-2	mg/kg	20,000				NS	NS	32,400,000	N	NMED		
Chromium (Total) (3)	7440-47-3	mg/kg	8.6				505	N	314,000	N	NMED	1.70E-07	2.74E-05
Cobalt	7440-48-4	mg/kg	3.9				83,400	N	388	N	NMED	4.68E-10	1.01E-02
Copper	7440-50-8	mg/kg	42				NS	NS	51,900	N	NMED		8.09E-04
Iron	7439-89-6	mg/kg	7,400				NS	NS	908,000	N	NMED		8.15E-03
Lead	7439-92-1	mg/kg	8.7				NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	6,100				NS	NS	5,680,000	N	NMED		
Manganese	7439-96-5	mg/kg	500				NS	NS	160,000	N	NMED		3.13E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.02	J			NS	NS	112	N	NMED		1.79E-04
Nickel	7440-02-0	mg/kg	7.6				2,890,000	N	25,700	N	NMED	2.63E-11	2.96E-04
Potassium	7440-09-7	mg/kg	820				NS	NS	76,200,000	N	NMED		
Selenium	7782-49-2	mg/kg	1.1				NS	NS	6,490	N	NMED		1.69E-04
Silver	7440-22-4	mg/kg	0.03	J			NS	NS	6,490	N	NMED		4.62E-06
Sodium	7440-23-5	mg/kg	38				NS	NS	37,300,000	N	NMED		1.02E-06
Thallium	7440-28-0	mg/kg	0.038				NS	NS	13	N	NMED		2.92E-03
Vanadium	7440-62-2	mg/kg	12				NS	NS	6,530	N	NMED		1.84E-03
Zinc	7440-66-6	mg/kg	18				NS	NS	38,900	N	NMED		4.63E-04

TABLE D1-F26-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID F26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.34	U			NS	NS	63	N	NMED		
Nitrate	14797-55-8	mg/kg	2	J			NS	NS	2,080,000	N	NMED		9.62E-07
Perchlorate	14797-73-0	mg/kg	0.0044	U			NS	NS	908	N	NMED		
										Cumulative Risk/Hazard		**4E-07**	**0.05**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service

IEUBK = Integrated Exposure Uptake Biokentic Model

J = Estimated

mg/kg = milligrams per kilogram

NS = No Standard

U = Nondetect

UJ = Estimated Nondetect

TABLE D1-F26-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID F26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.002	U			659	N	10,600	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.002	U			NS	NS	13,600	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.002	U			197	N	7,080	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.002	U			4,300	N	2	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.002	U			1,820	N	70,800	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.002	U			NS	NS	424	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.002	U			781	N	130	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.002	U			NS	NS	283	N	NMED[C]			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.005	U			8	N	6	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.002	U			8,540	N	79	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.002	U			NS	NS	492	N	NMED[C]			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.005	U			6	N	8	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.002	U			16	N	140	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.002	U			NS	NS	2,500	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.002	U			195	N	54	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.002	U			415	N	25	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.002	U			NS	NS	422	N	NMED[C]			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.002	U			45,900	N	24,800	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.002	U			NS	NS	7,080	N	NMED[C]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.002	U			45,900	N	24,800	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.002	U			415	N	25	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.003	U			NS	NS	90,700	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.002	U			NS	NS	7,080	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.002	U			NS	NS	599	N	NMED[C]			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.002	U			NS	NS	7,080	N	NMED[C]			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.002	U			NS	NS	20,400	N	NMED[C]			
Acetone	67-64-1	mg/kg	0.043				NS	NS	242,000	N	NMED		1.78E-07	
Benzene	71-43-2	mg/kg	0.002	U			423	N	142	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.002	U			NS	NS	538	N	NMED[C]			
Bromochloromethane	74-97-5	mg/kg	0.002	U			NS	NS	296	N	NMED[C]			
Bromodichloromethane	75-27-4	mg/kg	0.002	U			143	N	7,080	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.002	U			23,700	N	5,380	N	NMED			
Bromomethane	74-83-9	mg/kg	0.002	U			NS	NS	18	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.002	U			NS	NS	1,620	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.002	U			252	N	202	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.002	U			NS	NS	412	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.002	U			NS	NS	16,600	N	NMED			
Chloroform	67-66-3	mg/kg	0.002	U			134	N	391	N	NMED			
Chloromethane	74-87-3	mg/kg	0.005	U			956	N	235	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.002	U			NS	NS	708	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.002	U			781	N	130	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.002	U			340	N	5,380	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.002	U			NS	NS	54	N	NMED			

TABLE D1-F26-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID F26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Dichlorodifluoromethane	75-71-8	mg/kg	0.002	U			NS	NS	161	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.002	U			1,770	N	5,800	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.002	U			2,400	N	269	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.002	U			NS	NS	2,740	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.005	U			NS	NS	696	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.002	U			24,200	N	33,100	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.01	U			89,600	N	1,210	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.002	U			NS	NS	17,700	N	NMED[C]			
n-Propylbenzene	103-65-1	mg/kg	0.002	U			NS	NS	6,730	N	NMED[C]			
Naphthalene	91-20-3	mg/kg	0.002	U			633	N	159	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0025	U			NS	NS	736	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.002	U			NS	NS	2,740	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.002	U			NS	NS	35,400	N	NMED[C]			
Styrene	100-42-5	mg/kg	0.002	U			NS	NS	10,200	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.002	U			NS	NS	35,400	N	NMED[C]			
Tetrachloroethene	127-18-4	mg/kg	0.002	U			7,910	N	120	N	NMED			
Toluene	108-88-3	mg/kg	0.002	U			NS	NS	14,000	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.002	U			NS	NS	206	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.002	U			781	N	130	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.002	U			5,370	N	7	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.002	U			NS	NS	1,130	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.002	U			161	N	162	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.18	U			8,540	N	79	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.18	U			NS	NS	2,500	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.18	U			45,900	N	24,800	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.18	U			45,900	N	24,800	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.18	U			NS	NS	26,900	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.18	U			17,000	N	269	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.18	U			NS	NS	807	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.18	U			NS	NS	5,380	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.18	U			NS	NS	538	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.18	U			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.18	U			165	N	81	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.18	U			NS	NS	28,300	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.18	U			NS	NS	1,770	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.18	U			NS	NS	1,000	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.18	U			NS	NS	13,500	N	NMED[C]			
2-Nitroaniline	88-74-4	mg/kg	0.18	U			NS	NS	2,690	N	NMED[C]			
2-Nitrophenol	88-75-5	mg/kg	0.18	U			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.18	U			410	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.18	U			135	N	1,080	N	NMED[SC]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.18	U			NS	NS	22	N	NMED			

TABLE D1-F26-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID F26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.18	U			NS	NS	NS	NS	NS			
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.18	U			NS	NS	26,900	N	NMED[C]			
4-Chloroaniline	106-47-8	mg/kg	0.18	U			14	N	135	N	NMED[C]			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.18	U			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.18	U			135	N	1,080	N	NMED[C]			
4-Nitrophenol	100-02-7	mg/kg	0.18	U			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.18	U			NS	NS	15,100	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.18	U			NS	NS	7,530	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.18	U			NS	NS	75,300	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.18	U			240	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			173	N	15	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.18	U			240	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.18	U			NS	NS	7,530	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.18	U			2,310	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.18	U			NS	NS	1,080,000	N	NMED[C]			
Benzyl Alcohol	100-51-6	mg/kg	0.18	U			NS	NS	26,900	N	NMED[C]			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.18	U			NS	NS	807	N	NMED[C]			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.18	U			2	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.18	U			3,540	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.18	U			13,400	N	5,380	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.18	U			1,420	N	53,800	N	NMED[C]			
Carbazole	86-74-8	mg/kg	0.18	U			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.18	U			23,100	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.18	U			NS	NS	26,900	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.18	U			NS	NS	2,690	N	NMED[C]			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			24	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.18	U			NS	NS	269	N	NMED[C]			
Diethylphthalate	84-66-2	mg/kg	0.18	U			NS	NS	215,000	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.18	U			NS	NS	269,000	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.18	U			NS	NS	10,000	N	NMED			
Fluorene	86-73-7	mg/kg	0.18	U			NS	NS	10,000	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.18	U			117	N	215	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.18	U			2,400	N	269	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.18	U			4,670	N	188	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.18	U			240	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.18	U			198,000	N	53,700	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.18	U			0.38	N	NA	N	NMED[C]			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.022	UJ			4	N	2	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.18	U			37,900	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.18	U			633	N	159	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.18	U			1,350	N	353	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.18	U			346	N	989	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.18	U			NS	NS	8,070	N	NMED			
Phenol	108-95-2	mg/kg	0.18	U			NS	NS	77,400	N	NMED			
Pyrene	129-00-0	mg/kg	0.18	U			NS	NS	7,530	N	NMED			

TABLE D1-F26-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID F26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	8,070	N	NMED[C]			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	27	N	NMED[C]			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			626	N	2,420	N	NMED[C]			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.022	U			2,440	N	17	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.022	U			55	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.011	U			58	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.011	U			85	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.011	U			85	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.011	U			85	N	5	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.011	U			85	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (3)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000019	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg		U	0.000025	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	4.3E-08	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	6.5E-08	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	5.4E-08	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	4.6E-08	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	3.5E-08	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	2.4E-08	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	3.6E-08	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.0000001	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	3.6E-08	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000006	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	3.7E-08	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	4.8E-08	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	9.3E-08	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000033	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	3.5E-08	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.0				0.00172	N	0.000226	N	NMED			

TABLE D1-F26-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID F26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	16,000				NS	NS	41,400	N	NMED		3.86E-01	Nervous
Antimony	7440-36-0	mg/kg	0.086	J			NS	NS	142	N	NMED		6.06E-04	
Arsenic	7440-38-2	mg/kg	0.85				216	N	41	N	NMED	3.94E-08	2.06E-02	
Barium	7440-39-3	mg/kg	260				NS	NS	4,390	N	NMED		5.92E-02	
Beryllium	7440-41-7	mg/kg	0.82				2,710	N	148	N	NMED	3.03E-09	5.54E-03	
Cadmium	7440-43-9	mg/kg	0.26				3,610	N	72	N	NMED	7.20E-10	3.61E-03	
Calcium	7440-70-2	mg/kg	20,000				NS	NS	8,850,000	N	NMED		2.26E-03	
Chromium (Total) (4)	7440-47-3	mg/kg	8.6				468	N	134	N	NMED	1.84E-07	6.42E-02	
Cobalt	7440-48-4	mg/kg	3.9				722	N	37	N	NMED	5.40E-08	1.06E-01	Endocrine
Copper	7440-50-8	mg/kg	42				NS	NS	14,200	N	NMED		2.96E-03	
Iron	7439-89-6	mg/kg	7,400				NS	NS	248,000	N	NMED		2.98E-02	
Lead	7439-92-1	mg/kg	8.7				NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	6,100				NS	NS	1,550,000	N	NMED		3.94E-03	
Manganese	7439-96-5	mg/kg	500				NS	NS	464	Y	NMED		1.08E+00	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.02	J			NS	NS	21	N	NMED		9.66E-04	
Nickel	7440-02-0	mg/kg	7.6				20,500	N	753	N	NMED	3.71E-09	1.01E-02	
Potassium	7440-09-7	mg/kg	820				NS	NS	20,800,000	N	NMED		3.94E-05	
Selenium	7782-49-2	mg/kg	1.1				NS	NS	1,750	N	NMED		6.29E-04	
Silver	7440-22-4	mg/kg	0.03	J			NS	NS	1,770	N	NMED		1.69E-05	
Sodium	7440-23-5	mg/kg	38				NS	NS	10,200,000	N	NMED		3.73E-06	
Thallium	7440-28-0	mg/kg	0.038				NS	NS	4	N	NMED		1.07E-02	
Vanadium	7440-62-2	mg/kg	12				NS	NS	614	N	NMED		1.95E-02	
Zinc	7440-66-6	mg/kg	18				NS	NS	106,000	N	NMED		1.70E-04	

TABLE D1-F26-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID F26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.34	U			NS	NS	12	N	NMED			
Nitrate	14797-55-8	mg/kg	2	J			NS	NS	566,000	N	NMED		3.53E-06	
Perchlorate	14797-73-0	mg/kg	0.0044	U			NS	NS	248	N	NMED			
										Cumulative Risk/Hazard		**3E-07**	**1.8**	
										Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	1.5
Endocrine	0.11
All Others	0.23

Notes:

[s] = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update).

2) NMED[C] = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

3) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

4) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect

TABLE D1-G25-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID G25
INNER FENCE
FORT WINGATE DEPOT ACTIVITY

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0018	U			28.1	N	2,350	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0018	U			NS	NS	14,400	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0018	U			7.98	N	1,560	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0018	U			18.8	N	2.61	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0018	U			78.6	N	15,600	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0018	U			NS	NS	440	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0018	U			29.3	N	141	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0018	U			NS	NS	63	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0045	U			0.051	N	7.09	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0018	U			240	N	82.9	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0018	U			NS	NS	300	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0045	U			0.0858	N	5.88	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0018	U			0.672	N	135	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0018	U			NS	NS	2,150	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0018	U			8.32	N	55.6	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0018	U			17.8	N	29	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0018	U			NS	NS	270	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0018	U			1,290	N	5,480	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0018	U			NS	NS	1,600	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0018	U			1,290	N	5,480	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0018	U			17.8	N	29	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0027	U			NS	NS	37,400	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0018	U			NS	NS	1,560	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0018	U			NS	NS	200	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0018	U			NS	NS	1,600	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0018	U			NS	NS	5,810	N	RSL		
Acetone	67-64-1	mg/kg	0.4				NS	NS	66,300	N	NMED		6.03E-06
Benzene	71-43-2	mg/kg	0.0018	U			17.8	N	114	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0018	U			NS	NS	290	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0018	U			NS	NS	150	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0018	U			6.19	N	1,560	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0018	U			674	N	1,230	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0018	U			NS	NS	17.7	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0018	U			NS	NS	1,550	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0018	U			10.7	N	144	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0018	U			NS	NS	378	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0018	U			NS	NS	19,000	N	NMED		
Chloroform	67-66-3	mg/kg	0.0018	U			5.9	N	306	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0045	U			41.1	N	268	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0018	U			NS	NS	156	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0018	U			29.3	N	141	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0018	U			13.9	N	1,230	N	NMED		
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0018	U			NS	NS	57.9	N	NMED		

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HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID G25
INNER FENCE
FORT WINGATE DEPOT ACTIVITY

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dichlorodifluoromethane	75-71-8	mg/kg	0.0018	U			NS	NS	182	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0018	U			75.1	N	3,930	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0018	U			68.3	N	61.6	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0018	U			NS	NS	2,360	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0045	U			NS	NS	764	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0018	U			975	N	37,800	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.009	U			766	N	409	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0018	U			NS	NS	3,900	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0018	U			NS	NS	3,800	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0018	U			22.6	N	162	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0023	U			NS	NS	805	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0018	U			NS	NS	2,360	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0018	U			NS	NS	7,800	N	RSL		
Styrene	100-42-5	mg/kg	0.0018	U			NS	NS	7,260	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0018	U			NS	NS	7,800	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0018	U			337	N	111	N	NMED		
Toluene	108-88-3	mg/kg	0.0018	U			NS	NS	5,230	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0018	U			NS	NS	210	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0018	U			29.3	N	141	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0018	U			15.5	N	6.77	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0018	U			NS	NS	1,230	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0018	U			0.742	N	113	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.18	U			240	N	82.9	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.18	U			NS	NS	2,150	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.18	U			1,290	N	5,480	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.18	U			1,290	N	5,480	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.18	U			NS	NS	6,160	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.18	U			484	N	61.6	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.18	U			NS	NS	185	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.18	U			NS	NS	1,230	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.18	U			NS	NS	123	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.18	U			17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.18	U			3.56	N	18.5	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.18	U			NS	NS	6,260	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.18	U			NS	NS	391	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.18	U			NS	NS	232	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.18	U			NS	NS	3,200	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.18	U			NS	NS	630	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.18	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.18	U			11.8	N	NS	NS	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.18	U			270	N	250	N	RSL[S]		
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.18	U			NS	NS	4.93	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.18	U			NS	NS	NS	NS	NS		

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INNER FENCE
FORT WINGATE DEPOT ACTIVITY

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.18	U			NS	NS	6,300	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.18	U			27	N	32	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.18	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.18	U			270	N	250	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.18	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.18	U			NS	NS	3,480	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.18	U			NS	NS	1,740	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.18	U			NS	NS	17,400	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.18	U			1.53	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			1.12	N	17.4	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.18	U			1.53	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.18	U			NS	NS	1,740	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.18	U			15.3	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.18	U			NS	NS	250,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.18	U			NS	NS	6,300	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.18	U			NS	NS	190	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.18	U			3.11	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.18	U			99.3	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.18	U			380	N	1,230	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.18	U			2,900	N	13,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.18	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.18	U			153	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.18	U			NS	NS	6,160	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.18	U			NS	NS	630	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			0.153	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.18	U			NS	NS	78	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.18	U			NS	NS	49,300	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.18	U			NS	NS	61,600	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.18	U			NS	NS	2,320	N	NMED		
Fluorene	86-73-7	mg/kg	0.18	U			NS	NS	2,320	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.18	U			3.33	N	49.3	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.18	U			68.3	N	61.6	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.18	U			133	N	43.1	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.18	U			1.53	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.18	U			5,610	N	12,300	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.18	U			0.78	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	U			0.0234	N	0.493	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.18	U			1,090	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.18	U			22.6	N	162	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.18	U			60.4	N	131	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.18	U			9.85	N	234	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.18	U			NS	NS	1,740	N	NMED		
Phenol	108-95-2	mg/kg	0.18	U			NS	NS	18,500	N	NMED		
Pyrene	129-00-0	mg/kg	0.18	U			NS	NS	1,740	N	NMED		

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HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID G25
INNER FENCE
FORT WINGATE DEPOT ACTIVITY

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			1,300	N	570	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.021	U			69.6	N	3.98	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.021	U			1.81	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.011	U			1.86	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.011	U			2.43	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.011	U			2.43	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.011	U			2.43	N	1.14	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.011	U			2.43	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000012	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg		U	0.0000034	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000025	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.0000000062	J	0.00000062	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.000000099	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000071	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000081	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000066	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000074	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.000000087	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.000000078	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000014	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000042	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.000000072	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000014	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.0000003	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000061	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.0000000062				0.000049	N	0.0000506	N	NMED	1.27E-09	1.23E-04

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INNER FENCE
FORT WINGATE DEPOT ACTIVITY

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	18,000				NS	NS	78,000	N	NMED		2.31E-01
Antimony	7440-36-0	mg/kg	0.18	J			NS	NS	31.3	N	NMED		5.75E-03
Arsenic	7440-38-2	mg/kg	1.5				7.07	N	13	N	NMED	2.12E-06	1.15E-01
Barium	7440-39-3	mg/kg	360				NS	NS	15,600	N	NMED		2.31E-02
Beryllium	7440-41-7	mg/kg	0.54	J			64,400	N	156	N	NMED	8.39E-11	3.46E-03
Cadmium	7440-43-9	mg/kg	0.75				85,900	N	70.5	N	NMED	8.73E-11	1.06E-02
Calcium	7440-70-2	mg/kg	15,000				NS	NS	13,000,000	N	NMED		1.15E-03
Chromium (Total) (3)	7440-47-3	mg/kg	14				96.6	N	45,200	N	NMED	1.45E-06	3.10E-04
Cobalt	7440-48-4	mg/kg	4.1				17,200	N	23.4	N	NMED	2.38E-09	1.75E-01
Copper	7440-50-8	mg/kg	180				NS	NS	3,130	N	NMED		5.75E-02
Iron	7439-89-6	mg/kg	8,300				NS	NS	54,800	N	NMED		1.51E-01
Lead	7439-92-1	mg/kg	12				NS	NS	200	N	RSL		
Magnesium	7439-95-4	mg/kg	6,800				NS	NS	15,600,000	N	NMED		4.36E-04
Manganese	7439-96-5	mg/kg	500				NS	NS	10,500	N	NMED		4.76E-02
Mercury (Elemental)	7439-97-6	mg/kg	0.042	J			NS	NS	23.8	N	NMED		1.76E-03
Nickel	7440-02-0	mg/kg	9.9				595,000	N	1,560	N	NMED	1.66E-10	6.35E-03
Potassium	7440-09-7	mg/kg	1,600				NS	NS	15,600,000	N	NMED		1.03E-04
Selenium	7782-49-2	mg/kg	1.1				NS	NS	391	N	NMED		2.81E-03
Silver	7440-22-4	mg/kg	0.076	J			NS	NS	391	N	NMED		1.94E-04
Sodium	7440-23-5	mg/kg	38				NS	NS	7,820,000	N	NMED		4.86E-06
Thallium	7440-28-0	mg/kg	0.058	J			NS	NS	0.782	N	NMED		7.42E-02
Vanadium	7440-62-2	mg/kg	12				NS	NS	394	N	NMED		3.05E-02
Zinc	7440-66-6	mg/kg	27				NS	NS	23,500	N	NMED		1.15E-03

TABLE D1-G25-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID G25
INNER FENCE
FORT WINGATE DEPOT ACTIVITY

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.33	U			NS	NS	11.2	N	NMED		
Nitrate	14797-55-8	mg/kg	41				NS	NS	125,000	N	NMED		3.28E-04
Perchlorate	14797-73-0	mg/kg	0.0042	U			NS	NS	54.8	N	NMED		
										Cumulative Risk/Hazard		**4E-06**	**0.9**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect

TABLE D1-G25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID G25
INNER FENCE
FORT WINGATE DEPOT ACTIVITY

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0018	U			137	N	39,400	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0018	U			NS	NS	72,500	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0018	U			39	N	26,000	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0018	U			92	N	12	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0018	U			383	N	260,000	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0018	U			NS	NS	2,260	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0018	U			146	N	695	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0018	U			NS	NS	930	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0045	U			1	N	34	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0018	U			1,250	N	423	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0018	U			NS	NS	1,800	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0045	U			1	N	41	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0018	U			3	N	738	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0018	U			NS	NS	13,000	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0018	U			41	N	286	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0018	U			87	N	137	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0018	U			NS	NS	1,500	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0018	U			6,730	N	90,800	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0018	U			NS	NS	23,000	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0018	U			6,730	N	90,800	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0018	U			87	N	137	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0027	U			NS	NS	411,000	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0018	U			NS	NS	26,000	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0018	U			NS	NS	1,300	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0018	U			NS	NS	23,000	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0018	U			NS	NS	81,600	N	RSL		
Acetone	67-64-1	mg/kg	0.4				NS	NS	960,000	N	NMED		4.17E-07
Benzene	71-43-2	mg/kg	0.0018	U			87	N	729	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0018	U			NS	NS	1,800	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0018	U			NS	NS	630	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0018	U			30	N	26,000	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0018	U			1,760	N	18,300	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0018	U			NS	NS	95	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0018	U			NS	NS	8,540	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0018	U			53	N	1,020	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0018	U			NS	NS	2,160	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0018	U			NS	NS	89,500	N	NMED		
Chloroform	67-66-3	mg/kg	0.0018	U			29	N	2,000	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0045	U			201	N	1,260	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0018	U			NS	NS	2,600	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0018	U			146	N	695	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0018	U			67	N	18,300	N	NMED		

TABLE D1-G25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID G25
INNER FENCE
FORT WINGATE DEPOT ACTIVITY

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0018	U			NS	NS	288	N	NMED		
Dichlorodifluoromethane	75-71-8	mg/kg	0.0018	U			NS	NS	865	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0018	U			29,000	N	368	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0018	U			52	N	916	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0018	U			NS	NS	14,200	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0045	U			NS	NS	3,730	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0018	U			4,820	N	178,000	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.009	U			14,400	N	5,130	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0018	U			NS	NS	58,000	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0018	U			NS	NS	24,000	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0018	U			108	N	843	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0023	U			NS	NS	3,940	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0018	U			NS	NS	14,200	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0018	U			NS	NS	120,000	N	RSL		
Styrene	100-42-5	mg/kg	0.0018	U			NS	NS	51,300	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0018	U			NS	NS	120,000	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0018	U			1,650	N	629	N	NMED		
Toluene	108-88-3	mg/kg	0.0018	U			NS	NS	61,300	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0018	U			NS	NS	1,100	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0018	U			146	N	695	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0018	U			112	N	37	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0018	U			NS	NS	6,030	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0018	U			28	N	46	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.18	U			1,250	N	423	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.18	U			NS	NS	13,000	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.18	U			6,730	N	90,800	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.18	U			6,730	N	90,800	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.18	U			NS	NS	91,600	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.18	U			2,330	N	916	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.18	U			NS	NS	2,750	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.18	U			NS	NS	18,300	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.18	U			NS	NS	1,830	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.18	U			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.18	U			17	N	276	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.18	U			NS	NS	104,000	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.18	U			NS	NS	6,490	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.18	U			NS	NS	3,370	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.18	U			NS	NS	41,000	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.18	U			NS	NS	8,000	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.18	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.18	U			NS	NS	410	N	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.18	U			1,100	N	3,300	N	RSL[S]		

TABLE D1-G25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID G25
INNER FENCE
FORT WINGATE DEPOT ACTIVITY

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.18	U			NS	NS	73	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.18	U			NS	NS	NS	NS	NS		
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.18	U			NS	NS	82,000	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.18	U			110	N	410	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.18	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.18	U			1,100	N	3,300	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.18	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.18	U			NS	NS	50,500	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.18	U			NS	NS	25,300	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.18	U			NS	NS	253,000	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.18	U			32	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			24	N	251	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.18	U			32	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.18	U			NS	NS	25,300	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.18	U			323	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.18	U			NS	NS	3,300,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.18	U			NS	NS	82,000	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.18	U			NS	NS	2,500	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.18	U			16	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.18	U			519	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.18	U			1,830	N	18,300	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.18	U			12,000	N	160,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.18	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.18	U			3,230	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.18	U			NS	NS	91,600	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.18	U			NS	NS	8,200	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			3	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.18	U			NS	NS	1,200	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.18	U			NS	NS	733,000	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.18	U			NS	NS	916,000	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.18	U			NS	NS	33,700	N	NMED		
Fluorene	86-73-7	mg/kg	0.18	U			NS	NS	33,700	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.18	U			16	N	733	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.18	U			52	N	916	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.18	U			641	N	641	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.18	U			32	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.18	U			27,000	N	183,000	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.18	U			3	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	U			1	N	7	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.18	U			5,240	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.18	U			108	N	843	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.18	U			293	N	1,540	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.18	U			45	N	3,180	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.18	U			NS	NS	27,500	N	NMED		
Phenol	108-95-2	mg/kg	0.18	U			NS	NS	275,000	N	NMED		
Pyrene	129-00-0	mg/kg	0.18	U			NS	NS	25,300	N	NMED		

TABLE D1-G25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID G25
INNER FENCE
FORT WINGATE DEPOT ACTIVITY

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			5,300	N	7,400	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.021	U			304	N	57	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.021	U			9	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.011	U			9	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.011	U			11	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.011	U			11	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.011	U			11	N	16	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.011	U			11	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (3)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000012	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg		U	0.0000034	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000025	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.0000000062	J	0.00000062	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.000000099	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000071	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000081	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000066	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000074	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.000000087	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.000000078	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000014	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000042	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.000000072	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000014	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.0000003	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000061	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.0000000062				0.000238	N	0.000808	N	NMED	2.61E-10	7.67E-06

TABLE D1-G25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID G25
INNER FENCE
FORT WINGATE DEPOT ACTIVITY

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	18,000				NS	NS	1,290,000	N	NMED		1.40E-02
Antimony	7440-36-0	mg/kg	0.18	J			NS	NS	519	N	NMED		3.47E-04
Arsenic	7440-38-2	mg/kg	1.5				36	N	208	N	NMED	4.18E-07	7.21E-03
Barium	7440-39-3	mg/kg	360				NS	NS	255,000	N	NMED		1.41E-03
Beryllium	7440-41-7	mg/kg	0.54	J			313,000	N	2,580	N	NMED	1.73E-11	2.09E-04
Cadmium	7440-43-9	mg/kg	0.75				417,000	N	1,110	N	NMED	1.80E-11	6.76E-04
Calcium	7440-70-2	mg/kg	15,000				NS	NS	32,400,000	N	NMED		4.63E-04
Chromium (Total) (4)	7440-47-3	mg/kg	14				505	N	314,000	N	NMED	2.77E-07	4.46E-05
Cobalt	7440-48-4	mg/kg	4.1				83,400	N	388	N	NMED	4.92E-10	1.06E-02
Copper	7440-50-8	mg/kg	180				NS	NS	51,900	N	NMED		3.47E-03
Iron	7439-89-6	mg/kg	8,300				NS	NS	908,000	N	NMED		9.14E-03
Lead	7439-92-1	mg/kg	12				NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	6,800				NS	NS	5,680,000	N	NMED		1.20E-03
Manganese	7439-96-5	mg/kg	500				NS	NS	160,000	N	NMED		3.13E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.042	J			NS	NS	112	N	NMED		3.75E-04
Nickel	7440-02-0	mg/kg	9.9				2,890,000	N	25,700	N	NMED	3.43E-11	3.85E-04
Potassium	7440-09-7	mg/kg	1,600				NS	NS	76,200,000	N	NMED		2.10E-05
Selenium	7782-49-2	mg/kg	1.1				NS	NS	6,490	N	NMED		1.69E-04
Silver	7440-22-4	mg/kg	0.076	J			NS	NS	6,490	N	NMED		1.17E-05
Sodium	7440-23-5	mg/kg	38				NS	NS	37,300,000	N	NMED		1.02E-06
Thallium	7440-28-0	mg/kg	0.058	J			NS	NS	13	N	NMED		4.46E-03
Vanadium	7440-62-2	mg/kg	12				NS	NS	6,530	N	NMED		1.84E-03
Zinc	7440-66-6	mg/kg	27				NS	NS	38,900	N	NMED		6.94E-04

TABLE D1-G25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID G25
INNER FENCE
FORT WINGATE DEPOT ACTIVITY

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.33	U			NS	NS	63	N	NMED		
Nitrate	14797-55-8	mg/kg	41				NS	NS	2,080,000	N	NMED		1.97E-05
Perchlorate	14797-73-0	mg/kg	0.0042	U			NS	NS	908	N	NMED		
										Cumulative Risk/Hazard		**7E-07**	**0.06**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
IEUBK = Integrated Exposure Uptake Biokentic Model
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect

TABLE D1-G25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID G25
INNER FENCE
FORT WINGATE DEPOT ACTIVITY

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0018	U			659	N	10,600	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0018	U			NS	NS	13,600	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0018	U			197	N	7,080	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0018	U			4,300	N	2	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0018	U			1,820	N	70,800	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0018	U			NS	NS	424	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0018	U			781	N	130	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0018	U			NS	NS	283	N	NMED[C]			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0045	U			8	N	6	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0018	U			8,540	N	79	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0018	U			NS	NS	492	N	NMED[C]			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0045	U			6	N	8	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0018	U			16	N	140	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0018	U			NS	NS	2,500	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0018	U			195	N	54	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0018	U			415	N	25	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0018	U			NS	NS	422	N	NMED[C]			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0018	U			45,900	N	24,800	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0018	U			NS	NS	7,080	N	NMED[C]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0018	U			45,900	N	24,800	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0018	U			415	N	25	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.0027	U			NS	NS	90,700	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0018	U			NS	NS	7,080	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.0018	U			NS	NS	599	N	NMED[C]			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0018	U			NS	NS	7,080	N	NMED[C]			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0018	U			NS	NS	20,400	N	NMED[C]			
Acetone	67-64-1	mg/kg	0.4				NS	NS	242,000	N	NMED		1.65E-06	
Benzene	71-43-2	mg/kg	0.0018	U			423	N	142	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.0018	U			NS	NS	538	N	NMED[C]			
Bromochloromethane	74-97-5	mg/kg	0.0018	U			NS	NS	296	N	NMED[C]			
Bromodichloromethane	75-27-4	mg/kg	0.0018	U			143	N	7,080	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0018	U			23,700	N	5,380	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0018	U			NS	NS	18	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.0018	U			NS	NS	1,620	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0018	U			252	N	202	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0018	U			NS	NS	412	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0018	U			NS	NS	16,600	N	NMED			
Chloroform	67-66-3	mg/kg	0.0018	U			134	N	391	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0045	U			956	N	235	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0018	U			NS	NS	708	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0018	U			781	N	130	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0018	U			340	N	5,380	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0018	U			NS	NS	54	N	NMED			

TABLE D1-G25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID G25
INNER FENCE
FORT WINGATE DEPOT ACTIVITY

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Dichlorodifluoromethane	75-71-8	mg/kg	0.0018	U			NS	NS	161	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.0018	U			1,770	N	5,800	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0018	U			2,400	N	269	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0018	U			NS	NS	2,740	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0045	U			NS	NS	696	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0018	U			24,200	N	33,100	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.009	U			89,600	N	1,210	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0018	U			NS	NS	17,700	N	NMED[C]			
n-Propylbenzene	103-65-1	mg/kg	0.0018	U			NS	NS	6,730	N	NMED[C]			
Naphthalene	91-20-3	mg/kg	0.0018	U			633	N	159	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0023	U			NS	NS	736	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.0018	U			NS	NS	2,740	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.0018	U			NS	NS	35,400	N	NMED[C]			
Styrene	100-42-5	mg/kg	0.0018	U			NS	NS	10,200	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0018	U			NS	NS	35,400	N	NMED[C]			
Tetrachloroethene	127-18-4	mg/kg	0.0018	U			7,910	N	120	N	NMED			
Toluene	108-88-3	mg/kg	0.0018	U			NS	NS	14,000	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0018	U			NS	NS	206	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0018	U			781	N	130	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0018	U			5,370	N	7	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0018	U			NS	NS	1,130	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0018	U			161	N	162	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.18	U			8,540	N	79	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.18	U			NS	NS	2,500	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.18	U			45,900	N	24,800	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.18	U			45,900	N	24,800	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.18	U			NS	NS	26,900	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.18	U			17,000	N	269	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.18	U			NS	NS	807	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.18	U			NS	NS	5,380	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.18	U			NS	NS	538	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.18	U			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.18	U			165	N	81	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.18	U			NS	NS	28,300	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.18	U			NS	NS	1,770	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.18	U			NS	NS	1,000	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.18	U			NS	NS	13,500	N	NMED[C]			
2-Nitroaniline	88-74-4	mg/kg	0.18	U			NS	NS	2,690	N	NMED[C]			
2-Nitrophenol	88-75-5	mg/kg	0.18	U			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.18	U			410	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.18	U			135	N	1,080	N	NMED[SC]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.18	U			NS	NS	22	N	NMED			

TABLE D1-G25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID G25
INNER FENCE
FORT WINGATE DEPOT ACTIVITY

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.18	U			NS	NS	NS	NS	NS			
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.18	U			NS	NS	26,900	N	NMED[C]			
4-Chloroaniline	106-47-8	mg/kg	0.18	U			14	N	135	N	NMED[C]			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.18	U			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.18	U			135	N	1,080	N	NMED[C]			
4-Nitrophenol	100-02-7	mg/kg	0.18	U			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.18	U			NS	NS	15,100	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.18	U			NS	NS	7,530	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.18	U			NS	NS	75,300	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.18	U			240	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			173	N	15	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.18	U			240	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.18	U			NS	NS	7,530	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.18	U			2,310	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.18	U			NS	NS	1,080,000	N	NMED[C]			
Benzyl Alcohol	100-51-6	mg/kg	0.18	U			NS	NS	26,900	N	NMED[C]			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.18	U			NS	NS	807	N	NMED[C]			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.18	U			2	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.18	U			3,540	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.18	U			13,400	N	5,380	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.18	U			1,420	N	53,800	N	NMED[C]			
Carbazole	86-74-8	mg/kg	0.18	U			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.18	U			23,100	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.18	U			NS	NS	26,900	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.18	U			NS	NS	2,690	N	NMED[C]			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			24	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.18	U			NS	NS	269	N	NMED[C]			
Diethylphthalate	84-66-2	mg/kg	0.18	U			NS	NS	215,000	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.18	U			NS	NS	269,000	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.18	U			NS	NS	10,000	N	NMED			
Fluorene	86-73-7	mg/kg	0.18	U			NS	NS	10,000	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.18	U			117	N	215	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.18	U			2,400	N	269	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.18	U			4,670	N	188	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.18	U			240	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.18	U			198,000	N	53,700	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.18	U			0.38	N	NA	N	NMED[C]			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	U			4	N	2	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.18	U			37,900	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.18	U			633	N	159	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.18	U			1,350	N	353	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.18	U			346	N	989	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.18	U			NS	NS	8,070	N	NMED			
Phenol	108-95-2	mg/kg	0.18	U			NS	NS	77,400	N	NMED			
Pyrene	129-00-0	mg/kg	0.18	U			NS	NS	7,530	N	NMED			

TABLE D1-G25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID G25
INNER FENCE
FORT WINGATE DEPOT ACTIVITY

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	8,070	N	NMED[C]			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	27	N	NMED[C]			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			626	N	2,420	N	NMED[C]			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.021	U			2,440	N	17	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.021	U			55	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.011	U			58	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.011	U			85	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.011	U			85	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.011	U			85	N	5	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.011	U			85	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (3)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000012	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg		U	0.0000034	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000025	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.0000000062	J	0.00000062	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.000000099	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000071	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000081	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000066	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000074	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.000000087	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.000000078	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000014	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000042	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.000000072	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000014	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.0000003	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000061	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.0000000062				0.00172	N	0.000226	N	NMED	3.60E-11	2.74E-05	

TABLE D1-G25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID G25
INNER FENCE
FORT WINGATE DEPOT ACTIVITY

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	18,000				NS	NS	41,400	N	NMED		4.35E-01	Nervous
Antimony	7440-36-0	mg/kg	0.18	J			NS	NS	142	N	NMED		1.27E-03	
Arsenic	7440-38-2	mg/kg	1.5				216	N	41	N	NMED	6.94E-08	3.64E-02	
Barium	7440-39-3	mg/kg	360				NS	NS	4,390	N	NMED		8.20E-02	
Beryllium	7440-41-7	mg/kg	0.54	J			2,710	N	148	N	NMED	1.99E-09	3.65E-03	
Cadmium	7440-43-9	mg/kg	0.75				3,610	N	72	N	NMED	2.08E-09	1.04E-02	
Calcium	7440-70-2	mg/kg	15,000				NS	NS	8,850,000	N	NMED		1.69E-03	
Chromium (Total) (4)	7440-47-3	mg/kg	14				468	N	134	N	NMED	2.99E-07	1.04E-01	GI, Blood
Cobalt	7440-48-4	mg/kg	4.1				722	N	37	N	NMED	5.68E-08	1.12E-01	Endocrine
Copper	7440-50-8	mg/kg	180				NS	NS	14,200	N	NMED		1.27E-02	
Iron	7439-89-6	mg/kg	8,300				NS	NS	248,000	N	NMED		3.35E-02	
Lead	7439-92-1	mg/kg	12				NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	6,800				NS	NS	1,550,000	N	NMED		4.39E-03	
Manganese	7439-96-5	mg/kg	500				NS	NS	464	Y	NMED		1.08E+00	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.042	J			NS	NS	21	N	NMED		2.03E-03	
Nickel	7440-02-0	mg/kg	9.9				20,500	N	753	N	NMED	4.83E-09	1.31E-02	
Potassium	7440-09-7	mg/kg	1,600				NS	NS	20,800,000	N	NMED		7.69E-05	
Selenium	7782-49-2	mg/kg	1.1				NS	NS	1,750	N	NMED		6.29E-04	
Silver	7440-22-4	mg/kg	0.076	J			NS	NS	1,770	N	NMED		4.29E-05	
Sodium	7440-23-5	mg/kg	38				NS	NS	10,200,000	N	NMED		3.73E-06	
Thallium	7440-28-0	mg/kg	0.058	J			NS	NS	4	N	NMED		1.64E-02	
Vanadium	7440-62-2	mg/kg	12				NS	NS	614	N	NMED		1.95E-02	
Zinc	7440-66-6	mg/kg	27				NS	NS	106,000	N	NMED		2.55E-04	

TABLE D1-G25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID G25
INNER FENCE
FORT WINGATE DEPOT ACTIVITY

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.33	U			NS	NS	12	N	NMED			
Nitrate	14797-55-8	mg/kg	41				NS	NS	566,000	N	NMED		7.24E-05	
Perchlorate	14797-73-0	mg/kg	0.0042	U			NS	NS	248	N	NMED			
										Cumulative Risk/Hazard		**4E-07**	**2.0**	
										Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	1.5
Endocrine	0.11
GI	0.10
Blood	0.11
All Others	0.24

Notes:

[s] = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update).

2) NMED[C] = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

3) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

4) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect

TABLE D1-G26-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID G26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0021	U			28.1	N	2,350	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0021	U			NS	NS	14,400	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0021	U			7.98	N	1,560	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0021	U			18.8	N	2.61	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0021	U			78.6	N	15,600	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0021	U			NS	NS	440	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0021	U			29.3	N	141	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0021	U			NS	NS	63	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0053	U			0.051	N	7.09	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0021	U			240	N	82.9	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0021	U			NS	NS	300	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0053	U			0.0858	N	5.88	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0021	U			0.672	N	135	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0021	U			NS	NS	2,150	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0021	U			8.32	N	55.6	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0021	U			17.8	N	29	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0021	U			NS	NS	270	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0021	U			1,290	N	5,480	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0021	U			NS	NS	1,600	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0021	U			1,290	N	5,480	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0021	U			17.8	N	29	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0032	U			NS	NS	37,400	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0021	U			NS	NS	1,560	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.11				NS	NS	200	N	RSL		5.50E-04
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0021	U			NS	NS	1,600	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0021	U			NS	NS	5,810	N	RSL		
Acetone	67-64-1	mg/kg	0.26				NS	NS	66,300	N	NMED		3.92E-06
Benzene	71-43-2	mg/kg	0.0021	U			17.8	N	114	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0021	U			NS	NS	290	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0021	U			NS	NS	150	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0021	U			6.19	N	1,560	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0021	U			674	N	1,230	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0021	U			NS	NS	17.7	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0021	U			NS	NS	1,550	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0021	U			10.7	N	144	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0021	U			NS	NS	378	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0021	U			NS	NS	19,000	N	NMED		
Chloroform	67-66-3	mg/kg	0.0021	U			5.9	N	306	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0053	U			41.1	N	268	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0021	U			NS	NS	156	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0021	U			29.3	N	141	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0021	U			13.9	N	1,230	N	NMED		
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0021	U			NS	NS	57.9	N	NMED		

TABLE D1-G26-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID G26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dichlorodifluoromethane	75-71-8	mg/kg	0.0021	U			NS	NS	182	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0021	U			75.1	N	3,930	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0021	U			68.3	N	61.6	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0021	U			NS	NS	2,360	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0053	U			NS	NS	764	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0021	U			975	N	37,800	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.011	U			766	N	409	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0021	U			NS	NS	3,900	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0021	U			NS	NS	3,800	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0021	U			22.6	N	162	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0026	U			NS	NS	805	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0021	U			NS	NS	2,360	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0021	U			NS	NS	7,800	N	RSL		
Styrene	100-42-5	mg/kg	0.0021	U			NS	NS	7,260	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0021	U			NS	NS	7,800	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0021	U			337	N	111	N	NMED		
Toluene	108-88-3	mg/kg	0.0021	U			NS	NS	5,230	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0021	U			NS	NS	210	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0021	U			29.3	N	141	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0021	U			15.5	N	6.77	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0021	U			NS	NS	1,230	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0021	U			0.742	N	113	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.18	U			240	N	82.9	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.18	U			NS	NS	2,150	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.18	U			1,290	N	5,480	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.18	U			1,290	N	5,480	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.18	U			NS	NS	6,160	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.18	U			484	N	61.6	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.18	U			NS	NS	185	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.18	U			NS	NS	1,230	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.18	U			NS	NS	123	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.18	U			17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.18	U			3.56	N	18.5	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.18	U			NS	NS	6,260	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.18	U			NS	NS	391	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.18	U			NS	NS	232	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.18	U			NS	NS	3,200	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.18	U			NS	NS	630	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.18	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.18	U			11.8	N	NS	NS	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.18	U			270	N	250	N	RSL[S]		
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.18	U			NS	NS	4.93	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.18	U			NS	NS	NS	NS	NS		

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MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.18	U			NS	NS	6,300	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.18	U			27	N	32	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.18	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.18	U			270	N	250	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.18	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.18	U			NS	NS	3,480	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.18	U			NS	NS	1,740	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.18	U			NS	NS	17,400	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.18	U			1.53	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			1.12	N	17.4	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.18	U			1.53	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.18	U			NS	NS	1,740	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.18	U			15.3	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.18	U			NS	NS	250,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.18	U			NS	NS	6,300	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.18	U			NS	NS	190	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.18	U			3.11	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.18	U			99.3	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.18	U			380	N	1,230	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.18	U			2,900	N	13,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.18	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.18	U			153	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.14	U			NS	NS	6,160	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.18	U			NS	NS	630	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.18	U			0.153	Y	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.18	U			NS	NS	78	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.18	U			NS	NS	49,300	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.18	U			NS	NS	61,600	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.18	U			NS	NS	2,320	N	NMED		
Fluorene	86-73-7	mg/kg	0.18	U			NS	NS	2,320	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.18	U			3.33	N	49.3	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.18	U			68.3	N	61.6	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.18	U			133	N	43.1	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.18	U			1.53	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.18	U			5,610	N	12,300	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.18	U			0.78	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.022	U			0.0234	N	0.493	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.18	U			1,090	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.18	U			22.6	N	162	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.18	U			60.4	N	131	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.18	U			9.85	N	234	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.18	U			NS	NS	1,740	N	NMED		
Phenol	108-95-2	mg/kg	0.18	U			NS	NS	18,500	N	NMED		
Pyrene	129-00-0	mg/kg	0.18	U			NS	NS	1,740	N	NMED		

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FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			1,300	N	570	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.022	U			69.6	N	3.98	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.022	U			1.81	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.011	U			1.86	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.011	U			2.43	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.011	U			2.43	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.011	U			2.43	N	1.14	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.011	U			2.43	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.000000098	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg		U	0.0000014	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.000000037	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.00000021	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.000000047	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000031	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.00000002	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.00000011	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.000000026	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.000000072	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000078	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.000000021	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.000000074	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000051	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000046	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.0				0.000049	N	0.0000506	N	NMED		

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MCKINLEY COUNTY, NEW MEXICO

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METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	18,000				NS	NS	78,000	N	NMED		2.31E-01
Antimony	7440-36-0	mg/kg	0.15	J			NS	NS	31.3	N	NMED		4.79E-03
Arsenic	7440-38-2	mg/kg	1.1				7.07	N	13	N	NMED	1.56E-06	8.46E-02
Barium	7440-39-3	mg/kg	340				NS	NS	15,600	N	NMED		2.18E-02
Beryllium	7440-41-7	mg/kg	0.75	J			64,400	N	156	N	NMED	1.16E-10	4.81E-03
Cadmium	7440-43-9	mg/kg	0.54				85,900	N	70.5	N	NMED	6.29E-11	7.66E-03
Calcium	7440-70-2	mg/kg	34,000				NS	NS	13,000,000	N	NMED		2.62E-03
Chromium (Total) (3)	7440-47-3	mg/kg	12				96.6	N	45,200	N	NMED	1.24E-06	2.65E-04
Cobalt	7440-48-4	mg/kg	3.8				17,200	N	23.4	N	NMED	2.21E-09	1.62E-01
Copper	7440-50-8	mg/kg	110				NS	NS	3,130	N	NMED		3.51E-02
Iron	7439-89-6	mg/kg	8,300				NS	NS	54,800	N	NMED		1.51E-01
Lead	7439-92-1	mg/kg	10				NS	NS	200	N	RSL		
Magnesium	7439-95-4	mg/kg	7,000				NS	NS	15,600,000	N	NMED		4.49E-04
Manganese	7439-96-5	mg/kg	490				NS	NS	10,500	N	NMED		4.67E-02
Mercury (Elemental)	7439-97-6	mg/kg	0.022	J			NS	NS	23.8	N	NMED		9.24E-04
Nickel	7440-02-0	mg/kg	9.5				595,000	N	1,560	N	NMED	1.60E-10	6.09E-03
Potassium	7440-09-7	mg/kg	1,700				NS	NS	15,600,000	N	NMED		1.09E-04
Selenium	7782-49-2	mg/kg	1.1				NS	NS	391	N	NMED		2.81E-03
Silver	7440-22-4	mg/kg	0.051	J			NS	NS	391	N	NMED		1.30E-04
Sodium	7440-23-5	mg/kg	42				NS	NS	7,820,000	N	NMED		5.37E-06
Thallium	7440-28-0	mg/kg	0.072	J			NS	NS	0.782	N	NMED		9.21E-02
Vanadium	7440-62-2	mg/kg	8.4				NS	NS	394	N	NMED		2.13E-02
Zinc	7440-66-6	mg/kg	22				NS	NS	23,500	N	NMED		9.36E-04

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OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.34	U			NS	NS	11.2	N	NMED		
Nitrate	14797-55-8	mg/kg	13				NS	NS	125,000	N	NMED		1.04E-04
Perchlorate	14797-73-0	mg/kg	0.0044	U			NS	NS	54.8	N	NMED		
										Cumulative Risk/Hazard		**3E-06**	**0.9**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect

TABLE D1-G26-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID G26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0021	U			137	N	39,400	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0021	U			NS	NS	72,500	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0021	U			39	N	26,000	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0021	U			92	N	12	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0021	U			383	N	260,000	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0021	U			NS	NS	2,260	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0021	U			146	N	695	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0021	U			NS	NS	930	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0053	U			1	N	34	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0021	U			1,250	N	423	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0021	U			NS	NS	1,800	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0053	U			1	N	41	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0021	U			3	N	738	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0021	U			NS	NS	13,000	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0021	U			41	N	286	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0021	U			87	N	137	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0021	U			NS	NS	1,500	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0021	U			6,730	N	90,800	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0021	U			NS	NS	23,000	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0021	U			6,730	N	90,800	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0021	U			87	N	137	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0032	U			NS	NS	411,000	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0021	U			NS	NS	26,000	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.11				NS	NS	1,300	N	RSL		8.46E-05
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0021	U			NS	NS	23,000	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0021	U			NS	NS	81,600	N	RSL		
Acetone	67-64-1	mg/kg	0.26				NS	NS	960,000	N	NMED		2.71E-07
Benzene	71-43-2	mg/kg	0.0021	U			87	N	729	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0021	U			NS	NS	1,800	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0021	U			NS	NS	630	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0021	U			30	N	26,000	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0021	U			1,760	N	18,300	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0021	U			NS	NS	95	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0021	U			NS	NS	8,540	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0021	U			53	N	1,020	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0021	U			NS	NS	2,160	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0021	U			NS	NS	89,500	N	NMED		
Chloroform	67-66-3	mg/kg	0.0021	U			29	N	2,000	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0053	U			201	N	1,260	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0021	U			NS	NS	2,600	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0021	U			146	N	695	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0021	U			67	N	18,300	N	NMED		

TABLE D1-G26-2
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FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0021	U			NS	NS	288	N	NMED		
Dichlorodifluoromethane	75-71-8	mg/kg	0.0021	U			NS	NS	865	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0021	U			29,000	N	368	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0021	U			52	N	916	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0021	U			NS	NS	14,200	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0053	U			NS	NS	3,730	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0021	U			4,820	N	178,000	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.011	U			14,400	N	5,130	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0021	U			NS	NS	58,000	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0021	U			NS	NS	24,000	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0021	U			108	N	843	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0026	U			NS	NS	3,940	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0021	U			NS	NS	14,200	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0021	U			NS	NS	120,000	N	RSL		
Styrene	100-42-5	mg/kg	0.0021	U			NS	NS	51,300	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0021	U			NS	NS	120,000	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0021	U			1,650	N	629	N	NMED		
Toluene	108-88-3	mg/kg	0.0021	U			NS	NS	61,300	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0021	U			NS	NS	1,100	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0021	U			146	N	695	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0021	U			112	N	37	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0021	U			NS	NS	6,030	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0021	U			28	N	46	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.18	U			1,250	N	423	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.18	U			NS	NS	13,000	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.18	U			6,730	N	90,800	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.18	U			6,730	N	90,800	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.18	U			NS	NS	91,600	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.18	U			2,330	N	916	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.18	U			NS	NS	2,750	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.18	U			NS	NS	18,300	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.18	U			NS	NS	1,830	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.18	U			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.18	U			17	N	276	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.18	U			NS	NS	104,000	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.18	U			NS	NS	6,490	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.18	U			NS	NS	3,370	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.18	U			NS	NS	41,000	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.18	U			NS	NS	8,000	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.18	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.18	U			NS	NS	410	N	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.18	U			1,100	N	3,300	N	RSL[S]		

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FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.18	U			NS	NS	73	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.18	U			NS	NS	NS	NS	NS		
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.18	U			NS	NS	82,000	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.18	U			110	N	410	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.18	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.18	U			1,100	N	3,300	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.18	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.18	U			NS	NS	50,500	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.18	U			NS	NS	25,300	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.18	U			NS	NS	253,000	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.18	U			32	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			24	N	251	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.18	U			32	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.18	U			NS	NS	25,300	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.18	U			323	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.18	U			NS	NS	3,300,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.18	U			NS	NS	82,000	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.18	U			NS	NS	2,500	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.18	U			16	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.18	U			519	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.18	U			1,830	N	18,300	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.18	U			12,000	N	160,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.18	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.18	U			3,230	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.14	U			NS	NS	91,600	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.18	U			NS	NS	8,200	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.18	U			3	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.18	U			NS	NS	1,200	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.18	U			NS	NS	733,000	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.18	U			NS	NS	916,000	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.18	U			NS	NS	33,700	N	NMED		
Fluorene	86-73-7	mg/kg	0.18	U			NS	NS	33,700	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.18	U			16	N	733	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.18	U			52	N	916	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.18	U			641	N	641	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.18	U			32	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.18	U			27,000	N	183,000	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.18	U			3	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.022	U			1	N	7	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.18	U			5,240	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.18	U			108	N	843	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.18	U			293	N	1,540	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.18	U			45	N	3,180	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.18	U			NS	NS	27,500	N	NMED		
Phenol	108-95-2	mg/kg	0.18	U			NS	NS	275,000	N	NMED		
Pyrene	129-00-0	mg/kg	0.18	U			NS	NS	25,300	N	NMED		

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CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID G26
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MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			5,300	N	7,400	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.022	U			304	N	57	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.022	U			9	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.011	U			9	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.011	U			11	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.011	U			11	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.011	U			11	N	16	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.011	U			11	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.000000098	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg		U	0.0000014	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.000000037	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.00000021	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.000000047	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000031	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.00000002	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.00000011	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.000000026	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.000000072	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000078	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.000000021	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.000000074	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000051	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000046	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.0				0.000238	N	0.000808	N	NMED		

TABLE D1-G26-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID G26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	18,000				NS	NS	1,290,000	N	NMED		1.40E-02
Antimony	7440-36-0	mg/kg	0.15	J			NS	NS	519	N	NMED		2.89E-04
Arsenic	7440-38-2	mg/kg	1.1				36	N	208	N	NMED	3.06E-07	5.29E-03
Barium	7440-39-3	mg/kg	340				NS	NS	255,000	N	NMED		1.33E-03
Beryllium	7440-41-7	mg/kg	0.75	J			313,000	N	2,580	N	NMED	2.40E-11	2.91E-04
Cadmium	7440-43-9	mg/kg	0.54				417,000	N	1,110	N	NMED	1.29E-11	4.86E-04
Calcium	7440-70-2	mg/kg	34,000				NS	NS	32,400,000	N	NMED		
Chromium (Total) (3)	7440-47-3	mg/kg	12				505	N	314,000	N	NMED	2.38E-07	3.82E-05
Cobalt	7440-48-4	mg/kg	3.8				83,400	N	388	N	NMED	4.56E-10	9.79E-03
Copper	7440-50-8	mg/kg	110				NS	NS	51,900	N	NMED		2.12E-03
Iron	7439-89-6	mg/kg	8,300				NS	NS	908,000	N	NMED		9.14E-03
Lead	7439-92-1	mg/kg	10				NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	7,000				NS	NS	5,680,000	N	NMED		
Manganese	7439-96-5	mg/kg	490				NS	NS	160,000	N	NMED		3.06E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.022	J			NS	NS	112	N	NMED		1.96E-04
Nickel	7440-02-0	mg/kg	9.5				2,890,000	N	25,700	N	NMED	3.29E-11	3.70E-04
Potassium	7440-09-7	mg/kg	1,700				NS	NS	76,200,000	N	NMED		
Selenium	7782-49-2	mg/kg	1.1				NS	NS	6,490	N	NMED		1.69E-04
Silver	7440-22-4	mg/kg	0.051	J			NS	NS	6,490	N	NMED		7.86E-06
Sodium	7440-23-5	mg/kg	42				NS	NS	37,300,000	N	NMED		1.13E-06
Thallium	7440-28-0	mg/kg	0.072	J			NS	NS	13	N	NMED		5.54E-03
Vanadium	7440-62-2	mg/kg	8.4				NS	NS	6,530	N	NMED		1.29E-03
Zinc	7440-66-6	mg/kg	22				NS	NS	38,900	N	NMED		5.66E-04

TABLE D1-G26-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID G26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.34	U			NS	NS	63	N	NMED		
Nitrate	14797-55-8	mg/kg	13				NS	NS	2,080,000	N	NMED		6.25E-06
Perchlorate	14797-73-0	mg/kg	0.0044	U			NS	NS	908	N	NMED		
										Cumulative Risk/Hazard		**5E-07**	**0.05**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
IEUBK = Integrated Exposure Uptake Biokentic Model
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect

TABLE D1-G26-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID G26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0021	U			659	N	10,600	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0021	U			NS	NS	13,600	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0021	U			197	N	7,080	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0021	U			4,300	N	2	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0021	U			1,820	N	70,800	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0021	U			NS	NS	424	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0021	U			781	N	130	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0021	U			NS	NS	283	N	NMED[C]			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0053	U			8	N	6	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0021	U			8,540	N	79	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0021	U			NS	NS	492	N	NMED[C]			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0053	U			6	N	8	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0021	U			16	N	140	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0021	U			NS	NS	2,500	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0021	U			195	N	54	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0021	U			415	N	25	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0021	U			NS	NS	422	N	NMED[C]			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0021	U			45,900	N	24,800	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0021	U			NS	NS	7,080	N	NMED[C]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0021	U			45,900	N	24,800	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0021	U			415	N	25	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.0032	U			NS	NS	90,700	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0021	U			NS	NS	7,080	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.11				NS	NS	599	N	NMED[C]		1.84E-04	
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0021	U			NS	NS	7,080	N	NMED[C]			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0021	U			NS	NS	20,400	N	NMED[C]			
Acetone	67-64-1	mg/kg	0.26				NS	NS	242,000	N	NMED		1.07E-06	
Benzene	71-43-2	mg/kg	0.0021	U			423	N	142	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.0021	U			NS	NS	538	N	NMED[C]			
Bromochloromethane	74-97-5	mg/kg	0.0021	U			NS	NS	296	N	NMED[C]			
Bromodichloromethane	75-27-4	mg/kg	0.0021	U			143	N	7,080	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0021	U			23,700	N	5,380	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0021	U			NS	NS	18	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.0021	U			NS	NS	1,620	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0021	U			252	N	202	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0021	U			NS	NS	412	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0021	U			NS	NS	16,600	N	NMED			
Chloroform	67-66-3	mg/kg	0.0021	U			134	N	391	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0053	U			956	N	235	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0021	U			NS	NS	708	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0021	U			781	N	130	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0021	U			340	N	5,380	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0021	U			NS	NS	54	N	NMED			

TABLE D1-G26-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID G26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Dichlorodifluoromethane	75-71-8	mg/kg	0.0021	U			NS	NS	161	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.0021	U			1,770	N	5,800	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0021	U			2,400	N	269	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0021	U			NS	NS	2,740	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0053	U			NS	NS	696	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0021	U			24,200	N	33,100	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.011	U			89,600	N	1,210	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0021	U			NS	NS	17,700	N	NMED[C]			
n-Propylbenzene	103-65-1	mg/kg	0.0021	U			NS	NS	6,730	N	NMED[C]			
Naphthalene	91-20-3	mg/kg	0.0021	U			633	N	159	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0026	U			NS	NS	736	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.0021	U			NS	NS	2,740	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.0021	U			NS	NS	35,400	N	NMED[C]			
Styrene	100-42-5	mg/kg	0.0021	U			NS	NS	10,200	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0021	U			NS	NS	35,400	N	NMED[C]			
Tetrachloroethene	127-18-4	mg/kg	0.0021	U			7,910	N	120	N	NMED			
Toluene	108-88-3	mg/kg	0.0021	U			NS	NS	14,000	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0021	U			NS	NS	206	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0021	U			781	N	130	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0021	U			5,370	N	7	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0021	U			NS	NS	1,130	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0021	U			161	N	162	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.18	U			8,540	N	79	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.18	U			NS	NS	2,500	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.18	U			45,900	N	24,800	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.18	U			45,900	N	24,800	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.18	U			NS	NS	26,900	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.18	U			17,000	N	269	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.18	U			NS	NS	807	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.18	U			NS	NS	5,380	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.18	U			NS	NS	538	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.18	U			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.18	U			165	N	81	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.18	U			NS	NS	28,300	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.18	U			NS	NS	1,770	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.18	U			NS	NS	1,000	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.18	U			NS	NS	13,500	N	NMED[C]			
2-Nitroaniline	88-74-4	mg/kg	0.18	U			NS	NS	2,690	N	NMED[C]			
2-Nitrophenol	88-75-5	mg/kg	0.18	U			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.18	U			410	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.18	U			135	N	1,080	N	NMED[SC]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.18	U			NS	NS	22	N	NMED			

TABLE D1-G26-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID G26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.18	U			NS	NS	NS	NS	NS			
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.18	U			NS	NS	26,900	N	NMED[C]			
4-Chloroaniline	106-47-8	mg/kg	0.18	U			14	N	135	N	NMED[C]			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.18	U			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.18	U			135	N	1,080	N	NMED[C]			
4-Nitrophenol	100-02-7	mg/kg	0.18	U			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.18	U			NS	NS	15,100	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.18	U			NS	NS	7,530	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.18	U			NS	NS	75,300	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.18	U			240	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			173	N	15	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.18	U			240	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.18	U			NS	NS	7,530	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.18	U			2,310	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.18	U			NS	NS	1,080,000	N	NMED[C]			
Benzyl Alcohol	100-51-6	mg/kg	0.18	U			NS	NS	26,900	N	NMED[C]			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.18	U			NS	NS	807	N	NMED[C]			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.18	U			2	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.18	U			3,540	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.18	U			13,400	N	5,380	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.18	U			1,420	N	53,800	N	NMED[C]			
Carbazole	86-74-8	mg/kg	0.18	U			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.18	U			23,100	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.14	U			NS	NS	26,900	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.18	U			NS	NS	2,690	N	NMED[C]			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.18	U			24	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.18	U			NS	NS	269	N	NMED[C]			
Diethylphthalate	84-66-2	mg/kg	0.18	U			NS	NS	215,000	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.18	U			NS	NS	269,000	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.18	U			NS	NS	10,000	N	NMED			
Fluorene	86-73-7	mg/kg	0.18	U			NS	NS	10,000	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.18	U			117	N	215	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.18	U			2,400	N	269	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.18	U			4,670	N	188	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.18	U			240	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.18	U			198,000	N	53,700	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.18	U			0.38	N	NA	N	NMED[C]			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.022	U			4	N	2	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.18	U			37,900	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.18	U			633	N	159	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.18	U			1,350	N	353	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.18	U			346	N	989	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.18	U			NS	NS	8,070	N	NMED			
Phenol	108-95-2	mg/kg	0.18	U			NS	NS	77,400	N	NMED			
Pyrene	129-00-0	mg/kg	0.18	U			NS	NS	7,530	N	NMED			

TABLE D1-G26-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID G26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	8,070	N	NMED[C]			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	27	N	NMED[C]			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			626	N	2,420	N	NMED[C]			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.022	U			2,440	N	17	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.022	U			55	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.011	U			58	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.011	U			85	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.011	U			85	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.011	U			85	N	5	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.011	U			85	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (3)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.000000098	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg		U	0.0000014	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.000000037	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.00000021	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.000000047	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000031	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.00000002	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.00000011	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.000000026	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.000000072	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000078	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.000000021	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.000000074	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000051	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000046	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.0				0.00172	N	0.000226	N	NMED			

TABLE D1-G26-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID G26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	18,000				NS	NS	41,400	N	NMED		4.35E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	J			NS	NS	142	N	NMED		1.06E-03	
Arsenic	7440-38-2	mg/kg	1.1				216	N	41	N	NMED	5.09E-08	2.67E-02	
Barium	7440-39-3	mg/kg	340				NS	NS	4,390	N	NMED		7.74E-02	
Beryllium	7440-41-7	mg/kg	0.75	J			2,710	N	148	N	NMED	2.77E-09	5.07E-03	
Cadmium	7440-43-9	mg/kg	0.54				3,610	N	72	N	NMED	1.50E-09	7.49E-03	
Calcium	7440-70-2	mg/kg	34,000				NS	NS	8,850,000	N	NMED		3.84E-03	
Chromium (Total) (4)	7440-47-3	mg/kg	12				468	N	134	N	NMED	2.56E-07	8.96E-02	
Cobalt	7440-48-4	mg/kg	3.8				722	N	37	N	NMED	5.26E-08	1.04E-01	Endocrine
Copper	7440-50-8	mg/kg	110				NS	NS	14,200	N	NMED		7.75E-03	
Iron	7439-89-6	mg/kg	8,300				NS	NS	248,000	N	NMED		3.35E-02	
Lead	7439-92-1	mg/kg	10				NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	7,000				NS	NS	1,550,000	N	NMED		4.52E-03	
Manganese	7439-96-5	mg/kg	490				NS	NS	464	Y	NMED		1.06E+00	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.022	J			NS	NS	21	N	NMED		1.06E-03	
Nickel	7440-02-0	mg/kg	9.5				20,500	N	753	N	NMED	4.63E-09	1.26E-02	
Potassium	7440-09-7	mg/kg	1,700				NS	NS	20,800,000	N	NMED		8.17E-05	
Selenium	7782-49-2	mg/kg	1.1				NS	NS	1,750	N	NMED		6.29E-04	
Silver	7440-22-4	mg/kg	0.051	J			NS	NS	1,770	N	NMED		2.88E-05	
Sodium	7440-23-5	mg/kg	42				NS	NS	10,200,000	N	NMED		4.12E-06	
Thallium	7440-28-0	mg/kg	0.072	J			NS	NS	4	N	NMED		2.03E-02	
Vanadium	7440-62-2	mg/kg	8.4				NS	NS	614	N	NMED		1.37E-02	
Zinc	7440-66-6	mg/kg	22				NS	NS	106,000	N	NMED		2.08E-04	

TABLE D1-G26-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID G26
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.34	U			NS	NS	12	N	NMED			
Nitrate	14797-55-8	mg/kg	13				NS	NS	566,000	N	NMED		2.30E-05	
Perchlorate	14797-73-0	mg/kg	0.0044	U			NS	NS	248	N	NMED			
										Cumulative Risk/Hazard		**4E-07**	**1.9**	
										Exceeds Target Level		**N**	Y	

System	Hazard Quotient
Nervous	1.5
Endocrine	0.10
All Others	0.31

Notes:

[s] = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update).

2) NMED[C] = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

3) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

4) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service

J = Estimated

mg/kg = milligrams per kilogram

NS = No Standard

U = Nondetect

UJ = Estimated Nondetect

TABLE D1-H25-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID H25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0026	U			28.1	N	2,350	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0026	U			NS	NS	14,400	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0026	U			7.98	N	1,560	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0026	U			18.8	N	2.61	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0026	U			78.6	N	15,600	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0026	U			NS	NS	440	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0026	U			29.3	N	141	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0026	U			NS	NS	63	N	RSL			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0065	U			0.051	N	7.09	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0026	U			240	N	82.9	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0026	U			NS	NS	300	N	RSL			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0065	U			0.0858	N	5.88	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0026	U			0.672	N	135	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0026	U			NS	NS	2,150	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0026	U			8.32	N	55.6	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0026	U			17.8	N	29	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0026	U			NS	NS	270	N	RSL			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0026	U			1,290	N	5,480	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0026	U			NS	NS	1,600	N	RSL			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0026	U			1,290	N	5,480	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0026	U			17.8	N	29	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.0039	U			NS	NS	37,400	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0026	U			NS	NS	1,560	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.34	J			NS	NS	200	N	RSL		1.70E-03	
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0026	U			NS	NS	1,600	N	RSL			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0026	U			NS	NS	5,810	N	RSL			
Acetone	67-64-1	mg/kg	0.55	J			NS	NS	66,300	N	NMED		8.30E-06	
Benzene	71-43-2	mg/kg	0.0026	U			17.8	N	114	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.0026	U			NS	NS	290	N	RSL			
Bromochloromethane	74-97-5	mg/kg	0.0026	U			NS	NS	150	N	RSL			
Bromodichloromethane	75-27-4	mg/kg	0.0026	U			6.19	N	1,560	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0026	U			674	N	1,230	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0026	U			NS	NS	17.7	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.0026	U			NS	NS	1,550	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0026	U			10.7	N	144	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0026	U			NS	NS	378	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0026	U			NS	NS	19,000	N	NMED			
Chloroform	67-66-3	mg/kg	0.0026	U			5.9	N	306	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0065	U			41.1	N	268	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0026	U			NS	NS	156	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0026	U			29.3	N	141	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0026	U			13.9	N	1,230	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0026	U			NS	NS	57.9	N	NMED			

TABLE D1-H25-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID H25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Dichlorodifluoromethane	75-71-8	mg/kg	0.0026	U			NS	NS	182	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.0026	U			75.1	N	3,930	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0026	U			68.3	N	61.6	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0026	U			NS	NS	2,360	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0065	U			NS	NS	764	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0026	U			975	N	37,800	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.013	U			766	N	409	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0026	U			NS	NS	3,900	N	RSL			
n-Propylbenzene	103-65-1	mg/kg	0.0026	U			NS	NS	3,800	N	RSL			
Naphthalene	91-20-3	mg/kg	0.0026	U			22.6	N	162	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0032	U			NS	NS	805	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg		R			NS	NS	2,360	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.0026	U			NS	NS	7,800	N	RSL			
Styrene	100-42-5	mg/kg	0.0026	U			NS	NS	7,260	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0026	U			NS	NS	7,800	N	RSL			
Tetrachloroethene	127-18-4	mg/kg	0.0026	U			337	N	111	N	NMED			
Toluene	108-88-3	mg/kg	0.0026	U			NS	NS	5,230	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0026	U			NS	NS	210	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0026	U			29.3	N	141	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0026	U			15.5	N	6.77	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0026	U			NS	NS	1,230	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0026	U			0.742	N	113	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	U			240	N	82.9	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	U			NS	NS	2,150	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	U			1,290	N	5,480	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	U			1,290	N	5,480	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	U			NS	NS	6,160	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	U			484	N	61.6	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	U			NS	NS	185	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	U			NS	NS	1,230	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	U			NS	NS	123	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	U			17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	U			3.56	N	18.5	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	U			NS	NS	6,260	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.17	U			NS	NS	391	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.17	U			NS	NS	232	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	U			NS	NS	3,200	N	RSL			
2-Nitroaniline	88-74-4	mg/kg	0.17	U			NS	NS	630	N	RSL			
2-Nitrophenol	88-75-5	mg/kg	0.17	U			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	U			11.8	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.17	U			270	N	250	N	RSL[S]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	U			NS	NS	4.93	N	NMED			
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	U			NS	NS	NS	NS	NS			

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HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID H25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	U			NS	NS	6,300	N	RSL			
4-Chloroaniline	106-47-8	mg/kg	0.17	U			27	N	32	N	RSL			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	U			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.17	U			270	N	250	N	RSL			
4-Nitrophenol	100-02-7	mg/kg	0.17	U			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.17	U			NS	NS	3,480	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.17	U			NS	NS	1,740	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.17	U			NS	NS	17,400	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.17	U			1.53	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			1.12	N	17.4	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	U			1.53	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	U			NS	NS	1,740	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	U			15.3	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.17	U			NS	NS	250,000	N	RSL			
Benzyl Alcohol	100-51-6	mg/kg	0.17	U			NS	NS	6,300	N	RSL			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	U			NS	NS	190	N	RSL			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	U			3.11	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	U			99.3	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	U			380	N	1,230	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.17	U			2,900	N	13,000	N	RSL			
Carbazole	86-74-8	mg/kg	0.17	U			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.17	U			153	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.17	U			NS	NS	6,160	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.17	U			NS	NS	630	N	RSL			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			0.153	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.17	U			NS	NS	78	N	RSL			
Diethylphthalate	84-66-2	mg/kg	0.17	U			NS	NS	49,300	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.17	U			NS	NS	61,600	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.17	U			NS	NS	2,320	N	NMED			
Fluorene	86-73-7	mg/kg	0.17	U			NS	NS	2,320	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.17	U			3.33	N	49.3	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	U			68.3	N	61.6	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.17	U			133	N	43.1	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	U			1.53	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.17	U			5,610	N	12,300	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.021	U			0.78	N	NS	NS	RSL			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.17	U			0.0234	Y	0.493	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	U			1,090	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.17	U			22.6	N	162	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.17	U			60.4	N	131	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.17	U			9.85	N	234	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.17	U			NS	NS	1,740	N	NMED			
Phenol	108-95-2	mg/kg	0.17	U			NS	NS	18,500	N	NMED			
Pyrene	129-00-0	mg/kg	0.17	U			NS	NS	1,740	N	NMED			

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FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	2,200	N	RSL			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	6.3	N	RSL			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			211	N	36	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			3.56	N	18.5	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	7.7	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			31.6	N	70.4	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	6.16	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	7.64	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			333	N	247	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			83.1	N	301	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	156	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			60.4	N	131	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			313	N	6.16	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	3,850	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			1,300	N	570	N	RSL			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.021	U			69.6	N	3.98	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.021	U			1.81	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.01	U			1.86	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.01	U			2.43	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.01	U			2.43	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.01	U			2.43	N	1.14	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.01	U			2.43	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (2)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg	0.00000000028	J	0.00000093	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg		U	0.000013	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000026	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.000000017	J	0.0000017	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000011	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000088	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000078	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000081	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000071	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.00000011	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.000000075	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000024	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000078	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg	0.000000043	J	0.00000043	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000024	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000027	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000084	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.00000006				0.000049	N	0.0000506	N	NMED	1.23E-08	1.19E-03	

TABLE D1-H25-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID H25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	21,000				NS	NS	78,000	N	NMED		2.69E-01	Nervous
Antimony	7440-36-0	mg/kg	0.2				NS	NS	31.3	N	NMED		6.39E-03	
Arsenic	7440-38-2	mg/kg	1.4				7.07	N	13	N	NMED	1.98E-06	1.08E-01	Heart/Endocrine
Barium	7440-39-3	mg/kg	380				NS	NS	15,600	N	NMED		2.44E-02	
Beryllium	7440-41-7	mg/kg	0.82	J			64,400	N	156	N	NMED	1.27E-10	5.26E-03	
Cadmium	7440-43-9	mg/kg	0.83				85,900	N	70.5	N	NMED	9.66E-11	1.18E-02	
Calcium	7440-70-2	mg/kg	28,000				NS	NS	13,000,000	N	NMED		2.15E-03	
Chromium (Total) (3)	7440-47-3	mg/kg	15				96.6	N	45,200	N	NMED	1.55E-06	3.32E-04	
Cobalt	7440-48-4	mg/kg	4.7				17,200	N	23.4	N	NMED	2.73E-09	2.01E-01	Endocrine
Copper	7440-50-8	mg/kg	130				NS	NS	3,130	N	NMED		4.15E-02	
Iron	7439-89-6	mg/kg	9,500				NS	NS	54,800	N	NMED		1.73E-01	GI
Lead	7439-92-1	mg/kg	12				NS	NS	200	N	RSL			
Magnesium	7439-95-4	mg/kg	8,000				NS	NS	15,600,000	N	NMED		5.13E-04	
Manganese	7439-96-5	mg/kg	520				NS	NS	10,500	N	NMED		4.95E-02	
Mercury (Elemental)	7439-97-6	mg/kg	0.032	J			NS	NS	23.8	N	NMED		1.34E-03	
Nickel	7440-02-0	mg/kg	11				595,000	N	1,560	N	NMED	1.85E-10	7.05E-03	
Potassium	7440-09-7	mg/kg	2,200				NS	NS	15,600,000	N	NMED		1.41E-04	
Selenium	7782-49-2	mg/kg	1.3				NS	NS	391	N	NMED		3.32E-03	
Silver	7440-22-4	mg/kg	0.082	J			NS	NS	391	N	NMED		2.10E-04	
Sodium	7440-23-5	mg/kg	62				NS	NS	7,820,000	N	NMED		7.93E-06	
Thallium	7440-28-0	mg/kg	0.075	J			NS	NS	0.782	N	NMED		9.59E-02	
Vanadium	7440-62-2	mg/kg	12				NS	NS	394	N	NMED		3.05E-02	
Zinc	7440-66-6	mg/kg	36				NS	NS	23,500	N	NMED		1.53E-03	

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HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID H25
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MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.33	U			NS	NS	11.2	N	NMED			
Nitrate	14797-55-8	mg/kg	13				NS	NS	125,000	N	NMED		1.04E-04	
Perchlorate	14797-73-0	mg/kg	0.0042	U			NS	NS	54.8	N	NMED			
										Cumulative Risk/Hazard		**4E-06**	**1.0**	
										Exceeds Target Level		**N**	**Y**	

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect

System	Hazard Quotient
Nervous	0.27
Endocrine	0.31
GI	0.17
Heart	0.11
All Others	0.28

TABLE D1-H25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID H25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0026	U			137	N	39,400	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0026	U			NS	NS	72,500	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0026	U			39	N	26,000	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0026	U			92	N	12	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0026	U			383	N	260,000	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0026	U			NS	NS	2,260	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0026	U			146	N	695	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0026	U			NS	NS	930	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0065	U			1	N	34	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0026	U			1,250	N	423	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0026	U			NS	NS	1,800	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0065	U			1	N	41	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0026	U			3	N	738	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0026	U			NS	NS	13,000	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0026	U			41	N	286	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0026	U			87	N	137	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0026	U			NS	NS	1,500	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0026	U			6,730	N	90,800	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0026	U			NS	NS	23,000	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0026	U			6,730	N	90,800	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0026	U			87	N	137	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0039	U			NS	NS	411,000	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0026	U			NS	NS	26,000	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.34	J			NS	NS	1,300	N	RSL		2.62E-04
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0026	U			NS	NS	23,000	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0026	U			NS	NS	81,600	N	RSL		
Acetone	67-64-1	mg/kg	0.55	J			NS	NS	960,000	N	NMED		5.73E-07
Benzene	71-43-2	mg/kg	0.0026	U			87	N	729	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0026	U			NS	NS	1,800	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0026	U			NS	NS	630	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0026	U			30	N	26,000	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0026	U			1,760	N	18,300	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0026	U			NS	NS	95	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0026	U			NS	NS	8,540	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0026	U			53	N	1,020	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0026	U			NS	NS	2,160	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0026	U			NS	NS	89,500	N	NMED		
Chloroform	67-66-3	mg/kg	0.0026	U			29	N	2,000	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0065	U			201	N	1,260	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0026	U			NS	NS	2,600	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0026	U			146	N	695	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0026	U			67	N	18,300	N	NMED		

TABLE D1-H25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID H25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0026	U			NS	NS	288	N	NMED		
Dichlorodifluoromethane	75-71-8	mg/kg	0.0026	U			NS	NS	865	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0026	U			29,000	N	368	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0026	U			52	N	916	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0026	U			NS	NS	14,200	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0065	U			NS	NS	3,730	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0026	U			4,820	N	178,000	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.013	U			14,400	N	5,130	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0026	U			NS	NS	58,000	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0026	U			NS	NS	24,000	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0026	U			108	N	843	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0032	U			NS	NS	3,940	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg		R			NS	NS	14,200	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0026	U			NS	NS	120,000	N	RSL		
Styrene	100-42-5	mg/kg	0.0026	U			NS	NS	51,300	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0026	U			NS	NS	120,000	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0026	U			1,650	N	629	N	NMED		
Toluene	108-88-3	mg/kg	0.0026	U			NS	NS	61,300	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0026	U			NS	NS	1,100	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0026	U			146	N	695	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0026	U			112	N	37	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0026	U			NS	NS	6,030	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0026	U			28	N	46	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	U			1,250	N	423	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	U			NS	NS	13,000	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	U			6,730	N	90,800	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	U			6,730	N	90,800	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	U			NS	NS	91,600	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	U			2,330	N	916	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	U			NS	NS	2,750	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	U			NS	NS	18,300	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	U			NS	NS	1,830	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	U			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	U			17	N	276	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	U			NS	NS	104,000	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.17	U			NS	NS	6,490	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.17	U			NS	NS	3,370	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	U			NS	NS	41,000	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.17	U			NS	NS	8,000	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.17	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	U			NS	NS	410	N	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.17	U			1,100	N	3,300	N	RSL[S]		

TABLE D1-H25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID H25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	U			NS	NS	73	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	U			NS	NS	NS	NS	NS		
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	U			NS	NS	82,000	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.17	U			110	N	410	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.17	U			1,100	N	3,300	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.17	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.17	U			NS	NS	50,500	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.17	U			NS	NS	25,300	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.17	U			NS	NS	253,000	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.17	U			32	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			24	N	251	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	U			32	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	U			NS	NS	25,300	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	U			323	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.17	U			NS	NS	3,300,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.17	U			NS	NS	82,000	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	U			NS	NS	2,500	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	U			16	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	U			519	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	U			1,830	N	18,300	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.17	U			12,000	N	160,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.17	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.17	U			3,230	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.17	U			NS	NS	91,600	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.17	U			NS	NS	8,200	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			3	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.17	U			NS	NS	1,200	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.17	U			NS	NS	733,000	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.17	U			NS	NS	916,000	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.17	U			NS	NS	33,700	N	NMED		
Fluorene	86-73-7	mg/kg	0.17	U			NS	NS	33,700	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.17	U			16	N	733	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	U			52	N	916	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.17	U			641	N	641	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	U			32	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.17	U			27,000	N	183,000	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.021	U			3	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.17	U			1	N	7	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	U			5,240	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.17	U			108	N	843	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.17	U			293	N	1,540	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.17	U			45	N	3,180	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.17	U			NS	NS	27,500	N	NMED		
Phenol	108-95-2	mg/kg	0.17	U			NS	NS	275,000	N	NMED		
Pyrene	129-00-0	mg/kg	0.17	U			NS	NS	25,300	N	NMED		

TABLE D1-H25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID H25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			5,300	N	7,400	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.021	U			304	N	57	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.021	U			9	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.01	U			9	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.01	U			11	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.01	U			11	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.01	U			11	N	16	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.01	U			11	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (3)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg	0.00000000028	J	0.00000093	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg		U	0.000013	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000026	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.000000017	J	0.0000017	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000011	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000088	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000078	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000081	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000071	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.00000011	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.000000075	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000024	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000078	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg	0.000000043	J	0.00000043	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000024	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000027	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000084	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.00000006				0.000238	N	0.000808	N	NMED	2.53E-09	7.46E-05

TABLE D1-H25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID H25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	21,000				NS	NS	1,290,000	N	NMED		1.63E-02
Antimony	7440-36-0	mg/kg	0.2				NS	NS	519	N	NMED		3.85E-04
Arsenic	7440-38-2	mg/kg	1.4				36	N	208	N	NMED	3.90E-07	6.73E-03
Barium	7440-39-3	mg/kg	380				NS	NS	255,000	N	NMED		1.49E-03
Beryllium	7440-41-7	mg/kg	0.82	J			313,000	N	2,580	N	NMED	2.62E-11	3.18E-04
Cadmium	7440-43-9	mg/kg	0.83				417,000	N	1,110	N	NMED	1.99E-11	7.48E-04
Calcium	7440-70-2	mg/kg	28,000				NS	NS	32,400,000	N	NMED		
Chromium (Total) (4)	7440-47-3	mg/kg	15				505	N	314,000	N	NMED	2.97E-07	4.78E-05
Cobalt	7440-48-4	mg/kg	4.7				83,400	N	388	N	NMED	5.64E-10	1.21E-02
Copper	7440-50-8	mg/kg	130				NS	NS	51,900	N	NMED		2.50E-03
Iron	7439-89-6	mg/kg	9,500				NS	NS	908,000	N	NMED		1.05E-02
Lead	7439-92-1	mg/kg	12				NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	8,000				NS	NS	5,680,000	N	NMED		
Manganese	7439-96-5	mg/kg	520				NS	NS	160,000	N	NMED		3.25E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.032	J			NS	NS	112	N	NMED		2.86E-04
Nickel	7440-02-0	mg/kg	11				2,890,000	N	25,700	N	NMED	3.81E-11	4.28E-04
Potassium	7440-09-7	mg/kg	2,200				NS	NS	76,200,000	N	NMED		
Selenium	7782-49-2	mg/kg	1.3				NS	NS	6,490	N	NMED		2.00E-04
Silver	7440-22-4	mg/kg	0.082	J			NS	NS	6,490	N	NMED		1.26E-05
Sodium	7440-23-5	mg/kg	62				NS	NS	37,300,000	N	NMED		1.66E-06
Thallium	7440-28-0	mg/kg	0.075	J			NS	NS	13	N	NMED		5.77E-03
Vanadium	7440-62-2	mg/kg	12				NS	NS	6,530	N	NMED		1.84E-03
Zinc	7440-66-6	mg/kg	36				NS	NS	38,900	N	NMED		9.25E-04

TABLE D1-H25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID H25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.33	U			NS	NS	63	N	NMED		
Nitrate	14797-55-8	mg/kg	13				NS	NS	2,080,000	N	NMED		6.25E-06
Perchlorate	14797-73-0	mg/kg	0.0042	U			NS	NS	908	N	NMED		
										Cumulative Risk/Hazard		**7E-07**	**0.06**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
IEUBK = Integrated Exposure Uptake Biokentic Model
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect

TABLE D1-H25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID H25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0026	U			659	N	10,600	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0026	U			NS	NS	13,600	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0026	U			197	N	7,080	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0026	U			4,300	N	2	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0026	U			1,820	N	70,800	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0026	U			NS	NS	424	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0026	U			781	N	130	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0026	U			NS	NS	283	N	NMED[C]			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0065	U			8	N	6	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0026	U			8,540	N	79	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0026	U			NS	NS	492	N	NMED[C]			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0065	U			6	N	8	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0026	U			16	N	140	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0026	U			NS	NS	2,500	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0026	U			195	N	54	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0026	U			415	N	25	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0026	U			NS	NS	422	N	NMED[C]			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0026	U			45,900	N	24,800	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0026	U			NS	NS	7,080	N	NMED[C]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0026	U			45,900	N	24,800	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0026	U			415	N	25	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.0039	U			NS	NS	90,700	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0026	U			NS	NS	7,080	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.34	J			NS	NS	599	N	NMED[C]		5.68E-04	
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0026	U			NS	NS	7,080	N	NMED[C]			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0026	U			NS	NS	20,400	N	NMED[C]			
Acetone	67-64-1	mg/kg	0.55	J			NS	NS	242,000	N	NMED		2.27E-06	
Benzene	71-43-2	mg/kg	0.0026	U			423	N	142	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.0026	U			NS	NS	538	N	NMED[C]			
Bromochloromethane	74-97-5	mg/kg	0.0026	U			NS	NS	296	N	NMED[C]			
Bromodichloromethane	75-27-4	mg/kg	0.0026	U			143	N	7,080	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0026	U			23,700	N	5,380	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0026	U			NS	NS	18	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.0026	U			NS	NS	1,620	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0026	U			252	N	202	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0026	U			NS	NS	412	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0026	U			NS	NS	16,600	N	NMED			
Chloroform	67-66-3	mg/kg	0.0026	U			134	N	391	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0065	U			956	N	235	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0026	U			NS	NS	708	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0026	U			781	N	130	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0026	U			340	N	5,380	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0026	U			NS	NS	54	N	NMED			

TABLE D1-H25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID H25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Dichlorodifluoromethane	75-71-8	mg/kg	0.0026	U			NS	NS	161	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.0026	U			1,770	N	5,800	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0026	U			2,400	N	269	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0026	U			NS	NS	2,740	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0065	U			NS	NS	696	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0026	U			24,200	N	33,100	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.013	U			89,600	N	1,210	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0026	U			NS	NS	17,700	N	NMED[C]			
n-Propylbenzene	103-65-1	mg/kg	0.0026	U			NS	NS	6,730	N	NMED[C]			
Naphthalene	91-20-3	mg/kg	0.0026	U			633	N	159	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0032	U			NS	NS	736	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg		R			NS	NS	2,740	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.0026	U			NS	NS	35,400	N	NMED[C]			
Styrene	100-42-5	mg/kg	0.0026	U			NS	NS	10,200	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0026	U			NS	NS	35,400	N	NMED[C]			
Tetrachloroethene	127-18-4	mg/kg	0.0026	U			7,910	N	120	N	NMED			
Toluene	108-88-3	mg/kg	0.0026	U			NS	NS	14,000	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0026	U			NS	NS	206	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0026	U			781	N	130	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0026	U			5,370	N	7	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0026	U			NS	NS	1,130	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0026	U			161	N	162	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	U			8,540	N	79	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	U			NS	NS	2,500	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	U			45,900	N	24,800	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	U			45,900	N	24,800	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	U			NS	NS	26,900	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	U			17,000	N	269	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	U			NS	NS	807	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	U			NS	NS	5,380	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	U			NS	NS	538	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	U			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	U			165	N	81	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	U			NS	NS	28,300	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.17	U			NS	NS	1,770	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.17	U			NS	NS	1,000	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	U			NS	NS	13,500	N	NMED[C]			
2-Nitroaniline	88-74-4	mg/kg	0.17	U			NS	NS	2,690	N	NMED[C]			
2-Nitrophenol	88-75-5	mg/kg	0.17	U			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	U			410	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.17	U			135	N	1,080	N	NMED[SC]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	U			NS	NS	22	N	NMED			

TABLE D1-H25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID H25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	U			NS	NS	NS	NS	NS			
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	U			NS	NS	26,900	N	NMED[C]			
4-Chloroaniline	106-47-8	mg/kg	0.17	U			14	N	135	N	NMED[C]			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	U			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.17	U			135	N	1,080	N	NMED[C]			
4-Nitrophenol	100-02-7	mg/kg	0.17	U			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.17	U			NS	NS	15,100	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.17	U			NS	NS	7,530	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.17	U			NS	NS	75,300	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.17	U			240	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			173	N	15	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	U			240	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	U			NS	NS	7,530	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	U			2,310	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.17	U			NS	NS	1,080,000	N	NMED[C]			
Benzyl Alcohol	100-51-6	mg/kg	0.17	U			NS	NS	26,900	N	NMED[C]			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	U			NS	NS	807	N	NMED[C]			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	U			2	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	U			3,540	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	U			13,400	N	5,380	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.17	U			1,420	N	53,800	N	NMED[C]			
Carbazole	86-74-8	mg/kg	0.17	U			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.17	U			23,100	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.17	U			NS	NS	26,900	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.17	U			NS	NS	2,690	N	NMED[C]			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			24	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.17	U			NS	NS	269	N	NMED[C]			
Diethylphthalate	84-66-2	mg/kg	0.17	U			NS	NS	215,000	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.17	U			NS	NS	269,000	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.17	U			NS	NS	10,000	N	NMED			
Fluorene	86-73-7	mg/kg	0.17	U			NS	NS	10,000	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.17	U			117	N	215	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	U			2,400	N	269	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.17	U			4,670	N	188	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	U			240	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.17	U			198,000	N	53,700	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.021	U			0.38	N	NA	N	NMED[C]			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.17	U			4	N	2	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	U			37,900	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.17	U			633	N	159	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.17	U			1,350	N	353	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.17	U			346	N	989	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.17	U			NS	NS	8,070	N	NMED			
Phenol	108-95-2	mg/kg	0.17	U			NS	NS	77,400	N	NMED			
Pyrene	129-00-0	mg/kg	0.17	U			NS	NS	7,530	N	NMED			

TABLE D1-H25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID H25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	8,070	N	NMED[C]			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	27	N	NMED[C]			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			626	N	2,420	N	NMED[C]			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.021	U			2,440	N	17	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.021	U			55	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.01	U			58	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.01	U			85	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.01	U			85	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.01	U			85	N	5	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.01	U			85	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (3)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg	0.00000000028	J	0.00000093	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg		U	0.000013	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000026	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.000000017	J	0.0000017	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000011	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000088	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000078	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000081	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000071	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.00000011	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.000000075	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000024	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000078	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg	0.000000043	J	0.00000043	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000024	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000027	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000084	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.00000006				0.00172	N	0.000226	N	NMED	3.50E-10	2.67E-04	

TABLE D1-H25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID H25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	21,000				NS	NS	41,400	N	NMED		5.07E-01	Nervous
Antimony	7440-36-0	mg/kg	0.2				NS	NS	142	N	NMED		1.41E-03	
Arsenic	7440-38-2	mg/kg	1.4				216	N	41	N	NMED	6.48E-08	3.40E-02	
Barium	7440-39-3	mg/kg	380				NS	NS	4,390	N	NMED		8.66E-02	
Beryllium	7440-41-7	mg/kg	0.82	J			2,710	N	148	N	NMED	3.03E-09	5.54E-03	
Cadmium	7440-43-9	mg/kg	0.83				3,610	N	72	N	NMED	2.30E-09	1.15E-02	
Calcium	7440-70-2	mg/kg	28,000				NS	NS	8,850,000	N	NMED		3.16E-03	
Chromium (Total) (4)	7440-47-3	mg/kg	15				468	N	134	N	NMED	3.21E-07	1.12E-01	GI, Blood
Cobalt	7440-48-4	mg/kg	4.7				722	N	37	N	NMED	6.51E-08	1.28E-01	Endocrine
Copper	7440-50-8	mg/kg	130				NS	NS	14,200	N	NMED		9.15E-03	
Iron	7439-89-6	mg/kg	9,500				NS	NS	248,000	N	NMED		3.83E-02	
Lead	7439-92-1	mg/kg	12				NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	8,000				NS	NS	1,550,000	N	NMED		5.16E-03	
Manganese	7439-96-5	mg/kg	520				NS	NS	464	Y	NMED		1.12E+00	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.032	J			NS	NS	21	N	NMED		1.55E-03	
Nickel	7440-02-0	mg/kg	11				20,500	N	753	N	NMED	5.37E-09	1.46E-02	
Potassium	7440-09-7	mg/kg	2,200				NS	NS	20,800,000	N	NMED		1.06E-04	
Selenium	7782-49-2	mg/kg	1.3				NS	NS	1,750	N	NMED		7.43E-04	
Silver	7440-22-4	mg/kg	0.082	J			NS	NS	1,770	N	NMED		4.63E-05	
Sodium	7440-23-5	mg/kg	62				NS	NS	10,200,000	N	NMED		6.08E-06	
Thallium	7440-28-0	mg/kg	0.075	J			NS	NS	4	N	NMED		2.12E-02	
Vanadium	7440-62-2	mg/kg	12				NS	NS	614	N	NMED		1.95E-02	
Zinc	7440-66-6	mg/kg	36				NS	NS	106,000	N	NMED		3.40E-04	

TABLE D1-H25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID H25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.33	U			NS	NS	12	N	NMED			
Nitrate	14797-55-8	mg/kg	13				NS	NS	566,000	N	NMED		2.30E-05	
Perchlorate	14797-73-0	mg/kg	0.0042	U			NS	NS	248	N	NMED			
										Cumulative Risk/Hazard		**5E-07**	**2.1**	
										Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	1.6
Endocrine	0.13
GI	0.11
Blood	0.11
All Others	0.25

Notes:

[s] = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update).

2) NMED[C] = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

3) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

4) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect

TABLE D1-I25-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID I25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0023	UJ			28.1	N	2,350	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0023	UJ			NS	NS	14,400	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0023	UJ			7.98	N	1,560	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0023	UJ			18.8	N	2.61	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0023	UJ			78.6	N	15,600	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0023	UJ			NS	NS	440	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0023	UJ			29.3	N	141	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0023	UJ			NS	NS	63	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0057	UJ			0.051	N	7.09	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0023	UJ			240	N	82.9	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0023	UJ			NS	NS	300	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0057	UJ			0.0858	N	5.88	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0023	UJ			0.672	N	135	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0023	UJ			NS	NS	2,150	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0023	UJ			8.32	N	55.6	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0023	UJ			17.8	N	29	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0023	UJ			NS	NS	270	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0023	UJ			1,290	N	5,480	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0023	UJ			NS	NS	1,600	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0023	UJ			1,290	N	5,480	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0023	UJ			17.8	N	29	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0034	UJ			NS	NS	37,400	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0023	UJ			NS	NS	1,560	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0023	UJ			NS	NS	200	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0023	UJ			NS	NS	1,600	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0023	UJ			NS	NS	5,810	N	RSL		
Acetone	67-64-1	mg/kg	0.13	J			NS	NS	66,300	N	NMED		1.96E-06
Benzene	71-43-2	mg/kg	0.0023	UJ			17.8	N	114	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0023	UJ			NS	NS	290	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0023	UJ			NS	NS	150	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0023	UJ			6.19	N	1,560	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0023	UJ			674	N	1,230	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0023	UJ			NS	NS	17.7	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0023	UJ			NS	NS	1,550	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0023	UJ			10.7	N	144	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0023	UJ			NS	NS	378	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0023	UJ			NS	NS	19,000	N	NMED		
Chloroform	67-66-3	mg/kg	0.0023	UJ			5.9	N	306	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0057	UJ			41.1	N	268	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0023	UJ			NS	NS	156	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0023	UJ			29.3	N	141	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0023	UJ			13.9	N	1,230	N	NMED		
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0023	UJ			NS	NS	57.9	N	NMED		

TABLE D1-I25-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID I25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dichlorodifluoromethane	75-71-8	mg/kg	0.0023	UJ			NS	NS	182	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0023	UJ			75.1	N	3,930	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0023	UJ			68.3	N	61.6	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0023	UJ			NS	NS	2,360	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0057	UJ			NS	NS	764	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0023	UJ			975	N	37,800	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.011	UJ			766	N	409	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0023	UJ			NS	NS	3,900	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0023	UJ			NS	NS	3,800	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0023	UJ			22.6	N	162	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0029	UJ			NS	NS	805	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.01	J			NS	NS	2,360	N	NMED[S]		4.24E-06
sec-Butylbenzene	135-98-8	mg/kg	0.0023	UJ			NS	NS	7,800	N	RSL		
Styrene	100-42-5	mg/kg	0.0023	UJ			NS	NS	7,260	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0023	UJ			NS	NS	7,800	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0023	UJ			337	N	111	N	NMED		
Toluene	108-88-3	mg/kg	0.0023	UJ			NS	NS	5,230	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0023	UJ			NS	NS	210	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0023	UJ			29.3	N	141	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0023	UJ			15.5	N	6.77	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0023	UJ			NS	NS	1,230	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0023	UJ			0.742	N	113	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.18	UJ			240	N	82.9	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.18	UJ			NS	NS	2,150	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.18	UJ			1,290	N	5,480	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.18	UJ			1,290	N	5,480	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.18	UJ			NS	NS	6,160	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.18	UJ			484	N	61.6	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.18	UJ			NS	NS	185	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.18	UJ			NS	NS	1,230	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.18	UJ			NS	NS	123	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.18	UJ			17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.18	UJ			3.56	N	18.5	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.18	UJ			NS	NS	6,260	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.18	UJ			NS	NS	391	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.18	UJ			NS	NS	232	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.18	UJ			NS	NS	3,200	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.18	UJ			NS	NS	630	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.18	UJ			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.18	UJ			11.8	N	NS	NS	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.18	UJ			270	N	250	N	RSL[S]		
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.18	UJ			NS	NS	4.93	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.18	UJ			NS	NS	NS	NS	NS		

TABLE D1-I25-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID I25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.18	UJ			NS	NS	6,300	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.18	UJ			27	N	32	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.18	UJ			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.18	UJ			270	N	250	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.18	UJ			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.18	UJ			NS	NS	3,480	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.18	UJ			NS	NS	1,740	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.18	UJ			NS	NS	17,400	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.18	UJ			1.53	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.14	UJ			1.12	N	17.4	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.18	UJ			1.53	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.18	UJ			NS	NS	1,740	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.18	UJ			15.3	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.18	UJ			NS	NS	250,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.18	UJ			NS	NS	6,300	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.18	UJ			NS	NS	190	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.18	UJ			3.11	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.18	UJ			99.3	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.18	UJ			380	N	1,230	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.18	UJ			2,900	N	13,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.18	UJ			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.18	UJ			153	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.18	UJ			NS	NS	6,160	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.18	UJ			NS	NS	630	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	UJ			0.153	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.18	UJ			NS	NS	78	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.18	UJ			NS	NS	49,300	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.18	UJ			NS	NS	61,600	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.18	UJ			NS	NS	2,320	N	NMED		
Fluorene	86-73-7	mg/kg	0.18	UJ			NS	NS	2,320	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.18	UJ			3.33	N	49.3	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.18	UJ			68.3	N	61.6	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.18	UJ			133	N	43.1	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.18	UJ			1.53	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.18	UJ			5,610	N	12,300	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.18	UJ			0.78	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	UJ			0.0234	N	0.493	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.18	UJ			1,090	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.18	UJ			22.6	N	162	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.18	UJ			60.4	N	131	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.18	UJ			9.85	N	234	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.18	UJ			NS	NS	1,740	N	NMED		
Phenol	108-95-2	mg/kg	0.18	UJ			NS	NS	18,500	N	NMED		
Pyrene	129-00-0	mg/kg	0.18	UJ			NS	NS	1,740	N	NMED		

TABLE D1-I25-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID I25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			1,300	N	570	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.021	UJ			69.6	N	3.98	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.021	UJ			1.81	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.011	UJ			1.86	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.011	UJ			2.43	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.011	UJ			2.43	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.011	UJ			2.43	N	1.14	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.011	UJ			2.43	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		UJ	0.00000027	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg		UJ	0.0000016	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		UJ	0.000000063	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		UJ	0.00000017	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		UJ	0.000000079	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		UJ	0.000000074	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		UJ	0.000000058	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		UJ	0.000000072	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		UJ	0.000000059	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		UJ	0.000000092	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		UJ	0.000000074	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		UJ	0.000000064	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		UJ	0.000000068	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		UJ	0.000000077	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		UJ	0.000000065	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg	0.000000038	J	0.00000038	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		UJ	0.000000064	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.000000038				0.000049	N	0.0000506	N	NMED	7.76E-09	7.51E-04

TABLE D1-I25-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID I25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	18,000				NS	NS	78,000	N	NMED		2.31E-01
Antimony	7440-36-0	mg/kg	0.075	J			NS	NS	31.3	N	NMED		2.40E-03
Arsenic	7440-38-2	mg/kg	1.2				7.07	N	13	N	NMED	1.70E-06	9.23E-02
Barium	7440-39-3	mg/kg	350				NS	NS	15,600	N	NMED		2.24E-02
Beryllium	7440-41-7	mg/kg	0.89	J			64,400	N	156	N	NMED	1.38E-10	5.71E-03
Cadmium	7440-43-9	mg/kg	0.52				85,900	N	70.5	N	NMED	6.05E-11	7.38E-03
Calcium	7440-70-2	mg/kg	49,000				NS	NS	13,000,000	N	NMED		3.77E-03
Chromium (Total) (3)	7440-47-3	mg/kg	12				96.6	N	45,200	N	NMED	1.24E-06	2.65E-04
Cobalt	7440-48-4	mg/kg	4				17,200	N	23.4	N	NMED	2.33E-09	1.71E-01
Copper	7440-50-8	mg/kg	75				NS	NS	3,130	N	NMED		2.40E-02
Iron	7439-89-6	mg/kg	9,700				NS	NS	54,800	N	NMED		1.77E-01
Lead	7439-92-1	mg/kg	11				NS	NS	200	N	RSL		
Magnesium	7439-95-4	mg/kg	6,300				NS	NS	15,600,000	N	NMED		4.04E-04
Manganese	7439-96-5	mg/kg	620				NS	NS	10,500	N	NMED		5.90E-02
Mercury (Elemental)	7439-97-6	mg/kg	0.043	J			NS	NS	23.8	N	NMED		1.81E-03
Nickel	7440-02-0	mg/kg	9.9				595,000	N	1,560	N	NMED	1.66E-10	6.35E-03
Potassium	7440-09-7	mg/kg	2,200				NS	NS	15,600,000	N	NMED		1.41E-04
Selenium	7782-49-2	mg/kg	1.2				NS	NS	391	N	NMED		3.07E-03
Silver	7440-22-4	mg/kg	0.053	J			NS	NS	391	N	NMED		1.36E-04
Sodium	7440-23-5	mg/kg	59				NS	NS	7,820,000	N	NMED		7.54E-06
Thallium	7440-28-0	mg/kg	0.076	J			NS	NS	0.782	N	NMED		9.72E-02
Vanadium	7440-62-2	mg/kg	7.2				NS	NS	394	N	NMED		1.83E-02
Zinc	7440-66-6	mg/kg	20				NS	NS	23,500	N	NMED		8.51E-04

TABLE D1-I25-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID I25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg		R			NS	NS	11.2	N	NMED		
Nitrate	14797-55-8	mg/kg	5	J			NS	NS	125,000	N	NMED		4.00E-05
Perchlorate	14797-73-0	mg/kg		R			NS	NS	54.8	N	NMED		
										Cumulative Risk/Hazard		**3E-06**	**0.9**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect

TABLE D1-I25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID I25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0023	UJ			137	N	39,400	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0023	UJ			NS	NS	72,500	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0023	UJ			39	N	26,000	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0023	UJ			92	N	12	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0023	UJ			383	N	260,000	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0023	UJ			NS	NS	2,260	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0023	UJ			146	N	695	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0023	UJ			NS	NS	930	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0057	UJ			1	N	34	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0023	UJ			1,250	N	423	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0023	UJ			NS	NS	1,800	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0057	UJ			1	N	41	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0023	UJ			3	N	738	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0023	UJ			NS	NS	13,000	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0023	UJ			41	N	286	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0023	UJ			87	N	137	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0023	UJ			NS	NS	1,500	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0023	UJ			6,730	N	90,800	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0023	UJ			NS	NS	23,000	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0023	UJ			6,730	N	90,800	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0023	UJ			87	N	137	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0034	UJ			NS	NS	411,000	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0023	UJ			NS	NS	26,000	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0023	UJ			NS	NS	1,300	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0023	UJ			NS	NS	23,000	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0023	UJ			NS	NS	81,600	N	RSL		
Acetone	67-64-1	mg/kg	0.13	J			NS	NS	960,000	N	NMED		1.35E-07
Benzene	71-43-2	mg/kg	0.0023	UJ			87	N	729	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0023	UJ			NS	NS	1,800	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0023	UJ			NS	NS	630	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0023	UJ			30	N	26,000	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0023	UJ			1,760	N	18,300	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0023	UJ			NS	NS	95	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0023	UJ			NS	NS	8,540	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0023	UJ			53	N	1,020	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0023	UJ			NS	NS	2,160	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0023	UJ			NS	NS	89,500	N	NMED		
Chloroform	67-66-3	mg/kg	0.0023	UJ			29	N	2,000	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0057	UJ			201	N	1,260	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0023	UJ			NS	NS	2,600	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0023	UJ			146	N	695	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0023	UJ			67	N	18,300	N	NMED		

TABLE D1-I25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID I25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0023	UJ			NS	NS	288	N	NMED		
Dichlorodifluoromethane	75-71-8	mg/kg	0.0023	UJ			NS	NS	865	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0023	UJ			29,000	N	368	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0023	UJ			52	N	916	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0023	UJ			NS	NS	14,200	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0057	UJ			NS	NS	3,730	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0023	UJ			4,820	N	178,000	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.011	UJ			14,400	N	5,130	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0023	UJ			NS	NS	58,000	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0023	UJ			NS	NS	24,000	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0023	UJ			108	N	843	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0029	UJ			NS	NS	3,940	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.01	J			NS	NS	14,200	N	NMED[S]		7.04E-07
sec-Butylbenzene	135-98-8	mg/kg	0.0023	UJ			NS	NS	120,000	N	RSL		
Styrene	100-42-5	mg/kg	0.0023	UJ			NS	NS	51,300	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0023	UJ			NS	NS	120,000	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0023	UJ			1,650	N	629	N	NMED		
Toluene	108-88-3	mg/kg	0.0023	UJ			NS	NS	61,300	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0023	UJ			NS	NS	1,100	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0023	UJ			146	N	695	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0023	UJ			112	N	37	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0023	UJ			NS	NS	6,030	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0023	UJ			28	N	46	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.18	UJ			1,250	N	423	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.18	UJ			NS	NS	13,000	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.18	UJ			6,730	N	90,800	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.18	UJ			6,730	N	90,800	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.18	UJ			NS	NS	91,600	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.18	UJ			2,330	N	916	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.18	UJ			NS	NS	2,750	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.18	UJ			NS	NS	18,300	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.18	UJ			NS	NS	1,830	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.18	UJ			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.18	UJ			17	N	276	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.18	UJ			NS	NS	104,000	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.18	UJ			NS	NS	6,490	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.18	UJ			NS	NS	3,370	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.18	UJ			NS	NS	41,000	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.18	UJ			NS	NS	8,000	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.18	UJ			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.18	UJ			NS	NS	410	N	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.18	UJ			1,100	N	3,300	N	RSL[S]		

TABLE D1-I25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID I25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.18	UJ			NS	NS	73	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.18	UJ			NS	NS	NS	NS	NS		
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.18	UJ			NS	NS	82,000	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.18	UJ			110	N	410	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.18	UJ			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.18	UJ			1,100	N	3,300	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.18	UJ			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.18	UJ			NS	NS	50,500	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.18	UJ			NS	NS	25,300	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.18	UJ			NS	NS	253,000	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.18	UJ			32	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.14	UJ			24	N	251	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.18	UJ			32	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.18	UJ			NS	NS	25,300	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.18	UJ			323	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.18	UJ			NS	NS	3,300,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.18	UJ			NS	NS	82,000	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.18	UJ			NS	NS	2,500	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.18	UJ			16	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.18	UJ			519	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.18	UJ			1,830	N	18,300	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.18	UJ			12,000	N	160,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.18	UJ			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.18	UJ			3,230	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.18	UJ			NS	NS	91,600	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.18	UJ			NS	NS	8,200	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	UJ			3	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.18	UJ			NS	NS	1,200	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.18	UJ			NS	NS	733,000	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.18	UJ			NS	NS	916,000	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.18	UJ			NS	NS	33,700	N	NMED		
Fluorene	86-73-7	mg/kg	0.18	UJ			NS	NS	33,700	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.18	UJ			16	N	733	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.18	UJ			52	N	916	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.18	UJ			641	N	641	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.18	UJ			32	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.18	UJ			27,000	N	183,000	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.18	UJ			3	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	UJ			1	N	7	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.18	UJ			5,240	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.18	UJ			108	N	843	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.18	UJ			293	N	1,540	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.18	UJ			45	N	3,180	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.18	UJ			NS	NS	27,500	N	NMED		
Phenol	108-95-2	mg/kg	0.18	UJ			NS	NS	275,000	N	NMED		
Pyrene	129-00-0	mg/kg	0.18	UJ			NS	NS	25,300	N	NMED		

TABLE D1-I25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID I25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			5,300	N	7,400	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.021	UJ			304	N	57	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.021	UJ			9	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.011	UJ			9	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.011	UJ			11	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.011	UJ			11	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.011	UJ			11	N	16	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.011	UJ			11	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		UJ	0.00000027	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg		UJ	0.0000016	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		UJ	0.000000063	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		UJ	0.00000017	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		UJ	0.000000079	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		UJ	0.000000074	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		UJ	0.000000058	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		UJ	0.000000072	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		UJ	0.000000059	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		UJ	0.000000092	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		UJ	0.000000074	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		UJ	0.000000064	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		UJ	0.000000068	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		UJ	0.000000077	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		UJ	0.000000065	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg	0.000000038	J	0.00000038	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		UJ	0.000000064	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.000000038				0.000238	N	0.000808	N	NMED	1.60E-09	4.70E-05

TABLE D1-I25-2
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MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	18,000				NS	NS	1,290,000	N	NMED		1.40E-02
Antimony	7440-36-0	mg/kg	0.075	J			NS	NS	519	N	NMED		1.45E-04
Arsenic	7440-38-2	mg/kg	1.2				36	N	208	N	NMED	3.34E-07	5.77E-03
Barium	7440-39-3	mg/kg	350				NS	NS	255,000	N	NMED		1.37E-03
Beryllium	7440-41-7	mg/kg	0.89	J			313,000	N	2,580	N	NMED	2.84E-11	3.45E-04
Cadmium	7440-43-9	mg/kg	0.52				417,000	N	1,110	N	NMED	1.25E-11	4.68E-04
Calcium	7440-70-2	mg/kg	49,000				NS	NS	32,400,000	N	NMED		1.51E-03
Chromium (Total) (3)	7440-47-3	mg/kg	12				505	N	314,000	N	NMED	2.38E-07	3.82E-05
Cobalt	7440-48-4	mg/kg	4				83,400	N	388	N	NMED	4.80E-10	1.03E-02
Copper	7440-50-8	mg/kg	75				NS	NS	51,900	N	NMED		1.45E-03
Iron	7439-89-6	mg/kg	9,700				NS	NS	908,000	N	NMED		1.07E-02
Lead	7439-92-1	mg/kg	11				NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	6,300				NS	NS	5,680,000	N	NMED		1.11E-03
Manganese	7439-96-5	mg/kg	620				NS	NS	160,000	N	NMED		3.88E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.043	J			NS	NS	112	N	NMED		3.84E-04
Nickel	7440-02-0	mg/kg	9.9				2,890,000	N	25,700	N	NMED	3.43E-11	3.85E-04
Potassium	7440-09-7	mg/kg	2,200				NS	NS	76,200,000	N	NMED		2.89E-05
Selenium	7782-49-2	mg/kg	1.2				NS	NS	6,490	N	NMED		1.85E-04
Silver	7440-22-4	mg/kg	0.053	J			NS	NS	6,490	N	NMED		8.17E-06
Sodium	7440-23-5	mg/kg	59				NS	NS	37,300,000	N	NMED		1.58E-06
Thallium	7440-28-0	mg/kg	0.076	J			NS	NS	13	N	NMED		5.85E-03
Vanadium	7440-62-2	mg/kg	7.2				NS	NS	6,530	N	NMED		1.10E-03
Zinc	7440-66-6	mg/kg	20				NS	NS	38,900	N	NMED		5.14E-04

TABLE D1-I25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID I25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg		R			NS	NS	63	N	NMED		
Nitrate	14797-55-8	mg/kg	5	J			NS	NS	2,080,000	N	NMED		2.40E-06
Perchlorate	14797-73-0	mg/kg		R			NS	NS	908	N	NMED		
										Cumulative Risk/Hazard		**6E-07**	**0.06**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
IEUBK = Integrated Exposure Uptake Biokentic Model
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect

TABLE D1-I25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID I25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0023	UJ			659	N	10,600	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0023	UJ			NS	NS	13,600	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0023	UJ			197	N	7,080	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0023	UJ			4,300	N	2	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0023	UJ			1,820	N	70,800	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0023	UJ			NS	NS	424	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0023	UJ			781	N	130	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0023	UJ			NS	NS	283	N	NMED[C]			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0057	UJ			8	N	6	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0023	UJ			8,540	N	79	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0023	UJ			NS	NS	492	N	NMED[C]			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0057	UJ			6	N	8	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0023	UJ			16	N	140	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0023	UJ			NS	NS	2,500	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0023	UJ			195	N	54	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0023	UJ			415	N	25	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0023	UJ			NS	NS	422	N	NMED[C]			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0023	UJ			45,900	N	24,800	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0023	UJ			NS	NS	7,080	N	NMED[C]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0023	UJ			45,900	N	24,800	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0023	UJ			415	N	25	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.0034	UJ			NS	NS	90,700	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0023	UJ			NS	NS	7,080	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.0023	UJ			NS	NS	599	N	NMED[C]			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0023	UJ			NS	NS	7,080	N	NMED[C]			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0023	UJ			NS	NS	20,400	N	NMED[C]			
Acetone	67-64-1	mg/kg	0.13	J			NS	NS	242,000	N	NMED		5.37E-07	
Benzene	71-43-2	mg/kg	0.0023	UJ			423	N	142	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.0023	UJ			NS	NS	538	N	NMED[C]			
Bromochloromethane	74-97-5	mg/kg	0.0023	UJ			NS	NS	296	N	NMED[C]			
Bromodichloromethane	75-27-4	mg/kg	0.0023	UJ			143	N	7,080	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0023	UJ			23,700	N	5,380	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0023	UJ			NS	NS	18	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.0023	UJ			NS	NS	1,620	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0023	UJ			252	N	202	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0023	UJ			NS	NS	412	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0023	UJ			NS	NS	16,600	N	NMED			
Chloroform	67-66-3	mg/kg	0.0023	UJ			134	N	391	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0057	UJ			956	N	235	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0023	UJ			NS	NS	708	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0023	UJ			781	N	130	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0023	UJ			340	N	5,380	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0023	UJ			NS	NS	54	N	NMED			

TABLE D1-I25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID I25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Dichlorodifluoromethane	75-71-8	mg/kg	0.0023	UJ			NS	NS	161	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.0023	UJ			1,770	N	5,800	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0023	UJ			2,400	N	269	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0023	UJ			NS	NS	2,740	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0057	UJ			NS	NS	696	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0023	UJ			24,200	N	33,100	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.011	UJ			89,600	N	1,210	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0023	UJ			NS	NS	17,700	N	NMED[C]			
n-Propylbenzene	103-65-1	mg/kg	0.0023	UJ			NS	NS	6,730	N	NMED[C]			
Naphthalene	91-20-3	mg/kg	0.0023	UJ			633	N	159	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0029	UJ			NS	NS	736	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.01	J			NS	NS	2,740	N	NMED[S]		3.65E-06	
sec-Butylbenzene	135-98-8	mg/kg	0.0023	UJ			NS	NS	35,400	N	NMED[C]			
Styrene	100-42-5	mg/kg	0.0023	UJ			NS	NS	10,200	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0023	UJ			NS	NS	35,400	N	NMED[C]			
Tetrachloroethene	127-18-4	mg/kg	0.0023	UJ			7,910	N	120	N	NMED			
Toluene	108-88-3	mg/kg	0.0023	UJ			NS	NS	14,000	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0023	UJ			NS	NS	206	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0023	UJ			781	N	130	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0023	UJ			5,370	N	7	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0023	UJ			NS	NS	1,130	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0023	UJ			161	N	162	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.18	UJ			8,540	N	79	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.18	UJ			NS	NS	2,500	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.18	UJ			45,900	N	24,800	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.18	UJ			45,900	N	24,800	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.18	UJ			NS	NS	26,900	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.18	UJ			17,000	N	269	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.18	UJ			NS	NS	807	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.18	UJ			NS	NS	5,380	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.18	UJ			NS	NS	538	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.18	UJ			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.18	UJ			165	N	81	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.18	UJ			NS	NS	28,300	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.18	UJ			NS	NS	1,770	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.18	UJ			NS	NS	1,000	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.18	UJ			NS	NS	13,500	N	NMED[C]			
2-Nitroaniline	88-74-4	mg/kg	0.18	UJ			NS	NS	2,690	N	NMED[C]			
2-Nitrophenol	88-75-5	mg/kg	0.18	UJ			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.18	UJ			410	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.18	UJ			135	N	1,080	N	NMED[SC]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.18	UJ			NS	NS	22	N	NMED			

TABLE D1-I25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID I25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.18	UJ			NS	NS	NS	NS	NS			
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.18	UJ			NS	NS	26,900	N	NMED[C]			
4-Chloroaniline	106-47-8	mg/kg	0.18	UJ			14	N	135	N	NMED[C]			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.18	UJ			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.18	UJ			135	N	1,080	N	NMED[C]			
4-Nitrophenol	100-02-7	mg/kg	0.18	UJ			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.18	UJ			NS	NS	15,100	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.18	UJ			NS	NS	7,530	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.18	UJ			NS	NS	75,300	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.18	UJ			240	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.14	UJ			173	N	15	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.18	UJ			240	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.18	UJ			NS	NS	7,530	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.18	UJ			2,310	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.18	UJ			NS	NS	1,080,000	N	NMED[C]			
Benzyl Alcohol	100-51-6	mg/kg	0.18	UJ			NS	NS	26,900	N	NMED[C]			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.18	UJ			NS	NS	807	N	NMED[C]			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.18	UJ			2	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.18	UJ			3,540	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.18	UJ			13,400	N	5,380	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.18	UJ			1,420	N	53,800	N	NMED[C]			
Carbazole	86-74-8	mg/kg	0.18	UJ			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.18	UJ			23,100	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.18	UJ			NS	NS	26,900	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.18	UJ			NS	NS	2,690	N	NMED[C]			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	UJ			24	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.18	UJ			NS	NS	269	N	NMED[C]			
Diethylphthalate	84-66-2	mg/kg	0.18	UJ			NS	NS	215,000	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.18	UJ			NS	NS	269,000	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.18	UJ			NS	NS	10,000	N	NMED			
Fluorene	86-73-7	mg/kg	0.18	UJ			NS	NS	10,000	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.18	UJ			117	N	215	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.18	UJ			2,400	N	269	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.18	UJ			4,670	N	188	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.18	UJ			240	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.18	UJ			198,000	N	53,700	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.18	UJ			0.38	N	NA	N	NMED[C]			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	UJ			4	N	2	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.18	UJ			37,900	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.18	UJ			633	N	159	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.18	UJ			1,350	N	353	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.18	UJ			346	N	989	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.18	UJ			NS	NS	8,070	N	NMED			
Phenol	108-95-2	mg/kg	0.18	UJ			NS	NS	77,400	N	NMED			
Pyrene	129-00-0	mg/kg	0.18	UJ			NS	NS	7,530	N	NMED			

TABLE D1-I25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID I25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	8,070	N	NMED[C]			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	27	N	NMED[C]			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			626	N	2,420	N	NMED[C]			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.021	UJ			2,440	N	17	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.021	UJ			55	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.011	UJ			58	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.011	UJ			85	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.011	UJ			85	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.011	UJ			85	N	5	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.011	UJ			85	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (3)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		UJ	0.00000027	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg		UJ	0.0000016	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		UJ	0.000000063	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		UJ	0.00000017	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		UJ	0.000000079	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		UJ	0.000000074	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		UJ	0.000000058	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		UJ	0.000000072	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		UJ	0.000000059	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		UJ	0.000000092	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		UJ	0.000000074	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		UJ	0.000000064	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		UJ	0.000000068	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		UJ	0.000000077	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		UJ	0.000000065	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg	0.000000038	J	0.00000038	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		UJ	0.000000064	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.000000038				0.00172	N	0.000226	N	NMED	2.21E-10	1.68E-04	

TABLE D1-I25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID I25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	18,000				NS	NS	41,400	N	NMED		4.35E-01	Nervous
Antimony	7440-36-0	mg/kg	0.075	J			NS	NS	142	N	NMED		5.28E-04	
Arsenic	7440-38-2	mg/kg	1.2				216	N	41	N	NMED	5.56E-08	2.91E-02	
Barium	7440-39-3	mg/kg	350				NS	NS	4,390	N	NMED		7.97E-02	
Beryllium	7440-41-7	mg/kg	0.89	J			2,710	N	148	N	NMED	3.28E-09	6.01E-03	
Cadmium	7440-43-9	mg/kg	0.52				3,610	N	72	N	NMED	1.44E-09	7.21E-03	
Calcium	7440-70-2	mg/kg	49,000				NS	NS	8,850,000	N	NMED		5.54E-03	
Chromium (Total) (4)	7440-47-3	mg/kg	12				468	N	134	N	NMED	2.56E-07	8.96E-02	
Cobalt	7440-48-4	mg/kg	4				722	N	37	N	NMED	5.54E-08	1.09E-01	Endocrine
Copper	7440-50-8	mg/kg	75				NS	NS	14,200	N	NMED		5.28E-03	
Iron	7439-89-6	mg/kg	9,700				NS	NS	248,000	N	NMED		3.91E-02	
Lead	7439-92-1	mg/kg	11				NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	6,300				NS	NS	1,550,000	N	NMED		4.06E-03	
Manganese	7439-96-5	mg/kg	620				NS	NS	464	Y	NMED		1.34E+00	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.043	J			NS	NS	21	N	NMED		2.08E-03	
Nickel	7440-02-0	mg/kg	9.9				20,500	N	753	N	NMED	4.83E-09	1.31E-02	
Potassium	7440-09-7	mg/kg	2,200				NS	NS	20,800,000	N	NMED		1.06E-04	
Selenium	7782-49-2	mg/kg	1.2				NS	NS	1,750	N	NMED		6.86E-04	
Silver	7440-22-4	mg/kg	0.053	J			NS	NS	1,770	N	NMED		2.99E-05	
Sodium	7440-23-5	mg/kg	59				NS	NS	10,200,000	N	NMED		5.78E-06	
Thallium	7440-28-0	mg/kg	0.076	J			NS	NS	4	N	NMED		2.15E-02	
Vanadium	7440-62-2	mg/kg	7.2				NS	NS	614	N	NMED		1.17E-02	
Zinc	7440-66-6	mg/kg	20				NS	NS	106,000	N	NMED		1.89E-04	

TABLE D1-I25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID I25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg		R			NS	NS	12	N	NMED			
Nitrate	14797-55-8	mg/kg	5	J			NS	NS	566,000	N	NMED		8.83E-06	
Perchlorate	14797-73-0	mg/kg		R			NS	NS	248	N	NMED			
										Cumulative Risk/Hazard		**4E-07**	**2.2**	
										Exceeds Target Level		**N**	Y	

System	Hazard Quotient
Nervous	1.8
Endocrine	0.11
All Others	0.32

Notes:

[s] = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update).

2) NMED[C] = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

3) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

4) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect

TABLE D1-J22-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID J22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0021	U			28.1	N	2,350	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0021	U			NS	NS	14,400	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0021	U			7.98	N	1,560	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0021	U			18.8	N	2.61	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0021	U			78.6	N	15,600	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0021	U			NS	NS	440	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0021	U			29.3	N	141	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0021	U			NS	NS	63	N	RSL			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0052	U			0.051	N	7.09	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0021	U			240	N	82.9	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0021	U			NS	NS	300	N	RSL			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0052	U			0.0858	N	5.88	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0021	U			0.672	N	135	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0021	U			NS	NS	2,150	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0021	U			8.32	N	55.6	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0021	U			17.8	N	29	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0021	U			NS	NS	270	N	RSL			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0021	U			1,290	N	5,480	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0021	U			NS	NS	1,600	N	RSL			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0021	U			1,290	N	5,480	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0021	U			17.8	N	29	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.041				NS	NS	37,400	N	NMED		1.10E-06	
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0021	U			NS	NS	1,560	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.0021	U			NS	NS	200	N	RSL			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0021	U			NS	NS	1,600	N	RSL			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0021	U			NS	NS	5,810	N	RSL			
Acetone	67-64-1	mg/kg	0.46	J			NS	NS	66,300	N	NMED		6.94E-06	
Benzene	71-43-2	mg/kg	0.0021	U			17.8	N	114	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.0021	U			NS	NS	290	N	RSL			
Bromochloromethane	74-97-5	mg/kg	0.0021	U			NS	NS	150	N	RSL			
Bromodichloromethane	75-27-4	mg/kg	0.0021	U			6.19	N	1,560	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0021	U			674	N	1,230	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0021	U			NS	NS	17.7	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.17				NS	NS	1,550	N	NMED		1.10E-04	
Carbon Tetrachloride	56-23-5	mg/kg	0.0021	U			10.7	N	144	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0021	U			NS	NS	378	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0021	U			NS	NS	19,000	N	NMED			
Chloroform	67-66-3	mg/kg	0.0021	U			5.9	N	306	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0052	U			41.1	N	268	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0021	U			NS	NS	156	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0021	U			29.3	N	141	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0021	U			13.9	N	1,230	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0021	U			NS	NS	57.9	N	NMED			

TABLE D1-J22-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID J22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Dichlorodifluoromethane	75-71-8	mg/kg	0.0021	U			NS	NS	182	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.0021	U			75.1	N	3,930	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0021	U			68.3	N	61.6	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0021	U			NS	NS	2,360	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.011				NS	NS	764	N	NMED[S]		1.44E-05	
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0021	U			975	N	37,800	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.01	U			766	N	409	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0021	U			NS	NS	3,900	N	RSL			
n-Propylbenzene	103-65-1	mg/kg	0.0021	U			NS	NS	3,800	N	RSL			
Naphthalene	91-20-3	mg/kg	0.0021	U			22.6	N	162	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0026	U			NS	NS	805	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.0021	U			NS	NS	2,360	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.0021	U			NS	NS	7,800	N	RSL			
Styrene	100-42-5	mg/kg	0.0021	U			NS	NS	7,260	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0021	U			NS	NS	7,800	N	RSL			
Tetrachloroethene	127-18-4	mg/kg	0.0021	U			337	N	111	N	NMED			
Toluene	108-88-3	mg/kg	0.0021	U			NS	NS	5,230	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0021	U			NS	NS	210	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0021	U			29.3	N	141	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0021	U			15.5	N	6.77	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0021	U			NS	NS	1,230	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0021	U			0.742	N	113	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	U			240	N	82.9	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	U			NS	NS	2,150	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	U			1,290	N	5,480	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	U			1,290	N	5,480	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	U			NS	NS	6,160	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	U			484	N	61.6	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	U			NS	NS	185	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	U			NS	NS	1,230	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	U			NS	NS	123	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	U			17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	U			3.56	N	18.5	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	U			NS	NS	6,260	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.17	U			NS	NS	391	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.17	U			NS	NS	232	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	U			NS	NS	3,200	N	RSL			
2-Nitroaniline	88-74-4	mg/kg	0.17	U			NS	NS	630	N	RSL			
2-Nitrophenol	88-75-5	mg/kg	0.17	U			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	U			11.8	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.17	U			270	N	250	N	RSL[S]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	U			NS	NS	4.93	N	NMED			
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	U			NS	NS	NS	NS	NS			

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HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID J22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	U			NS	NS	6,300	N	RSL			
4-Chloroaniline	106-47-8	mg/kg	0.17	U			27	N	32	N	RSL			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	U			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.17	U			270	N	250	N	RSL			
4-Nitrophenol	100-02-7	mg/kg	0.17	U			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.17	U			NS	NS	3,480	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.17	U			NS	NS	1,740	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.17	U			NS	NS	17,400	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.17	U			1.53	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			1.12	N	17.4	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	U			1.53	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	U			NS	NS	1,740	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	U			15.3	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.17	U			NS	NS	250,000	N	RSL			
Benzyl Alcohol	100-51-6	mg/kg	0.17	U			NS	NS	6,300	N	RSL			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	U			NS	NS	190	N	RSL			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	U			3.11	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	U			99.3	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	U			380	N	1,230	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.17	U			2,900	N	13,000	N	RSL			
Carbazole	86-74-8	mg/kg	0.17	U			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.17	U			153	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.17	U			NS	NS	6,160	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.17	U			NS	NS	630	N	RSL			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			0.153	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.17	U			NS	NS	78	N	RSL			
Diethylphthalate	84-66-2	mg/kg	0.17	U			NS	NS	49,300	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.17	U			NS	NS	61,600	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.17	U			NS	NS	2,320	N	NMED			
Fluorene	86-73-7	mg/kg	0.17	U			NS	NS	2,320	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.17	U			3.33	N	49.3	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	U			68.3	N	61.6	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.17	U			133	N	43.1	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	U			1.53	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.17	U			5,610	N	12,300	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	U			0.78	N	NS	NS	RSL			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	U			0.0234	N	0.493	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	U			1,090	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.17	U			22.6	N	162	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.17	U			60.4	N	131	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.17	U			9.85	N	234	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.17	U			NS	NS	1,740	N	NMED			
Phenol	108-95-2	mg/kg	0.17	U			NS	NS	18,500	N	NMED			
Pyrene	129-00-0	mg/kg	0.17	U			NS	NS	1,740	N	NMED			

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HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID J22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	2,200	N	RSL			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	6.3	N	RSL			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			211	N	36	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			3.56	N	18.5	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	7.7	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			31.6	N	70.4	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	6.16	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	7.64	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			333	N	247	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			83.1	N	301	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	156	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			60.4	N	131	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			313	N	6.16	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	3,850	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			1,300	N	570	N	RSL			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.021	U			69.6	N	3.98	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.021	U			1.81	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.01	U			1.86	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.01	U			2.43	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.01	U			2.43	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.01	U			2.43	N	1.14	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.01	U			2.43	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (2)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg	0.00000000018	J	0.0000006	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000039	J	0.000013	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000014	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.0000014	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000018	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000099	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000069	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000096	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.00000011	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000007	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.0000001	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000082	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.00000028	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000011	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000019	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.00000008	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.0000000041				0.000049	N	0.0000506	N	NMED	8.33E-10	8.06E-05	

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HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID J22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	20,000				NS	NS	78,000	N	NMED		2.56E-01	Nervous
Antimony	7440-36-0	mg/kg	0.31				NS	NS	31.3	N	NMED		9.90E-03	
Arsenic	7440-38-2	mg/kg	1.3				7.07	N	13	N	NMED	1.84E-06	1.00E-01	Heart/Endocrine
Barium	7440-39-3	mg/kg	320				NS	NS	15,600	N	NMED		2.05E-02	
Beryllium	7440-41-7	mg/kg	0.87	J			64,400	N	156	N	NMED	1.35E-10	5.58E-03	
Cadmium	7440-43-9	mg/kg	1.6				85,900	N	70.5	N	NMED	1.86E-10	2.27E-02	
Calcium	7440-70-2	mg/kg	35,000				NS	NS	13,000,000	N	NMED		2.69E-03	
Chromium (Total) (3)	7440-47-3	mg/kg	19				96.6	N	45,200	N	NMED	1.97E-06	4.20E-04	
Cobalt	7440-48-4	mg/kg	4.4				17,200	N	23.4	N	NMED	2.56E-09	1.88E-01	Endocrine
Copper	7440-50-8	mg/kg	190				NS	NS	3,130	N	NMED		6.07E-02	
Iron	7439-89-6	mg/kg	10,000				NS	NS	54,800	N	NMED		1.82E-01	GI
Lead	7439-92-1	mg/kg	17				NS	NS	200	N	RSL			
Magnesium	7439-95-4	mg/kg	6,400	J			NS	NS	15,600,000	N	NMED		4.10E-04	
Manganese	7439-96-5	mg/kg	550				NS	NS	10,500	N	NMED		5.24E-02	
Mercury (Elemental)	7439-97-6	mg/kg	0.038	J			NS	NS	23.8	N	NMED		1.60E-03	
Nickel	7440-02-0	mg/kg	13				595,000	N	1,560	N	NMED	2.18E-10	8.33E-03	
Potassium	7440-09-7	mg/kg	2,600				NS	NS	15,600,000	N	NMED		1.67E-04	
Selenium	7782-49-2	mg/kg	1.3				NS	NS	391	N	NMED		3.32E-03	
Silver	7440-22-4	mg/kg	0.18				NS	NS	391	N	NMED		4.60E-04	
Sodium	7440-23-5	mg/kg	66				NS	NS	7,820,000	N	NMED		8.44E-06	
Thallium	7440-28-0	mg/kg	0.078	J			NS	NS	0.782	N	NMED		9.97E-02	
Vanadium	7440-62-2	mg/kg	11				NS	NS	394	N	NMED		2.79E-02	
Zinc	7440-66-6	mg/kg	31				NS	NS	23,500	N	NMED		1.32E-03	

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HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID J22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.32	U			NS	NS	11.2	N	NMED			
Nitrate	14797-55-8	mg/kg	21				NS	NS	125,000	N	NMED		1.68E-04	
Perchlorate	14797-73-0	mg/kg	0.0042	U			NS	NS	54.8	N	NMED			
										Cumulative Risk/Hazard		**4E-06**	**1.0**	
										Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	0.26
Endocrine	0.29
GI	0.18
Heart	0.10
All Others	0.32

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
TEF = Toxicity Equivalency Factor
TEQ = Toxicity Equivalency Quotient
U = Nondetect
UJ = Estimated Nondetect
UTL = Upper tolerance limit

TABLE D1-J22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID J22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0021	U			137	N	39,400	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0021	U			NS	NS	72,500	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0021	U			39	N	26,000	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0021	U			92	N	12	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0021	U			383	N	260,000	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0021	U			NS	NS	2,260	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0021	U			146	N	695	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0021	U			NS	NS	930	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0052	U			1	N	34	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0021	U			1,250	N	423	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0021	U			NS	NS	1,800	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0052	U			1	N	41	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0021	U			3	N	738	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0021	U			NS	NS	13,000	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0021	U			41	N	286	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0021	U			87	N	137	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0021	U			NS	NS	1,500	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0021	U			6,730	N	90,800	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0021	U			NS	NS	23,000	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0021	U			6,730	N	90,800	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0021	U			87	N	137	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.041				NS	NS	411,000	N	NMED		9.98E-08
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0021	U			NS	NS	26,000	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0021	U			NS	NS	1,300	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0021	U			NS	NS	23,000	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0021	U			NS	NS	81,600	N	RSL		
Acetone	67-64-1	mg/kg	0.46	J			NS	NS	960,000	N	NMED		4.79E-07
Benzene	71-43-2	mg/kg	0.0021	U			87	N	729	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0021	U			NS	NS	1,800	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0021	U			NS	NS	630	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0021	U			30	N	26,000	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0021	U			1,760	N	18,300	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0021	U			NS	NS	95	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.17				NS	NS	8,540	N	NMED		1.99E-05
Carbon Tetrachloride	56-23-5	mg/kg	0.0021	U			53	N	1,020	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0021	U			NS	NS	2,160	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0021	U			NS	NS	89,500	N	NMED		
Chloroform	67-66-3	mg/kg	0.0021	U			29	N	2,000	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0052	U			201	N	1,260	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0021	U			NS	NS	2,600	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0021	U			146	N	695	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0021	U			67	N	18,300	N	NMED		
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0021	U			NS	NS	288	N	NMED		

TABLE D1-J22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID J22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dichlorodifluoromethane	75-71-8	mg/kg	0.0021	U			NS	NS	865	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0021	U			29,000	N	368	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0021	U			52	N	916	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0021	U			NS	NS	14,200	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.011				NS	NS	3,730	N	NMED[S]		2.95E-06
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0021	U			4,820	N	178,000	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.01	U			14,400	N	5,130	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0021	U			NS	NS	58,000	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0021	U			NS	NS	24,000	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0021	U			108	N	843	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0026	U			NS	NS	3,940	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0021	U			NS	NS	14,200	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0021	U			NS	NS	120,000	N	RSL		
Styrene	100-42-5	mg/kg	0.0021	U			NS	NS	51,300	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0021	U			NS	NS	120,000	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0021	U			1,650	N	629	N	NMED		
Toluene	108-88-3	mg/kg	0.0021	U			NS	NS	61,300	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0021	U			NS	NS	1,100	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0021	U			146	N	695	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0021	U			112	N	37	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0021	U			NS	NS	6,030	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0021	U			28	N	46	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	U			1,250	N	423	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	U			NS	NS	13,000	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	U			6,730	N	90,800	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	U			6,730	N	90,800	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	U			NS	NS	91,600	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	U			2,330	N	916	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	U			NS	NS	2,750	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	U			NS	NS	18,300	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	U			NS	NS	1,830	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	U			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	U			17	N	276	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	U			NS	NS	104,000	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.17	U			NS	NS	6,490	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.17	U			NS	NS	3,370	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	U			NS	NS	41,000	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.17	U			NS	NS	8,000	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.17	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	U			NS	NS	410	N	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.17	U			1,100	N	3,300	N	RSL[S]		
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	U			NS	NS	73	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	U			NS	NS	NS	NS	NS		
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	U			NS	NS	82,000	N	RSL		

TABLE D1-J22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID J22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4-Chloroaniline	106-47-8	mg/kg	0.17	U			110	N	410	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.17	U			1,100	N	3,300	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.17	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.17	U			NS	NS	50,500	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.17	U			NS	NS	25,300	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.17	U			NS	NS	253,000	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.17	U			32	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			24	N	251	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	U			32	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	U			NS	NS	25,300	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	U			323	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.17	U			NS	NS	3,300,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.17	U			NS	NS	82,000	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	U			NS	NS	2,500	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	U			16	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	U			519	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	U			1,830	N	18,300	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.17	U			12,000	N	160,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.17	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.17	U			3,230	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.17	U			NS	NS	91,600	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.17	U			NS	NS	8,200	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			3	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.17	U			NS	NS	1,200	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.17	U			NS	NS	733,000	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.17	U			NS	NS	916,000	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.17	U			NS	NS	33,700	N	NMED		
Fluorene	86-73-7	mg/kg	0.17	U			NS	NS	33,700	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.17	U			16	N	733	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	U			52	N	916	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.17	U			641	N	641	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	U			32	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.17	U			27,000	N	183,000	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	U			3	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	U			1	N	7	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	U			5,240	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.17	U			108	N	843	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.17	U			293	N	1,540	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.17	U			45	N	3,180	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.17	U			NS	NS	27,500	N	NMED		
Phenol	108-95-2	mg/kg	0.17	U			NS	NS	275,000	N	NMED		
Pyrene	129-00-0	mg/kg	0.17	U			NS	NS	25,300	N	NMED		

TABLE D1-J22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID J22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			5,300	N	7,400	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.021	U			304	N	57	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.021	U			9	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.01	U			9	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.01	U			11	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.01	U			11	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.01	U			11	N	16	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.01	U			11	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg	0.00000000018	J	0.0000006	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000039	J	0.000013	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000014	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.0000014	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000018	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000099	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000069	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000096	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.00000011	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000007	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.0000001	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000082	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.00000028	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000011	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000019	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.00000008	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.0000000041				0.000238	N	0.000808	N	NMED	1.71E-10	5.05E-06

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	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	20,000				NS	NS	1,290,000	N	NMED		1.55E-02
Antimony	7440-36-0	mg/kg	0.31				NS	NS	519	N	NMED		5.97E-04
Arsenic	7440-38-2	mg/kg	1.3				36	N	208	N	NMED	3.62E-07	6.25E-03
Barium	7440-39-3	mg/kg	320				NS	NS	255,000	N	NMED		1.25E-03
Beryllium	7440-41-7	mg/kg	0.87	J			313,000	N	2,580	N	NMED	2.78E-11	3.37E-04
Cadmium	7440-43-9	mg/kg	1.6				417,000	N	1,110	N	NMED	3.84E-11	1.44E-03
Calcium	7440-70-2	mg/kg	35,000				NS	NS	32,400,000	N	NMED		1.08E-03
Chromium (Total) (3)	7440-47-3	mg/kg	19				505	N	314,000	N	NMED	3.76E-07	6.05E-05
Cobalt	7440-48-4	mg/kg	4.4				83,400	N	388	N	NMED	5.28E-10	1.13E-02
Copper	7440-50-8	mg/kg	190				NS	NS	51,900	N	NMED		3.66E-03
Iron	7439-89-6	mg/kg	10,000				NS	NS	908,000	N	NMED		1.10E-02
Lead	7439-92-1	mg/kg	17				NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	6,400	J			NS	NS	5,680,000	N	NMED		1.13E-03
Manganese	7439-96-5	mg/kg	550				NS	NS	160,000	N	NMED		3.44E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.038	J			NS	NS	112	N	NMED		3.39E-04
Nickel	7440-02-0	mg/kg	13				2,890,000	N	25,700	N	NMED	4.50E-11	5.06E-04
Potassium	7440-09-7	mg/kg	2,600				NS	NS	76,200,000	N	NMED		3.41E-05
Selenium	7782-49-2	mg/kg	1.3				NS	NS	6,490	N	NMED		2.00E-04
Silver	7440-22-4	mg/kg	0.18				NS	NS	6,490	N	NMED		2.77E-05
Sodium	7440-23-5	mg/kg	66				NS	NS	37,300,000	N	NMED		1.77E-06
Thallium	7440-28-0	mg/kg	0.078	J			NS	NS	13	N	NMED		6.00E-03
Vanadium	7440-62-2	mg/kg	11				NS	NS	6,530	N	NMED		1.68E-03
Zinc	7440-66-6	mg/kg	31				NS	NS	38,900	N	NMED		7.97E-04

TABLE D1-J22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID J22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.32	U			NS	NS	63	N	NMED		
Nitrate	14797-55-8	mg/kg	21				NS	NS	2,080,000	N	NMED		1.01E-05
Perchlorate	14797-73-0	mg/kg	0.0042	U			NS	NS	908	N	NMED		
										Cumulative Risk/Hazard		**7E-07**	**0.07**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
IEUBK = Integrated Exposure Uptake Biokentic Model
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
TEF = Toxicity Equivalency Factor
TEQ = Toxicity Equivalency Quotient
U = Nondetect
UJ = Estimated Nondetect

TABLE D1-J22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID J22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0021	U			659	N	10,600	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0021	U			NS	NS	13,600	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0021	U			197	N	7,080	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0021	U			4,300	N	2	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0021	U			1,820	N	70,800	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0021	U			NS	NS	424	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0021	U			781	N	130	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0021	U			NS	NS	283	N	NMED[C]			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0052	U			8	N	6	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0021	U			8,540	N	79	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0021	U			NS	NS	492	N	NMED[C]			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0052	U			6	N	8	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0021	U			16	N	140	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0021	U			NS	NS	2,500	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0021	U			195	N	54	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0021	U			415	N	25	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0021	U			NS	NS	422	N	NMED[C]			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0021	U			45,900	N	24,800	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0021	U			NS	NS	7,080	N	NMED[C]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0021	U			45,900	N	24,800	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0021	U			415	N	25	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.041				NS	NS	90,700	N	NMED		4.52E-07	
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0021	U			NS	NS	7,080	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.0021	U			NS	NS	599	N	NMED[C]			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0021	U			NS	NS	7,080	N	NMED[C]			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0021	U			NS	NS	20,400	N	NMED[C]			
Acetone	67-64-1	mg/kg	0.46	J			NS	NS	242,000	N	NMED		1.90E-06	
Benzene	71-43-2	mg/kg	0.0021	U			423	N	142	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.0021	U			NS	NS	538	N	NMED[C]			
Bromochloromethane	74-97-5	mg/kg	0.0021	U			NS	NS	296	N	NMED[C]			
Bromodichloromethane	75-27-4	mg/kg	0.0021	U			143	N	7,080	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0021	U			23,700	N	5,380	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0021	U			NS	NS	18	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.17				NS	NS	1,620	N	NMED		1.05E-04	
Carbon Tetrachloride	56-23-5	mg/kg	0.0021	U			252	N	202	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0021	U			NS	NS	412	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0021	U			NS	NS	16,600	N	NMED			
Chloroform	67-66-3	mg/kg	0.0021	U			134	N	391	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0052	U			956	N	235	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0021	U			NS	NS	708	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0021	U			781	N	130	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0021	U			340	N	5,380	N	NMED			

TABLE D1-J22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID J22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0021	U			NS	NS	54	N	NMED			
Dichlorodifluoromethane	75-71-8	mg/kg	0.0021	U			NS	NS	161	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.0021	U			1,770	N	5,800	N	NMED			
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Hexachlorobutadiene	87-68-3	mg/kg	0.0021	U			2,400	N	269	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0021	U			NS	NS	2,740	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.011				NS	NS	696	N	NMED[S]		1.58E-05	
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0021	U			24,200	N	33,100	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.01	U			89,600	N	1,210	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0021	U			NS	NS	17,700	N	NMED[C]			
n-Propylbenzene	103-65-1	mg/kg	0.0021	U			NS	NS	6,730	N	NMED[C]			
Naphthalene	91-20-3	mg/kg	0.0021	U			633	N	159	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0026	U			NS	NS	736	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.0021	U			NS	NS	2,740	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.0021	U			NS	NS	35,400	N	NMED[C]			
Styrene	100-42-5	mg/kg	0.0021	U			NS	NS	10,200	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0021	U			NS	NS	35,400	N	NMED[C]			
Tetrachloroethene	127-18-4	mg/kg	0.0021	U			7,910	N	120	N	NMED			
Toluene	108-88-3	mg/kg	0.0021	U			NS	NS	14,000	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0021	U			NS	NS	206	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0021	U			781	N	130	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0021	U			5,370	N	7	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0021	U			NS	NS	1,130	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0021	U			161	N	162	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	U			8,540	N	79	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	U			NS	NS	2,500	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	U			45,900	N	24,800	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	U			45,900	N	24,800	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	U			NS	NS	26,900	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	U			17,000	N	269	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	U			NS	NS	807	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	U			NS	NS	5,380	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	U			NS	NS	538	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	U			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	U			165	N	81	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	U			NS	NS	28,300	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.17	U			NS	NS	1,770	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.17	U			NS	NS	1,000	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	U			NS	NS	13,500	N	NMED[C]			
2-Nitroaniline	88-74-4	mg/kg	0.17	U			NS	NS	2,690	N	NMED[C]			
2-Nitrophenol	88-75-5	mg/kg	0.17	U			NS	NS	NS	NS	NS			

TABLE D1-J22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID J22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	U			410	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.17	U			135	N	1,080	N	NMED[SC]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	U			NS	NS	22	N	NMED			
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	U			NS	NS	NS	NS	NS			
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	U			NS	NS	26,900	N	NMED[C]			
4-Chloroaniline	106-47-8	mg/kg	0.17	U			14	N	135	N	NMED[C]			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	U			NS	NS	NS	NS	NS			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Nitroaniline	100-01-6	mg/kg	0.17	U			135	N	1,080	N	NMED[C]			
4-Nitrophenol	100-02-7	mg/kg	0.17	U			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.17	U			NS	NS	15,100	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.17	U			NS	NS	7,530	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.17	U			NS	NS	75,300	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.17	U			240	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			173	N	15	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	U			240	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	U			NS	NS	7,530	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	U			2,310	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.17	U			NS	NS	1,080,000	N	NMED[C]			
Benzyl Alcohol	100-51-6	mg/kg	0.17	U			NS	NS	26,900	N	NMED[C]			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	U			NS	NS	807	N	NMED[C]			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	U			2	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	U			3,540	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	U			13,400	N	5,380	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.17	U			1,420	N	53,800	N	NMED[C]			
Carbazole	86-74-8	mg/kg	0.17	U			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.17	U			23,100	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.17	U			NS	NS	26,900	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.17	U			NS	NS	2,690	N	NMED[C]			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			24	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.17	U			NS	NS	269	N	NMED[C]			
Diethylphthalate	84-66-2	mg/kg	0.17	U			NS	NS	215,000	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.17	U			NS	NS	269,000	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.17	U			NS	NS	10,000	N	NMED			
Fluorene	86-73-7	mg/kg	0.17	U			NS	NS	10,000	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.17	U			117	N	215	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	U			2,400	N	269	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.17	U			4,670	N	188	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	U			240	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.17	U			198,000	N	53,700	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	U			0.38	N	NA	N	NMED[C]			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	U			4	N	2	N	NMED			

TABLE D1-J22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID J22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	U			37,900	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.17	U			633	N	159	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.17	U			1,350	N	353	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.17	U			346	N	989	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.17	U			NS	NS	8,070	N	NMED			
Phenol	108-95-2	mg/kg	0.17	U			NS	NS	77,400	N	NMED			
Pyrene	129-00-0	mg/kg	0.17	U			NS	NS	7,530	N	NMED			

TABLE D1-J22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID J22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	8,070	N	NMED[C]			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	27	N	NMED[C]			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			626	N	2,420	N	NMED[C]			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.021	U			2,440	N	17	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.021	U			55	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.01	U			58	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.01	U			85	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.01	U			85	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.01	U			85	N	5	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.01	U			85	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (3)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg	0.00000000018	J	0.0000006	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000039	J	0.000013	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000014	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.0000014	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000018	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000099	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000069	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000096	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.00000011	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000007	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.0000001	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000082	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.00000028	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000011	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000019	0.1	NS	NS	NS	NS	NMED			

TABLE D1-J22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID J22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.00000008	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.0000000041				0.00172	N	0.000226	N	NMED	2.37E-11	1.81E-05	

TABLE D1-J22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID J22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	20,000				NS	NS	41,400	N	NMED		4.83E-01	Nervous
Antimony	7440-36-0	mg/kg	0.31				NS	NS	142	N	NMED		2.18E-03	
Arsenic	7440-38-2	mg/kg	1.3				216	N	41	N	NMED		3.16E-02	
Barium	7440-39-3	mg/kg	320				NS	NS	4,390	N	NMED		7.29E-02	
Beryllium	7440-41-7	mg/kg	0.87	J			2,710	N	148	N	NMED		5.88E-03	
Cadmium	7440-43-9	mg/kg	1.6				3,610	N	72	N	NMED		2.22E-02	
Calcium	7440-70-2	mg/kg	35,000				NS	NS	8,850,000	N	NMED		3.95E-03	
Chromium (Total) (4)	7440-47-3	mg/kg	19				468	N	134	N	NMED		1.42E-01	GI, Blood
Cobalt	7440-48-4	mg/kg	4.4				722	N	37	N	NMED		1.20E-01	Endocrine
Copper	7440-50-8	mg/kg	190				NS	NS	14,200	N	NMED		1.34E-02	
Iron	7439-89-6	mg/kg	10,000				NS	NS	248,000	N	NMED		4.03E-02	
Lead	7439-92-1	mg/kg	17				NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	6,400	J			NS	NS	1,550,000	N	NMED		4.13E-03	
Manganese	7439-96-5	mg/kg	550				NS	NS	464	Y	NMED		1.19E+00	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.038	J			NS	NS	21	N	NMED		1.84E-03	
Nickel	7440-02-0	mg/kg	13				20,500	N	753	N	NMED		1.73E-02	
Potassium	7440-09-7	mg/kg	2,600				NS	NS	20,800,000	N	NMED		1.25E-04	
Selenium	7782-49-2	mg/kg	1.3				NS	NS	1,750	N	NMED		7.43E-04	
Silver	7440-22-4	mg/kg	0.18				NS	NS	1,770	N	NMED		1.02E-04	
Sodium	7440-23-5	mg/kg	66				NS	NS	10,200,000	N	NMED		6.47E-06	
Thallium	7440-28-0	mg/kg	0.078	J			NS	NS	4	N	NMED		2.20E-02	
Vanadium	7440-62-2	mg/kg	11				NS	NS	614	N	NMED		1.79E-02	
Zinc	7440-66-6	mg/kg	31				NS	NS	106,000	N	NMED		2.92E-04	

TABLE D1-J22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID J22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.32	U			NS	NS	12	N	NMED			
Nitrate	14797-55-8	mg/kg	21				NS	NS	566,000	N	NMED		3.71E-05	
Perchlorate	14797-73-0	mg/kg	0.0042	U			NS	NS	248	N	NMED			
										Cumulative Risk/Hazard		**2E-11**	**2.2**	
										Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	1.7
Endocrine	0.12
GI	0.14
Blood	0.14
All Others	0.26

Notes:

[s] = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update).

2) NMED[C] = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

3) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

4) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service

J = Estimated

mg/kg = milligrams per kilogram

NS = No Standard

TEF = Toxicity Equivalency Factor

TEQ = Toxicity Equivalency Quotient

U = Nondetect

UJ = Estimated Nondetect

TABLE D1-J23-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID J23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0023	U			28.1	N	2,350	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0023	U			NS	NS	14,400	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0023	U			7.98	N	1,560	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0023	U			18.8	N	2.61	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0023	U			78.6	N	15,600	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0023	U			NS	NS	440	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0023	U			29.3	N	141	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0023	U			NS	NS	63	N	RSL			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0058	U			0.051	N	7.09	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0023	U			240	N	82.9	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0023	U			NS	NS	300	N	RSL			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0058	U			0.0858	N	5.88	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0023	U			0.672	N	135	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0023	U			NS	NS	2,150	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0023	U			8.32	N	55.6	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0023	U			17.8	N	29	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0023	U			NS	NS	270	N	RSL			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0023	U			1,290	N	5,480	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0023	U			NS	NS	1,600	N	RSL			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0023	U			1,290	N	5,480	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0023	U			17.8	N	29	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.0035	U			NS	NS	37,400	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0023	U			NS	NS	1,560	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.0023	U			NS	NS	200	N	RSL			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0023	U			NS	NS	1,600	N	RSL			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0023	U			NS	NS	5,810	N	RSL			
Acetone	67-64-1	mg/kg	0.37				NS	NS	66,300	N	NMED		5.58E-06	
Benzene	71-43-2	mg/kg	0.0023	U			17.8	N	114	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.0023	U			NS	NS	290	N	RSL			
Bromochloromethane	74-97-5	mg/kg	0.0023	U			NS	NS	150	N	RSL			
Bromodichloromethane	75-27-4	mg/kg	0.0023	U			6.19	N	1,560	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0023	U			674	N	1,230	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0023	U			NS	NS	17.7	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.0023	U			NS	NS	1,550	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0023	U			10.7	N	144	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0023	U			NS	NS	378	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0023	U			NS	NS	19,000	N	NMED			
Chloroform	67-66-3	mg/kg	0.0023	U			5.9	N	306	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0058	U			41.1	N	268	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0023	U			NS	NS	156	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0023	U			29.3	N	141	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0023	U			13.9	N	1,230	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0023	U			NS	NS	57.9	N	NMED			

TABLE D1-J23-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID J23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Dichlorodifluoromethane	75-71-8	mg/kg	0.0023	U			NS	NS	182	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.0023	U			75.1	N	3,930	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0023	U			68.3	N	61.6	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0023	U			NS	NS	2,360	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0058	U			NS	NS	764	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0023	U			975	N	37,800	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.012	U			766	N	409	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0023	U			NS	NS	3,900	N	RSL			
n-Propylbenzene	103-65-1	mg/kg	0.0023	U			NS	NS	3,800	N	RSL			
Naphthalene	91-20-3	mg/kg	0.0023	U			22.6	N	162	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0029	U			NS	NS	805	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.0023	U			NS	NS	2,360	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.0023	U			NS	NS	7,800	N	RSL			
Styrene	100-42-5	mg/kg	0.0023	U			NS	NS	7,260	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0023	U			NS	NS	7,800	N	RSL			
Tetrachloroethene	127-18-4	mg/kg	0.0023	U			337	N	111	N	NMED			
Toluene	108-88-3	mg/kg	0.0023	U			NS	NS	5,230	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0023	U			NS	NS	210	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0023	U			29.3	N	141	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0023	U			15.5	N	6.77	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0023	U			NS	NS	1,230	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0023	U			0.742	N	113	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	U			240	N	82.9	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	U			NS	NS	2,150	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	U			1,290	N	5,480	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	U			1,290	N	5,480	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	U			NS	NS	6,160	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	U			484	N	61.6	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	U			NS	NS	185	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	U			NS	NS	1,230	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	U			NS	NS	123	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	U			17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	U			3.56	N	18.5	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	U			NS	NS	6,260	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.17	U			NS	NS	391	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.17	U			NS	NS	232	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	U			NS	NS	3,200	N	RSL			
2-Nitroaniline	88-74-4	mg/kg	0.17	U			NS	NS	630	N	RSL			
2-Nitrophenol	88-75-5	mg/kg	0.17	U			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	U			11.8	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.17	U			270	N	250	N	RSL[S]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	U			NS	NS	4.93	N	NMED			
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	U			NS	NS	NS	NS	NS			

TABLE D1-J23-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID J23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	U			NS	NS	6,300	N	RSL			
4-Chloroaniline	106-47-8	mg/kg	0.17	U			27	N	32	N	RSL			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	U			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.17	U			270	N	250	N	RSL			
4-Nitrophenol	100-02-7	mg/kg	0.17	U			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.17	U			NS	NS	3,480	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.17	U			NS	NS	1,740	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.17	U			NS	NS	17,400	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.17	U			1.53	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.13	U			1.12	N	17.4	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	U			1.53	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	U			NS	NS	1,740	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	U			15.3	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.17	U			NS	NS	250,000	N	RSL			
Benzyl Alcohol	100-51-6	mg/kg	0.17	U			NS	NS	6,300	N	RSL			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	U			NS	NS	190	N	RSL			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	U			3.11	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	U			99.3	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	U			380	N	1,230	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.17	U			2,900	N	13,000	N	RSL			
Carbazole	86-74-8	mg/kg	0.17	U			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.17	U			153	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.17	U			NS	NS	6,160	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.17	U			NS	NS	630	N	RSL			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	U			0.153	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.17	U			NS	NS	78	N	RSL			
Diethylphthalate	84-66-2	mg/kg	0.17	U			NS	NS	49,300	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.17	U			NS	NS	61,600	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.17	U			NS	NS	2,320	N	NMED			
Fluorene	86-73-7	mg/kg	0.17	U			NS	NS	2,320	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.17	U			3.33	N	49.3	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	U			68.3	N	61.6	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.17	U			133	N	43.1	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	U			1.53	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.17	U			5,610	N	12,300	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	U			0.78	N	NS	NS	RSL			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	UJ			0.0234	N	0.493	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	U			1,090	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.17	U			22.6	N	162	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.17	U			60.4	N	131	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.17	U			9.85	N	234	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.17	U			NS	NS	1,740	N	NMED			
Phenol	108-95-2	mg/kg	0.17	U			NS	NS	18,500	N	NMED			
Pyrene	129-00-0	mg/kg	0.17	U			NS	NS	1,740	N	NMED			

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HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID J23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	2,200	N	RSL			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	6.3	N	RSL			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			211	N	36	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			3.56	N	18.5	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	7.7	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			31.6	N	70.4	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	6.16	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	7.64	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			333	N	247	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			83.1	N	301	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	156	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			60.4	N	131	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			313	N	6.16	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	3,850	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			1,300	N	570	N	RSL			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.021	U			69.6	N	3.98	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.021	U			1.81	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.01	U			1.86	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.01	U			2.43	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.01	U			2.43	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.01	U			2.43	N	1.14	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.01	U			2.43	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (2)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000055	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg		U	0.0000048	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000026	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.00000069	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000033	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.00000014	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000077	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		UJ	0.00000017	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000018	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000096	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		UJ	0.00000015	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000019	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000022	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.00000011	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.000				0.000049	N	0.0000506	N	NMED			

TABLE D1-J23-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID J23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	20,000				NS	NS	78,000	N	NMED		2.56E-01	Nervous
Antimony	7440-36-0	mg/kg	0.16	J			NS	NS	31.3	N	NMED		5.11E-03	
Arsenic	7440-38-2	mg/kg	0.98				7.07	N	13	N	NMED	1.39E-06	7.54E-02	
Barium	7440-39-3	mg/kg	300				NS	NS	15,600	N	NMED		1.92E-02	
Beryllium	7440-41-7	mg/kg	0.95	J			64,400	N	156	N	NMED	1.48E-10	6.09E-03	
Cadmium	7440-43-9	mg/kg	0.7	J			85,900	N	70.5	N	NMED	8.15E-11	9.93E-03	
Calcium	7440-70-2	mg/kg	47,000				NS	NS	13,000,000	N	NMED		3.62E-03	
Chromium (Total) (3)	7440-47-3	mg/kg	14				96.6	N	45,200	N	NMED	1.45E-06	3.10E-04	
Cobalt	7440-48-4	mg/kg	4.5				17,200	N	23.4	N	NMED	2.62E-09	1.92E-01	Endocrine
Copper	7440-50-8	mg/kg	110				NS	NS	3,130	N	NMED		3.51E-02	
Iron	7439-89-6	mg/kg	12,000				NS	NS	54,800	N	NMED		2.19E-01	GI
Lead	7439-92-1	mg/kg	11				NS	NS	200	N	RSL			
Magnesium	7439-95-4	mg/kg	7,800				NS	NS	15,600,000	N	NMED		5.00E-04	
Manganese	7439-96-5	mg/kg	740				NS	NS	10,500	N	NMED		7.05E-02	
Mercury (Elemental)	7439-97-6	mg/kg	0.018	J			NS	NS	23.8	N	NMED		7.56E-04	
Nickel	7440-02-0	mg/kg	12				595,000	N	1,560	N	NMED	2.02E-10	7.69E-03	
Potassium	7440-09-7	mg/kg	2,300				NS	NS	15,600,000	N	NMED		1.47E-04	
Selenium	7782-49-2	mg/kg	1				NS	NS	391	N	NMED		2.56E-03	
Silver	7440-22-4	mg/kg	0.029				NS	NS	391	N	NMED		7.42E-05	
Sodium	7440-23-5	mg/kg	68				NS	NS	7,820,000	N	NMED		8.70E-06	
Thallium	7440-28-0	mg/kg	0.074	J			NS	NS	0.782	N	NMED		9.46E-02	
Vanadium	7440-62-2	mg/kg	9.9				NS	NS	394	N	NMED		2.51E-02	
Zinc	7440-66-6	mg/kg	27				NS	NS	23,500	N	NMED		1.15E-03	

TABLE D1-J23-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID J23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.33	U			NS	NS	11.2	N	NMED			
Nitrate	14797-55-8	mg/kg	36				NS	NS	125,000	N	NMED		2.88E-04	
Perchlorate	14797-73-0	mg/kg	0.002	U			NS	NS	54.8	N	NMED			
										Cumulative Risk/Hazard		**3E-06**	**1.0**	
										Exceeds Target Level		**N**	**Y**	

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	0.26
Endocrine	0.19
GI	0.19
All Others	0.36

CAS = Chemical Abstracts Service
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
TEF = Toxicity Equivalency Factor
TEQ = Toxicity Equivalency Quotient
U = Nondetect
UJ = Estimated Nondetect
UTL = upper tolerance limit

TABLE D1-J23-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID J23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0023	U			137	N	39,400	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0023	U			NS	NS	72,500	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0023	U			39	N	26,000	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0023	U			92	N	12	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0023	U			383	N	260,000	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0023	U			NS	NS	2,260	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0023	U			146	N	695	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0023	U			NS	NS	930	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0058	U			1	N	34	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0023	U			1,250	N	423	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0023	U			NS	NS	1,800	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0058	U			1	N	41	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0023	U			3	N	738	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0023	U			NS	NS	13,000	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0023	U			41	N	286	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0023	U			87	N	137	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0023	U			NS	NS	1,500	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0023	U			6,730	N	90,800	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0023	U			NS	NS	23,000	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0023	U			6,730	N	90,800	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0023	U			87	N	137	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0035	U			NS	NS	411,000	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0023	U			NS	NS	26,000	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0023	U			NS	NS	1,300	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0023	U			NS	NS	23,000	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0023	U			NS	NS	81,600	N	RSL		
Acetone	67-64-1	mg/kg	0.37				NS	NS	960,000	N	NMED		3.85E-07
Benzene	71-43-2	mg/kg	0.0023	U			87	N	729	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0023	U			NS	NS	1,800	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0023	U			NS	NS	630	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0023	U			30	N	26,000	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0023	U			1,760	N	18,300	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0023	U			NS	NS	95	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0023	U			NS	NS	8,540	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0023	U			53	N	1,020	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0023	U			NS	NS	2,160	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0023	U			NS	NS	89,500	N	NMED		
Chloroform	67-66-3	mg/kg	0.0023	U			29	N	2,000	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0058	U			201	N	1,260	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0023	U			NS	NS	2,600	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0023	U			146	N	695	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0023	U			67	N	18,300	N	NMED		
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0023	U			NS	NS	288	N	NMED		

TABLE D1-J23-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID J23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dichlorodifluoromethane	75-71-8	mg/kg	0.0023	U			NS	NS	865	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0023	U			29,000	N	368	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0023	U			52	N	916	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0023	U			NS	NS	14,200	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0058	U			NS	NS	3,730	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0023	U			4,820	N	178,000	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.012	U			14,400	N	5,130	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0023	U			NS	NS	58,000	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0023	U			NS	NS	24,000	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0023	U			108	N	843	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0029	U			NS	NS	3,940	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0023	U			NS	NS	14,200	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0023	U			NS	NS	120,000	N	RSL		
Styrene	100-42-5	mg/kg	0.0023	U			NS	NS	51,300	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0023	U			NS	NS	120,000	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0023	U			1,650	N	629	N	NMED		
Toluene	108-88-3	mg/kg	0.0023	U			NS	NS	61,300	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0023	U			NS	NS	1,100	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0023	U			146	N	695	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0023	U			112	N	37	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0023	U			NS	NS	6,030	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0023	U			28	N	46	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	U			1,250	N	423	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	U			NS	NS	13,000	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	U			6,730	N	90,800	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	U			6,730	N	90,800	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	U			NS	NS	91,600	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	U			2,330	N	916	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	U			NS	NS	2,750	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	U			NS	NS	18,300	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	U			NS	NS	1,830	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	U			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	U			17	N	276	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	U			NS	NS	104,000	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.17	U			NS	NS	6,490	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.17	U			NS	NS	3,370	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	U			NS	NS	41,000	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.17	U			NS	NS	8,000	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.17	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	U			NS	NS	410	N	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.17	U			1,100	N	3,300	N	RSL[S]		
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	U			NS	NS	73	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	U			NS	NS	NS	NS	NS		

TABLE D1-J23-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID J23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	U			NS	NS	82,000	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.17	U			110	N	410	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.17	U			1,100	N	3,300	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.17	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.17	U			NS	NS	50,500	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.17	U			NS	NS	25,300	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.17	U			NS	NS	253,000	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.17	U			32	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.13	U			24	N	251	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	U			32	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	U			NS	NS	25,300	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	U			323	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.17	U			NS	NS	3,300,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.17	U			NS	NS	82,000	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	U			NS	NS	2,500	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	U			16	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	U			519	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	U			1,830	N	18,300	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.17	U			12,000	N	160,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.17	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.17	U			3,230	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.17	U			NS	NS	91,600	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.17	U			NS	NS	8,200	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	U			3	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.17	U			NS	NS	1,200	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.17	U			NS	NS	733,000	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.17	U			NS	NS	916,000	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.17	U			NS	NS	33,700	N	NMED		
Fluorene	86-73-7	mg/kg	0.17	U			NS	NS	33,700	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.17	U			16	N	733	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	U			52	N	916	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.17	U			641	N	641	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	U			32	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.17	U			27,000	N	183,000	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	U			3	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	UJ			1	N	7	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	U			5,240	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.17	U			108	N	843	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.17	U			293	N	1,540	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.17	U			45	N	3,180	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.17	U			NS	NS	27,500	N	NMED		
Phenol	108-95-2	mg/kg	0.17	U			NS	NS	275,000	N	NMED		
Pyrene	129-00-0	mg/kg	0.17	U			NS	NS	25,300	N	NMED		

TABLE D1-J23-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID J23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			5,300	N	7,400	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.021	U			304	N	57	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.021	U			9	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.01	U			9	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.01	U			11	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.01	U			11	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.01	U			11	N	16	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.01	U			11	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (3)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000055	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg		U	0.0000048	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000026	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.00000069	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000033	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.00000014	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000077	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		UJ	0.00000017	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000018	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000096	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		UJ	0.00000015	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000019	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000022	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.00000011	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.000				0.000238	N	0.000808	N	NMED		

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CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID J23
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MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	20,000				NS	NS	1,290,000	N	NMED		1.55E-02
Antimony	7440-36-0	mg/kg	0.16	J			NS	NS	519	N	NMED		3.08E-04
Arsenic	7440-38-2	mg/kg	0.98				36	N	208	N	NMED	2.73E-07	4.71E-03
Barium	7440-39-3	mg/kg	300				NS	NS	255,000	N	NMED		1.18E-03
Beryllium	7440-41-7	mg/kg	0.95	J			313,000	N	2,580	N	NMED	3.04E-11	3.68E-04
Cadmium	7440-43-9	mg/kg	0.7	J			417,000	N	1,110	N	NMED	1.68E-11	6.31E-04
Calcium	7440-70-2	mg/kg	47,000				NS	NS	32,400,000	N	NMED		1.45E-03
Chromium (Total) (4)	7440-47-3	mg/kg	14				505	N	314,000	N	NMED	2.77E-07	4.46E-05
Cobalt	7440-48-4	mg/kg	4.5				83,400	N	388	N	NMED	5.40E-10	1.16E-02
Copper	7440-50-8	mg/kg	110				NS	NS	51,900	N	NMED		2.12E-03
Iron	7439-89-6	mg/kg	12,000				NS	NS	908,000	N	NMED		1.32E-02
Lead	7439-92-1	mg/kg	11				NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	7,800				NS	NS	5,680,000	N	NMED		1.37E-03
Manganese	7439-96-5	mg/kg	740				NS	NS	160,000	N	NMED		4.63E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.018	J			NS	NS	112	N	NMED		1.61E-04
Nickel	7440-02-0	mg/kg	12				2,890,000	N	25,700	N	NMED	4.15E-11	4.67E-04
Potassium	7440-09-7	mg/kg	2,300				NS	NS	76,200,000	N	NMED		3.02E-05
Selenium	7782-49-2	mg/kg	1				NS	NS	6,490	N	NMED		1.54E-04
Silver	7440-22-4	mg/kg	0.029				NS	NS	6,490	N	NMED		4.47E-06
Sodium	7440-23-5	mg/kg	68				NS	NS	37,300,000	N	NMED		1.82E-06
Thallium	7440-28-0	mg/kg	0.074	J			NS	NS	13	N	NMED		5.69E-03
Vanadium	7440-62-2	mg/kg	9.9				NS	NS	6,530	N	NMED		1.52E-03
Zinc	7440-66-6	mg/kg	27				NS	NS	38,900	N	NMED		6.94E-04

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FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.33	U			NS	NS	63	N	NMED		
Nitrate	14797-55-8	mg/kg	36				NS	NS	2,080,000	N	NMED		1.73E-05
Perchlorate	14797-73-0	mg/kg	0.002	U			NS	NS	908	N	NMED		
										Cumulative Risk/Hazard		**6E-07**	**0.07**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service

IEUBK = Integrated Exposure Uptake Biokentic Model

J = Estimated

mg/kg = milligrams per kilogram

NS = No Standard

TEF = Toxicity Equivalency Factor

TEQ = Toxicity Equivalency Quotient

U = Nondetect

UJ = Estimated Nondetect

UTL = upper tolerance limit

TABLE D1-J23-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID J23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0023	U			659	N	10,600	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0023	U			NS	NS	13,600	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0023	U			197	N	7,080	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0023	U			4,300	N	2	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0023	U			1,820	N	70,800	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0023	U			NS	NS	424	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0023	U			781	N	130	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0023	U			NS	NS	283	N	NMED[C]			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0058	U			8	N	6	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0023	U			8,540	N	79	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0023	U			NS	NS	492	N	NMED[C]			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0058	U			6	N	8	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0023	U			16	N	140	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0023	U			NS	NS	2,500	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0023	U			195	N	54	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0023	U			415	N	25	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0023	U			NS	NS	422	N	NMED[C]			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0023	U			45,900	N	24,800	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0023	U			NS	NS	7,080	N	NMED[C]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0023	U			45,900	N	24,800	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0023	U			415	N	25	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.0035	U			NS	NS	90,700	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0023	U			NS	NS	7,080	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.0023	U			NS	NS	599	N	NMED[C]			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0023	U			NS	NS	7,080	N	NMED[C]			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0023	U			NS	NS	20,400	N	NMED[C]			
Acetone	67-64-1	mg/kg	0.37				NS	NS	242,000	N	NMED		1.53E-06	
Benzene	71-43-2	mg/kg	0.0023	U			423	N	142	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.0023	U			NS	NS	538	N	NMED[C]			
Bromochloromethane	74-97-5	mg/kg	0.0023	U			NS	NS	296	N	NMED[C]			
Bromodichloromethane	75-27-4	mg/kg	0.0023	U			143	N	7,080	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0023	U			23,700	N	5,380	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0023	U			NS	NS	18	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.0023	U			NS	NS	1,620	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0023	U			252	N	202	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0023	U			NS	NS	412	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0023	U			NS	NS	16,600	N	NMED			
Chloroform	67-66-3	mg/kg	0.0023	U			134	N	391	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0058	U			956	N	235	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0023	U			NS	NS	708	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0023	U			781	N	130	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0023	U			340	N	5,380	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0023	U			NS	NS	54	N	NMED			
Dichlorodifluoromethane	75-71-8	mg/kg	0.0023	U			NS	NS	161	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.0023	U			1,770	N	5,800	N	NMED			

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	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Hexachlorobutadiene	87-68-3	mg/kg	0.0023	U			2,400	N	269	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0023	U			NS	NS	2,740	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0058	U			NS	NS	696	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0023	U			24,200	N	33,100	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.012	U			89,600	N	1,210	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0023	U			NS	NS	17,700	N	NMED[C]			
n-Propylbenzene	103-65-1	mg/kg	0.0023	U			NS	NS	6,730	N	NMED[C]			
Naphthalene	91-20-3	mg/kg	0.0023	U			633	N	159	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0029	U			NS	NS	736	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.0023	U			NS	NS	2,740	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.0023	U			NS	NS	35,400	N	NMED[C]			
Styrene	100-42-5	mg/kg	0.0023	U			NS	NS	10,200	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0023	U			NS	NS	35,400	N	NMED[C]			
Tetrachloroethene	127-18-4	mg/kg	0.0023	U			7,910	N	120	N	NMED			
Toluene	108-88-3	mg/kg	0.0023	U			NS	NS	14,000	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0023	U			NS	NS	206	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0023	U			781	N	130	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0023	U			5,370	N	7	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0023	U			NS	NS	1,130	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0023	U			161	N	162	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	U			8,540	N	79	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	U			NS	NS	2,500	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	U			45,900	N	24,800	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	U			45,900	N	24,800	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	U			NS	NS	26,900	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	U			17,000	N	269	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	U			NS	NS	807	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	U			NS	NS	5,380	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	U			NS	NS	538	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	U			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	U			165	N	81	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	U			NS	NS	28,300	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.17	U			NS	NS	1,770	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.17	U			NS	NS	1,000	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	U			NS	NS	13,500	N	NMED[C]			
2-Nitroaniline	88-74-4	mg/kg	0.17	U			NS	NS	2,690	N	NMED[C]			
2-Nitrophenol	88-75-5	mg/kg	0.17	U			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	U			410	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.17	U			135	N	1,080	N	NMED[SC]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	U			NS	NS	22	N	NMED			
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	U			NS	NS	NS	NS	NS			
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	U			NS	NS	26,900	N	NMED[C]			
4-Chloroaniline	106-47-8	mg/kg	0.17	U			14	N	135	N	NMED[C]			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	U			NS	NS	NS	NS	NS			

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	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Nitroaniline	100-01-6	mg/kg	0.17	U			135	N	1,080	N	NMED[C]			
4-Nitrophenol	100-02-7	mg/kg	0.17	U			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.17	U			NS	NS	15,100	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.17	U			NS	NS	7,530	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.17	U			NS	NS	75,300	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.17	U			240	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.13	U			173	N	15	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	U			240	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	U			NS	NS	7,530	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	U			2,310	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.17	U			NS	NS	1,080,000	N	NMED[C]			
Benzyl Alcohol	100-51-6	mg/kg	0.17	U			NS	NS	26,900	N	NMED[C]			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	U			NS	NS	807	N	NMED[C]			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	U			2	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	U			3,540	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	U			13,400	N	5,380	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.17	U			1,420	N	53,800	N	NMED[C]			
Carbazole	86-74-8	mg/kg	0.17	U			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.17	U			23,100	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.17	U			NS	NS	26,900	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.17	U			NS	NS	2,690	N	NMED[C]			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	U			24	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.17	U			NS	NS	269	N	NMED[C]			
Diethylphthalate	84-66-2	mg/kg	0.17	U			NS	NS	215,000	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.17	U			NS	NS	269,000	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.17	U			NS	NS	10,000	N	NMED			
Fluorene	86-73-7	mg/kg	0.17	U			NS	NS	10,000	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.17	U			117	N	215	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	U			2,400	N	269	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.17	U			4,670	N	188	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	U			240	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.17	U			198,000	N	53,700	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	U			0.38	N	NA	N	NMED[C]			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	UJ			4	N	2	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	U			37,900	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.17	U			633	N	159	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.17	U			1,350	N	353	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.17	U			346	N	989	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.17	U			NS	NS	8,070	N	NMED			
Phenol	108-95-2	mg/kg	0.17	U			NS	NS	77,400	N	NMED			
Pyrene	129-00-0	mg/kg	0.17	U			NS	NS	7,530	N	NMED			

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EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	8,070	N	NMED[C]			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	27	N	NMED[C]			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			626	N	2,420	N	NMED[C]			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.021	U			2,440	N	17	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.021	U			55	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.01	U			58	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.01	U			85	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.01	U			85	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.01	U			85	N	5	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.01	U			85	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (3)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000055	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg		U	0.0000048	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000026	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.00000069	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000033	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.00000014	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000077	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		UJ	0.00000017	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000018	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000096	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		UJ	0.00000015	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000019	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000022	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.00000011	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.000				0.00172	N	0.000226	N	NMED			

TABLE D1-J23-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID J23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	20,000				NS	NS	41,400	N	NMED		4.83E-01	Nervous
Antimony	7440-36-0	mg/kg	0.16	J			NS	NS	142	N	NMED		1.13E-03	
Arsenic	7440-38-2	mg/kg	0.98				216	N	41	N	NMED		2.38E-02	
Barium	7440-39-3	mg/kg	300				NS	NS	4,390	N	NMED		6.83E-02	
Beryllium	7440-41-7	mg/kg	0.95	J			2,710	N	148	N	NMED		6.42E-03	
Cadmium	7440-43-9	mg/kg	0.7	J			3,610	N	72	N	NMED		9.71E-03	
Calcium	7440-70-2	mg/kg	47,000				NS	NS	8,850,000	N	NMED		5.31E-03	
Chromium (Total) (4)	7440-47-3	mg/kg	14				468	N	134	N	NMED		1.04E-01	GI, Blood
Cobalt	7440-48-4	mg/kg	4.5				722	N	37	N	NMED		1.23E-01	Endocrine
Copper	7440-50-8	mg/kg	110				NS	NS	14,200	N	NMED		7.75E-03	
Iron	7439-89-6	mg/kg	12,000				NS	NS	248,000	N	NMED		4.84E-02	
Lead	7439-92-1	mg/kg	11				NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	7,800				NS	NS	1,550,000	N	NMED		5.03E-03	
Manganese	7439-96-5	mg/kg	740				NS	NS	464	Y	NMED		1.59E+00	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.018	J			NS	NS	21	N	NMED		8.70E-04	
Nickel	7440-02-0	mg/kg	12				20,500	N	753	N	NMED		1.59E-02	
Potassium	7440-09-7	mg/kg	2,300				NS	NS	20,800,000	N	NMED		1.11E-04	
Selenium	7782-49-2	mg/kg	1				NS	NS	1,750	N	NMED		5.71E-04	
Silver	7440-22-4	mg/kg	0.029				NS	NS	1,770	N	NMED		1.64E-05	
Sodium	7440-23-5	mg/kg	68				NS	NS	10,200,000	N	NMED		6.67E-06	
Thallium	7440-28-0	mg/kg	0.074	J			NS	NS	4	N	NMED		2.09E-02	
Vanadium	7440-62-2	mg/kg	9.9				NS	NS	614	N	NMED		1.61E-02	
Zinc	7440-66-6	mg/kg	27				NS	NS	106,000	N	NMED		2.55E-04	

TABLE D1-J23-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID J23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.33	U			NS	NS	12	N	NMED			
Nitrate	14797-55-8	mg/kg	36				NS	NS	566,000	N	NMED		6.36E-05	
Perchlorate	14797-73-0	mg/kg	0.002	U			NS	NS	248	N	NMED			
										Cumulative Risk/Hazard		**0E+00**	**2.5**	
										Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	2.1
Endocrine	0.12
GI	0.10
Blood	0.10
All Others	0.23

Notes:

[s] = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update).

2) NMED[C] = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

3) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

4) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service

J = Estimated

mg/kg = milligrams per kilogram

NS = No Standard

TEF = Toxicity Equivalency Factor

TEQ = Toxicity Equivalency Quotient

U = Nondetect

UJ = Estimated Nondetect

UTL = upper tolerance limit

TABLE D1-J24-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID J24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0019	UJ			28.1	N	2,350	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0019	UJ			NS	NS	14,400	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0019	UJ			7.98	N	1,560	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0019	UJ			18.8	N	2.61	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0019	UJ			78.6	N	15,600	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0019	UJ			NS	NS	440	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0019	UJ			29.3	N	141	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0019	UJ			NS	NS	63	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0048	UJ			0.051	N	7.09	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0019	UJ			240	N	82.9	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0019	UJ			NS	NS	300	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0048	UJ			0.0858	N	5.88	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0019	UJ			0.672	N	135	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0019	UJ			NS	NS	2,150	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0019	UJ			8.32	N	55.6	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0019	UJ			17.8	N	29	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0019	UJ			NS	NS	270	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0019	UJ			1,290	N	5,480	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0019	UJ			NS	NS	1,600	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0019	UJ			1,290	N	5,480	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0019	UJ			17.8	N	29	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0029	UJ			NS	NS	37,400	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0019	UJ			NS	NS	1,560	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.082	J			NS	NS	200	N	RSL		4.10E-04
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0019	UJ			NS	NS	1,600	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0019	UJ			NS	NS	5,810	N	RSL		
Acetone	67-64-1	mg/kg	0.13	J			NS	NS	66,300	N	NMED		1.96E-06
Benzene	71-43-2	mg/kg	0.0019	UJ			17.8	N	114	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0019	UJ			NS	NS	290	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0019	UJ			NS	NS	150	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0019	UJ			6.19	N	1,560	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0019	UJ			674	N	1,230	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0019	UJ			NS	NS	17.7	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0019	UJ			NS	NS	1,550	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0019	UJ			10.7	N	144	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0019	UJ			NS	NS	378	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0019	UJ			NS	NS	19,000	N	NMED		
Chloroform	67-66-3	mg/kg	0.0019	UJ			5.9	N	306	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0048	UJ			41.1	N	268	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0019	UJ			NS	NS	156	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0019	UJ			29.3	N	141	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0019	UJ			13.9	N	1,230	N	NMED		
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0019	UJ			NS	NS	57.9	N	NMED		

TABLE D1-J24-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID J24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dichlorodifluoromethane	75-71-8	mg/kg	0.0019	UJ			NS	NS	182	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0019	UJ			75.1	N	3,930	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0019	UJ			68.3	N	61.6	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0019	UJ			NS	NS	2,360	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0048	UJ			NS	NS	764	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0019	UJ			975	N	37,800	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.0095	UJ			766	N	409	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0019	UJ			NS	NS	3,900	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0019	UJ			NS	NS	3,800	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0019	UJ			22.6	N	162	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0024	UJ			NS	NS	805	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0019	UJ			NS	NS	2,360	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0019	UJ			NS	NS	7,800	N	RSL		
Styrene	100-42-5	mg/kg	0.0019	UJ			NS	NS	7,260	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0019	UJ			NS	NS	7,800	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0019	UJ			337	N	111	N	NMED		
Toluene	108-88-3	mg/kg	0.0019	UJ			NS	NS	5,230	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0019	UJ			NS	NS	210	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0019	UJ			29.3	N	141	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0019	UJ			15.5	N	6.77	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0019	UJ			NS	NS	1,230	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0019	UJ			0.742	N	113	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	UJ			240	N	82.9	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	UJ			NS	NS	2,150	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	UJ			1,290	N	5,480	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	UJ			1,290	N	5,480	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	UJ			NS	NS	6,160	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	UJ			484	N	61.6	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	UJ			NS	NS	185	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	UJ			NS	NS	1,230	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	UJ			NS	NS	123	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	UJ			17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	UJ			3.56	N	18.5	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	UJ			NS	NS	6,260	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.17	UJ			NS	NS	391	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.17	UJ			NS	NS	232	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	UJ			NS	NS	3,200	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.17	UJ			NS	NS	630	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	UJ			11.8	N	NS	NS	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.17	UJ			270	N	250	N	RSL[S]		
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	UJ			NS	NS	4.93	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		

TABLE D1-J24-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID J24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	UJ			NS	NS	6,300	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.17	UJ			27	N	32	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.17	UJ			270	N	250	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.17	UJ			NS	NS	3,480	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.17	UJ			NS	NS	1,740	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.17	UJ			NS	NS	17,400	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.17	UJ			1.53	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.13	UJ			1.12	N	17.4	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	UJ			1.53	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	UJ			NS	NS	1,740	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	UJ			15.3	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.17	UJ			NS	NS	250,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.17	UJ			NS	NS	6,300	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	UJ			NS	NS	190	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	UJ			3.11	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	UJ			99.3	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	UJ			380	N	1,230	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.17	UJ			2,900	N	13,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.17	UJ			153	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.17	UJ			NS	NS	6,160	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.17	UJ			NS	NS	630	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	UJ			0.153	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.17	UJ			NS	NS	78	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.17	UJ			NS	NS	49,300	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.17	UJ			NS	NS	61,600	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.17	UJ			NS	NS	2,320	N	NMED		
Fluorene	86-73-7	mg/kg	0.17	UJ			NS	NS	2,320	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.17	UJ			3.33	N	49.3	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	UJ			68.3	N	61.6	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.17	UJ			133	N	43.1	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	UJ			1.53	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.17	UJ			5,610	N	12,300	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.02	UJ			0.78	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.17	UJ			0.0234	Y	0.493	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	UJ			1,090	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.17	UJ			22.6	N	162	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.17	UJ			60.4	N	131	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.17	UJ			9.85	N	234	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.17	UJ			NS	NS	1,740	N	NMED		
Phenol	108-95-2	mg/kg	0.17	UJ			NS	NS	18,500	N	NMED		
Pyrene	129-00-0	mg/kg	0.17	UJ			NS	NS	1,740	N	NMED		

TABLE D1-J24-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID J24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			1,300	N	570	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.02	UJ			69.6	N	3.98	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.02	UJ			1.81	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.01	UJ			1.86	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.01	UJ			2.43	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.01	UJ			2.43	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.01	UJ			2.43	N	1.14	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.01	UJ			2.43	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		UJ	0.000025	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg		UJ	0.000025	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		UJ	0.00000016	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		UJ	0.00000037	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		UJ	0.000000073	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		UJ	0.000000096	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		UJ	0.000000062	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		UJ	0.000000093	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		UJ	0.000000075	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		UJ	0.00000012	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		UJ	0.000000086	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		UJ	0.000000098	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		UJ	0.000000086	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		UJ	0.000000066	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		UJ	0.0000001	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		UJ	0.00000018	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		UJ	0.0000001	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.0				0.000049	N	0.0000506	N	NMED		

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HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID J24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	19,000				NS	NS	78,000	N	NMED		2.44E-01
Antimony	7440-36-0	mg/kg	0.11	J			NS	NS	31.3	N	NMED		3.51E-03
Arsenic	7440-38-2	mg/kg	1				7.07	N	13	N	NMED	1.41E-06	7.69E-02
Barium	7440-39-3	mg/kg	310				NS	NS	15,600	N	NMED		1.99E-02
Beryllium	7440-41-7	mg/kg	1.3				64,400	N	156	N	NMED	2.02E-10	8.33E-03
Cadmium	7440-43-9	mg/kg	0.39				85,900	N	70.5	N	NMED	4.54E-11	5.53E-03
Calcium	7440-70-2	mg/kg	43,000				NS	NS	13,000,000	N	NMED		3.31E-03
Chromium (Total) (3)	7440-47-3	mg/kg	10				96.6	N	45,200	N	NMED	1.04E-06	2.21E-04
Cobalt	7440-48-4	mg/kg	4.2				17,200	N	23.4	N	NMED	2.44E-09	1.79E-01
Copper	7440-50-8	mg/kg	53	J			NS	NS	3,130	N	NMED		1.69E-02
Iron	7439-89-6	mg/kg	11,000				NS	NS	54,800	N	NMED		2.01E-01
Lead	7439-92-1	mg/kg	10				NS	NS	200	N	RSL		
Magnesium	7439-95-4	mg/kg	7,400				NS	NS	15,600,000	N	NMED		4.74E-04
Manganese	7439-96-5	mg/kg	640	J			NS	NS	10,500	N	NMED		6.10E-02
Mercury (Elemental)	7439-97-6	mg/kg	0.015	J			NS	NS	23.8	N	NMED		6.30E-04
Nickel	7440-02-0	mg/kg	9.1				595,000	N	1,560	N	NMED	1.53E-10	5.83E-03
Potassium	7440-09-7	mg/kg	2,700	J			NS	NS	15,600,000	N	NMED		1.73E-04
Selenium	7782-49-2	mg/kg	1.3				NS	NS	391	N	NMED		3.32E-03
Silver	7440-22-4	mg/kg	0.054	J			NS	NS	391	N	NMED		1.38E-04
Sodium	7440-23-5	mg/kg	72				NS	NS	7,820,000	N	NMED		9.21E-06
Thallium	7440-28-0	mg/kg	0.092	J			NS	NS	0.782	N	NMED		1.18E-01
Vanadium	7440-62-2	mg/kg	8.4	J			NS	NS	394	N	NMED		2.13E-02
Zinc	7440-66-6	mg/kg	21				NS	NS	23,500	N	NMED		8.94E-04

TABLE D1-J24-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID J24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.32	UJ			NS	NS	11.2	N	NMED		
Nitrate	14797-55-8	mg/kg	5.9	J			NS	NS	125,000	N	NMED		4.72E-05
Perchlorate	14797-73-0	mg/kg	0.0041	UJ			NS	NS	54.8	N	NMED		
										Cumulative Risk/Hazard		**2E-06**	**0.97**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect

TABLE D1-J24-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID J24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0019	UJ			137	N	39,400	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0019	UJ			NS	NS	72,500	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0019	UJ			39	N	26,000	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0019	UJ			92	N	12	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0019	UJ			383	N	260,000	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0019	UJ			NS	NS	2,260	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0019	UJ			146	N	695	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0019	UJ			NS	NS	930	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0048	UJ			1	N	34	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0019	UJ			1,250	N	423	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0019	UJ			NS	NS	1,800	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0048	UJ			1	N	41	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0019	UJ			3	N	738	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0019	UJ			NS	NS	13,000	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0019	UJ			41	N	286	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0019	UJ			87	N	137	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0019	UJ			NS	NS	1,500	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0019	UJ			6,730	N	90,800	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0019	UJ			NS	NS	23,000	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0019	UJ			6,730	N	90,800	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0019	UJ			87	N	137	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0029	UJ			NS	NS	411,000	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0019	UJ			NS	NS	26,000	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.082	J			NS	NS	1,300	N	RSL		6.31E-05
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0019	UJ			NS	NS	23,000	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0019	UJ			NS	NS	81,600	N	RSL		
Acetone	67-64-1	mg/kg	0.13	J			NS	NS	960,000	N	NMED		1.35E-07
Benzene	71-43-2	mg/kg	0.0019	UJ			87	N	729	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0019	UJ			NS	NS	1,800	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0019	UJ			NS	NS	630	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0019	UJ			30	N	26,000	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0019	UJ			1,760	N	18,300	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0019	UJ			NS	NS	95	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0019	UJ			NS	NS	8,540	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0019	UJ			53	N	1,020	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0019	UJ			NS	NS	2,160	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0019	UJ			NS	NS	89,500	N	NMED		
Chloroform	67-66-3	mg/kg	0.0019	UJ			29	N	2,000	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0048	UJ			201	N	1,260	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0019	UJ			NS	NS	2,600	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0019	UJ			146	N	695	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0019	UJ			67	N	18,300	N	NMED		

TABLE D1-J24-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID J24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0019	UJ			NS	NS	288	N	NMED		
Dichlorodifluoromethane	75-71-8	mg/kg	0.0019	UJ			NS	NS	865	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0019	UJ			29,000	N	368	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0019	UJ			52	N	916	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0019	UJ			NS	NS	14,200	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0048	UJ			NS	NS	3,730	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0019	UJ			4,820	N	178,000	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.0095	UJ			14,400	N	5,130	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0019	UJ			NS	NS	58,000	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0019	UJ			NS	NS	24,000	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0019	UJ			108	N	843	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0024	UJ			NS	NS	3,940	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0019	UJ			NS	NS	14,200	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0019	UJ			NS	NS	120,000	N	RSL		
Styrene	100-42-5	mg/kg	0.0019	UJ			NS	NS	51,300	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0019	UJ			NS	NS	120,000	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0019	UJ			1,650	N	629	N	NMED		
Toluene	108-88-3	mg/kg	0.0019	UJ			NS	NS	61,300	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0019	UJ			NS	NS	1,100	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0019	UJ			146	N	695	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0019	UJ			112	N	37	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0019	UJ			NS	NS	6,030	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0019	UJ			28	N	46	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	UJ			1,250	N	423	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	UJ			NS	NS	13,000	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	UJ			6,730	N	90,800	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	UJ			6,730	N	90,800	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	UJ			NS	NS	91,600	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	UJ			2,330	N	916	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	UJ			NS	NS	2,750	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	UJ			NS	NS	18,300	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	UJ			NS	NS	1,830	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	UJ			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	UJ			17	N	276	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	UJ			NS	NS	104,000	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.17	UJ			NS	NS	6,490	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.17	UJ			NS	NS	3,370	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	UJ			NS	NS	41,000	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.17	UJ			NS	NS	8,000	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	UJ			NS	NS	410	N	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.17	UJ			1,100	N	3,300	N	RSL[S]		

TABLE D1-J24-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID J24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	UJ			NS	NS	73	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	UJ			NS	NS	82,000	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.17	UJ			110	N	410	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.17	UJ			1,100	N	3,300	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.17	UJ			NS	NS	50,500	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.17	UJ			NS	NS	25,300	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.17	UJ			NS	NS	253,000	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.17	UJ			32	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.13	UJ			24	N	251	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	UJ			32	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	UJ			NS	NS	25,300	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	UJ			323	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.17	UJ			NS	NS	3,300,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.17	UJ			NS	NS	82,000	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	UJ			NS	NS	2,500	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	UJ			16	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	UJ			519	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	UJ			1,830	N	18,300	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.17	UJ			12,000	N	160,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.17	UJ			3,230	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.17	UJ			NS	NS	91,600	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.17	UJ			NS	NS	8,200	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	UJ			3	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.17	UJ			NS	NS	1,200	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.17	UJ			NS	NS	733,000	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.17	UJ			NS	NS	916,000	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.17	UJ			NS	NS	33,700	N	NMED		
Fluorene	86-73-7	mg/kg	0.17	UJ			NS	NS	33,700	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.17	UJ			16	N	733	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	UJ			52	N	916	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.17	UJ			641	N	641	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	UJ			32	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.17	UJ			27,000	N	183,000	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.02	UJ			3	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.17	UJ			1	N	7	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	UJ			5,240	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.17	UJ			108	N	843	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.17	UJ			293	N	1,540	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.17	UJ			45	N	3,180	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.17	UJ			NS	NS	27,500	N	NMED		
Phenol	108-95-2	mg/kg	0.17	UJ			NS	NS	275,000	N	NMED		
Pyrene	129-00-0	mg/kg	0.17	UJ			NS	NS	25,300	N	NMED		

TABLE D1-J24-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID J24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			5,300	N	7,400	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.02	UJ			304	N	57	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.02	UJ			9	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.01	UJ			9	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.01	UJ			11	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.01	UJ			11	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.01	UJ			11	N	16	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.01	UJ			11	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		UJ	0.000025	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg		UJ	0.000025	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		UJ	0.00000016	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		UJ	0.00000037	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		UJ	0.000000073	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		UJ	0.000000096	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		UJ	0.000000062	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		UJ	0.000000093	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		UJ	0.000000075	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		UJ	0.00000012	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		UJ	0.000000086	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		UJ	0.000000098	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		UJ	0.000000086	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		UJ	0.000000066	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		UJ	0.0000001	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		UJ	0.00000018	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		UJ	0.0000001	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.0				0.000238	N	0.000808	N	NMED		

TABLE D1-J24-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID J24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	19,000				NS	NS	1,290,000	N	NMED		1.47E-02
Antimony	7440-36-0	mg/kg	0.11	J			NS	NS	519	N	NMED		2.12E-04
Arsenic	7440-38-2	mg/kg	1				36	N	208	N	NMED	2.79E-07	4.81E-03
Barium	7440-39-3	mg/kg	310				NS	NS	255,000	N	NMED		1.22E-03
Beryllium	7440-41-7	mg/kg	1.3				313,000	N	2,580	N	NMED	4.15E-11	5.04E-04
Cadmium	7440-43-9	mg/kg	0.39				417,000	N	1,110	N	NMED	9.35E-12	3.51E-04
Calcium	7440-70-2	mg/kg	43,000				NS	NS	32,400,000	N	NMED		1.33E-03
Chromium (Total) (3)	7440-47-3	mg/kg	10				505	N	314,000	N	NMED	1.98E-07	3.18E-05
Cobalt	7440-48-4	mg/kg	4.2				83,400	N	388	N	NMED	5.04E-10	1.08E-02
Copper	7440-50-8	mg/kg	53	J			NS	NS	51,900	N	NMED		1.02E-03
Iron	7439-89-6	mg/kg	11,000				NS	NS	908,000	N	NMED		1.21E-02
Lead	7439-92-1	mg/kg	10				NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	7,400				NS	NS	5,680,000	N	NMED		1.30E-03
Manganese	7439-96-5	mg/kg	640	J			NS	NS	160,000	N	NMED		4.00E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.015	J			NS	NS	112	N	NMED		1.34E-04
Nickel	7440-02-0	mg/kg	9.1				2,890,000	N	25,700	N	NMED	3.15E-11	3.54E-04
Potassium	7440-09-7	mg/kg	2,700	J			NS	NS	76,200,000	N	NMED		3.54E-05
Selenium	7782-49-2	mg/kg	1.3				NS	NS	6,490	N	NMED		2.00E-04
Silver	7440-22-4	mg/kg	0.054	J			NS	NS	6,490	N	NMED		8.32E-06
Sodium	7440-23-5	mg/kg	72				NS	NS	37,300,000	N	NMED		1.93E-06
Thallium	7440-28-0	mg/kg	0.092	J			NS	NS	13	N	NMED		7.08E-03
Vanadium	7440-62-2	mg/kg	8.4	J			NS	NS	6,530	N	NMED		1.29E-03
Zinc	7440-66-6	mg/kg	21				NS	NS	38,900	N	NMED		5.40E-04

TABLE D1-J24-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID J24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.32	UJ			NS	NS	63	N	NMED		
Nitrate	14797-55-8	mg/kg	5.9	J			NS	NS	2,080,000	N	NMED		2.84E-06
Perchlorate	14797-73-0	mg/kg	0.0041	UJ			NS	NS	908	N	NMED		
										Cumulative Risk/Hazard		**5E-07**	**0.06**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
IEUBK = Integrated Exposure Uptake Biokentic Model
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect

TABLE D1-J24-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID J24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0019	UJ			659	N	10,600	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0019	UJ			NS	NS	13,600	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0019	UJ			197	N	7,080	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0019	UJ			4,300	N	2	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0019	UJ			1,820	N	70,800	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0019	UJ			NS	NS	424	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0019	UJ			781	N	130	N	NMED[3]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0019	UJ			NS	NS	283	N	NMED[2]			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0048	UJ			8	N	6	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0019	UJ			8,540	N	79	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0019	UJ			NS	NS	492	N	NMED[2]			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0048	UJ			6	N	8	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0019	UJ			16	N	140	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0019	UJ			NS	NS	2,500	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0019	UJ			195	N	54	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0019	UJ			415	N	25	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0019	UJ			NS	NS	422	N	NMED[2]			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0019	UJ			45,900	N	24,800	N	NMED[3]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0019	UJ			NS	NS	7,080	N	NMED[2]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0019	UJ			45,900	N	24,800	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0019	UJ			415	N	25	N	NMED[3]			
2-Butanone	78-93-3	mg/kg	0.0029	UJ			NS	NS	90,700	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0019	UJ			NS	NS	7,080	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.082	J			NS	NS	599	N	NMED[2]		1.37E-04	
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0019	UJ			NS	NS	7,080	N	NMED[2]			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0019	UJ			NS	NS	20,400	N	NMED[2]			
Acetone	67-64-1	mg/kg	0.13	J			NS	NS	242,000	N	NMED		5.37E-07	
Benzene	71-43-2	mg/kg	0.0019	UJ			423	N	142	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.0019	UJ			NS	NS	538	N	NMED[2]			
Bromochloromethane	74-97-5	mg/kg	0.0019	UJ			NS	NS	296	N	NMED[2]			
Bromodichloromethane	75-27-4	mg/kg	0.0019	UJ			143	N	7,080	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0019	UJ			23,700	N	5,380	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0019	UJ			NS	NS	18	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.0019	UJ			NS	NS	1,620	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0019	UJ			252	N	202	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0019	UJ			NS	NS	412	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0019	UJ			NS	NS	16,600	N	NMED			
Chloroform	67-66-3	mg/kg	0.0019	UJ			134	N	391	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0048	UJ			956	N	235	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0019	UJ			NS	NS	708	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0019	UJ			781	N	130	N	NMED[3]			
Dibromochloromethane	124-48-1	mg/kg	0.0019	UJ			340	N	5,380	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0019	UJ			NS	NS	54	N	NMED			

TABLE D1-J24-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID J24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Dichlorodifluoromethane	75-71-8	mg/kg	0.0019	UJ			NS	NS	161	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.0019	UJ			1,770	N	5,800	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0019	UJ			2,400	N	269	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0019	UJ			NS	NS	2,740	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0048	UJ			NS	NS	696	N	NMED[3]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0019	UJ			24,200	N	33,100	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.0095	UJ			89,600	N	1,210	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0019	UJ			NS	NS	17,700	N	NMED[C]			
n-Propylbenzene	103-65-1	mg/kg	0.0019	UJ			NS	NS	6,730	N	NMED[C]			
Naphthalene	91-20-3	mg/kg	0.0019	UJ			633	N	159	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0024	UJ			NS	NS	736	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.0019	UJ			NS	NS	2,740	N	NMED[3]			
sec-Butylbenzene	135-98-8	mg/kg	0.0019	UJ			NS	NS	35,400	N	NMED[C]			
Styrene	100-42-5	mg/kg	0.0019	UJ			NS	NS	10,200	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0019	UJ			NS	NS	35,400	N	NMED[C]			
Tetrachloroethene	127-18-4	mg/kg	0.0019	UJ			7,910	N	120	N	NMED			
Toluene	108-88-3	mg/kg	0.0019	UJ			NS	NS	14,000	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0019	UJ			NS	NS	206	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0019	UJ			781	N	130	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0019	UJ			5,370	N	7	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0019	UJ			NS	NS	1,130	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0019	UJ			161	N	162	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	UJ			8,540	N	79	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	UJ			NS	NS	2,500	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	UJ			45,900	N	24,800	N	NMED[3]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	UJ			45,900	N	24,800	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	UJ			NS	NS	26,900	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	UJ			17,000	N	269	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	UJ			NS	NS	807	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	UJ			NS	NS	5,380	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	UJ			NS	NS	538	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	UJ			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	UJ			165	N	81	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	UJ			NS	NS	28,300	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.17	UJ			NS	NS	1,770	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.17	UJ			NS	NS	1,000	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	UJ			NS	NS	13,500	N	NMED[C]			
2-Nitroaniline	88-74-4	mg/kg	0.17	UJ			NS	NS	2,690	N	NMED[C]			
2-Nitrophenol	88-75-5	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	UJ			410	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.17	UJ			135	N	1,080	N	NMED[SC]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	UJ			NS	NS	22	N	NMED			

TABLE D1-J24-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID J24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	UJ			NS	NS	26,900	N	NMED[C]			
4-Chloroaniline	106-47-8	mg/kg	0.17	UJ			14	N	135	N	NMED[C]			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.17	UJ			135	N	1,080	N	NMED[C]			
4-Nitrophenol	100-02-7	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.17	UJ			NS	NS	15,100	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.17	UJ			NS	NS	7,530	N	NMED[3]			
Anthracene	120-12-7	mg/kg	0.17	UJ			NS	NS	75,300	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.17	UJ			240	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.13	UJ			173	N	15	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	UJ			240	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	UJ			NS	NS	7,530	N	NMED[3]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	UJ			2,310	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.17	UJ			NS	NS	1,080,000	N	NMED[C]			
Benzyl Alcohol	100-51-6	mg/kg	0.17	UJ			NS	NS	26,900	N	NMED[C]			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	UJ			NS	NS	807	N	NMED[C]			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	UJ			2	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	UJ			3,540	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	UJ			13,400	N	5,380	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.17	UJ			1,420	N	53,800	N	NMED[C]			
Carbazole	86-74-8	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.17	UJ			23,100	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.17	UJ			NS	NS	26,900	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.17	UJ			NS	NS	2,690	N	NMED[C]			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	UJ			24	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.17	UJ			NS	NS	269	N	NMED[C]			
Diethylphthalate	84-66-2	mg/kg	0.17	UJ			NS	NS	215,000	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.17	UJ			NS	NS	269,000	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.17	UJ			NS	NS	10,000	N	NMED			
Fluorene	86-73-7	mg/kg	0.17	UJ			NS	NS	10,000	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.17	UJ			117	N	215	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	UJ			2,400	N	269	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.17	UJ			4,670	N	188	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	UJ			240	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.17	UJ			198,000	N	53,700	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.02	UJ			0.38	N	NA	N	NMED[C]			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.17	UJ			4	N	2	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	UJ			37,900	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.17	UJ			633	N	159	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.17	UJ			1,350	N	353	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.17	UJ			346	N	989	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.17	UJ			NS	NS	8,070	N	NMED			
Phenol	108-95-2	mg/kg	0.17	UJ			NS	NS	77,400	N	NMED			
Pyrene	129-00-0	mg/kg	0.17	UJ			NS	NS	7,530	N	NMED			

TABLE D1-J24-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID J24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	8,070	N	NMED[C]			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	27	N	NMED[C]			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			626	N	2,420	N	NMED[C]			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.02	UJ			2,440	N	17	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.02	UJ			55	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.01	UJ			58	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.01	UJ			85	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.01	UJ			85	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.01	UJ			85	N	5	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.01	UJ			85	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (3)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		UJ	0.000025	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg		UJ	0.000025	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		UJ	0.00000016	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		UJ	0.00000037	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		UJ	0.000000073	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		UJ	0.000000096	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		UJ	0.000000062	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		UJ	0.000000093	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		UJ	0.000000075	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		UJ	0.00000012	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		UJ	0.000000086	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		UJ	0.000000098	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		UJ	0.000000086	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		UJ	0.000000066	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		UJ	0.0000001	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		UJ	0.00000018	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		UJ	0.0000001	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.0				0.00172	N	0.000226	N	NMED			

TABLE D1-J24-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID J24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	19,000				NS	NS	41,400	N	NMED		4.59E-01	Nervous
Antimony	7440-36-0	mg/kg	0.11	J			NS	NS	142	N	NMED		7.75E-04	
Arsenic	7440-38-2	mg/kg	1				216	N	41	N	NMED	4.63E-08	2.43E-02	
Barium	7440-39-3	mg/kg	310				NS	NS	4,390	N	NMED		7.06E-02	
Beryllium	7440-41-7	mg/kg	1.3				2,710	N	148	N	NMED	4.80E-09	8.78E-03	
Cadmium	7440-43-9	mg/kg	0.39				3,610	N	72	N	NMED	1.08E-09	5.41E-03	
Calcium	7440-70-2	mg/kg	43,000				NS	NS	8,850,000	N	NMED		4.86E-03	
Chromium (Total) (4)	7440-47-3	mg/kg	10				468	N	134	N	NMED	2.14E-07	7.46E-02	
Cobalt	7440-48-4	mg/kg	4.2				722	N	37	N	NMED	5.82E-08	1.14E-01	Endocrine
Copper	7440-50-8	mg/kg	53	J			NS	NS	14,200	N	NMED		3.73E-03	
Iron	7439-89-6	mg/kg	11,000				NS	NS	248,000	N	NMED		4.44E-02	
Lead	7439-92-1	mg/kg	10				NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	7,400				NS	NS	1,550,000	N	NMED		4.77E-03	
Manganese	7439-96-5	mg/kg	640	J			NS	NS	464	Y	NMED		1.38E+00	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.015	J			NS	NS	21	N	NMED		7.25E-04	
Nickel	7440-02-0	mg/kg	9.1				20,500	N	753	N	NMED	4.44E-09	1.21E-02	
Potassium	7440-09-7	mg/kg	2,700	J			NS	NS	20,800,000	N	NMED		1.30E-04	
Selenium	7782-49-2	mg/kg	1.3				NS	NS	1,750	N	NMED		7.43E-04	
Silver	7440-22-4	mg/kg	0.054	J			NS	NS	1,770	N	NMED		3.05E-05	
Sodium	7440-23-5	mg/kg	72				NS	NS	10,200,000	N	NMED		7.06E-06	
Thallium	7440-28-0	mg/kg	0.092	J			NS	NS	4	N	NMED		2.60E-02	
Vanadium	7440-62-2	mg/kg	8.4	J			NS	NS	614	N	NMED		1.37E-02	
Zinc	7440-66-6	mg/kg	21				NS	NS	106,000	N	NMED		1.98E-04	

TABLE D1-J24-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID J24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.32	UJ			NS	NS	12	N	NMED			
Nitrate	14797-55-8	mg/kg	5.9	J			NS	NS	566,000	N	NMED		1.04E-05	
Perchlorate	14797-73-0	mg/kg	0.0041	UJ			NS	NS	248	N	NMED			
										Cumulative Risk/Hazard		**3E-07**	**2.2**	
										Exceeds Target Level		**N**	Y	

System	Hazard Quotient
Nervous	1.8
Endocrine	0.11
All Others	0.30

Notes:

[a] = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update).

2) NMED[C] = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

3) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

4) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service

J = Estimated

mg/kg = milligrams per kilogram

NS = No Standard

U = Nondetect

UJ = Estimated Nondetect

TABLE D1-J25-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID J25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.002	UJ			28.1	N	2,350	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.002	UJ			NS	NS	14,400	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.002	UJ			7.98	N	1,560	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.002	UJ			18.8	N	2.61	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.002	UJ			78.6	N	15,600	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.002	UJ			NS	NS	440	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.002	UJ			29.3	N	141	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.002	UJ			NS	NS	63	N	RSL			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0049	UJ			0.051	N	7.09	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.002	UJ			240	N	82.9	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.002	UJ			NS	NS	300	N	RSL			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0049	UJ			0.0858	N	5.88	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.002	UJ			0.672	N	135	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.002	UJ			NS	NS	2,150	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.002	UJ			8.32	N	55.6	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.002	UJ			17.8	N	29	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.002	UJ			NS	NS	270	N	RSL			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.002	UJ			1,290	N	5,480	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.002	UJ			NS	NS	1,600	N	RSL			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.002	UJ			1,290	N	5,480	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.002	UJ			17.8	N	29	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.003	UJ			NS	NS	37,400	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.002	UJ			NS	NS	1,560	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.002	UJ			NS	NS	200	N	RSL			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.002	UJ			NS	NS	1,600	N	RSL			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.002	UJ			NS	NS	5,810	N	RSL			
Acetone	67-64-1	mg/kg	0.068	J			NS	NS	66,300	N	NMED		1.03E-06	
Benzene	71-43-2	mg/kg	0.002	UJ			17.8	N	114	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.002	UJ			NS	NS	290	N	RSL			
Bromochloromethane	74-97-5	mg/kg	0.002	UJ			NS	NS	150	N	RSL			
Bromodichloromethane	75-27-4	mg/kg	0.002	UJ			6.19	N	1,560	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.002	UJ			674	N	1,230	N	NMED			
Bromomethane	74-83-9	mg/kg	0.002	UJ			NS	NS	17.7	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.002	UJ			NS	NS	1,550	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.002	UJ			10.7	N	144	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.002	UJ			NS	NS	378	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.002	UJ			NS	NS	19,000	N	NMED			
Chloroform	67-66-3	mg/kg	0.002	UJ			5.9	N	306	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0049	UJ			41.1	N	268	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.002	UJ			NS	NS	156	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.002	UJ			29.3	N	141	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.002	UJ			13.9	N	1,230	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.002	UJ			NS	NS	57.9	N	NMED			

TABLE D1-J25-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID J25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Dichlorodifluoromethane	75-71-8	mg/kg	0.002	UJ			NS	NS	182	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.002	UJ			75.1	N	3,930	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.002	UJ			68.3	N	61.6	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.002	UJ			NS	NS	2,360	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0049	UJ			NS	NS	764	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.002	UJ			975	N	37,800	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.0099	UJ			766	N	409	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.002	UJ			NS	NS	3,900	N	RSL			
n-Propylbenzene	103-65-1	mg/kg	0.002	UJ			NS	NS	3,800	N	RSL			
Naphthalene	91-20-3	mg/kg	0.002	UJ			22.6	N	162	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0025	UJ			NS	NS	805	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.002	UJ			NS	NS	2,360	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.002	UJ			NS	NS	7,800	N	RSL			
Styrene	100-42-5	mg/kg	0.002	UJ			NS	NS	7,260	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.002	UJ			NS	NS	7,800	N	RSL			
Tetrachloroethene	127-18-4	mg/kg	0.002	UJ			337	N	111	N	NMED			
Toluene	108-88-3	mg/kg	0.002	UJ			NS	NS	5,230	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.002	UJ			NS	NS	210	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.002	UJ			29.3	N	141	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.002	UJ			15.5	N	6.77	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.002	UJ			NS	NS	1,230	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.002	UJ			0.742	N	113	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	UJ			240	N	82.9	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	UJ			NS	NS	2,150	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	UJ			1,290	N	5,480	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	UJ			1,290	N	5,480	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	UJ			NS	NS	6,160	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	UJ			484	N	61.6	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	UJ			NS	NS	185	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	UJ			NS	NS	1,230	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	UJ			NS	NS	123	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	UJ			17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	UJ			3.56	N	18.5	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	UJ			NS	NS	6,260	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.17	UJ			NS	NS	391	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.17	UJ			NS	NS	232	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	UJ			NS	NS	3,200	N	RSL			
2-Nitroaniline	88-74-4	mg/kg	0.17	UJ			NS	NS	630	N	RSL			
2-Nitrophenol	88-75-5	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	UJ			11.8	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.17	UJ			270	N	250	N	RSL[S]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	UJ			NS	NS	4.93	N	NMED			
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			

TABLE D1-J25-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID J25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	UJ			NS	NS	6,300	N	RSL			
4-Chloroaniline	106-47-8	mg/kg	0.17	UJ			27	N	32	N	RSL			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.17	UJ			270	N	250	N	RSL			
4-Nitrophenol	100-02-7	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.17	UJ			NS	NS	3,480	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.17	UJ			NS	NS	1,740	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.17	UJ			NS	NS	17,400	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.17	UJ			1.53	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.13	UJ			1.12	N	17.4	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	UJ			1.53	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	UJ			NS	NS	1,740	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	UJ			15.3	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.17	UJ			NS	NS	250,000	N	RSL			
Benzyl Alcohol	100-51-6	mg/kg	0.17	UJ			NS	NS	6,300	N	RSL			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	UJ			NS	NS	190	N	RSL			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	UJ			3.11	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	UJ			99.3	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	UJ			380	N	1,230	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.17	UJ			2,900	N	13,000	N	RSL			
Carbazole	86-74-8	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.17	UJ			153	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.17	UJ			NS	NS	6,160	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.17	UJ			NS	NS	630	N	RSL			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	UJ			0.153	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.17	UJ			NS	NS	78	N	RSL			
Diethylphthalate	84-66-2	mg/kg	0.17	UJ			NS	NS	49,300	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.17	UJ			NS	NS	61,600	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.17	UJ			NS	NS	2,320	N	NMED			
Fluorene	86-73-7	mg/kg	0.17	UJ			NS	NS	2,320	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.17	UJ			3.33	N	49.3	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	UJ			68.3	N	61.6	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.17	UJ			133	N	43.1	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	UJ			1.53	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.17	UJ			5,610	N	12,300	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.021	UJ			0.78	N	NS	NS	RSL			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.17	UJ			0.0234	Y	0.493	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	UJ			1,090	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.17	UJ			22.6	N	162	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.17	UJ			60.4	N	131	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.17	UJ			9.85	N	234	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.17	UJ			NS	NS	1,740	N	NMED			
Phenol	108-95-2	mg/kg	0.17	UJ			NS	NS	18,500	N	NMED			
Pyrene	129-00-0	mg/kg	0.17	UJ			NS	NS	1,740	N	NMED			

TABLE D1-J25-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID J25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	2,200	N	RSL			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	6.3	N	RSL			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			211	N	36	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			3.56	N	18.5	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	7.7	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			31.6	N	70.4	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	6.16	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	7.64	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			333	N	247	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			83.1	N	301	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	156	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			60.4	N	131	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			313	N	6.16	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	3,850	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			1,300	N	570	N	RSL			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.02	UJ			69.6	N	3.98	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.02	UJ			1.81	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.01	UJ			1.86	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.01	UJ			2.43	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.01	UJ			2.43	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.01	UJ			2.43	N	1.14	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.01	UJ			2.43	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (2)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		UJ	0.000000096	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg		UJ	0.0000022	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		UJ	0.000000052	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		UJ	0.000000078	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		UJ	0.000000066	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		UJ	0.00000011	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg	0.000000011	J	0.00000011	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		UJ	0.00000011	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		UJ	0.000000056	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		UJ	0.00000014	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		UJ	0.000000057	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		UJ	0.000000086	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		UJ	0.000000098	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		UJ	0.000000078	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		UJ	0.000000089	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		UJ	0.00000028	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		UJ	0.000000097	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.000000011				0.000049	N	0.0000506	N	NMED	2.24E-09	2.17E-04	

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HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID J25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	20,000				NS	NS	78,000	N	NMED		2.56E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	UJ			NS	NS	31.3	N	NMED			
Arsenic	7440-38-2	mg/kg	1.9				7.07	N	13	N	NMED		1.46E-01	Heart/Endocrine
Barium	7440-39-3	mg/kg	350				NS	NS	15,600	N	NMED		2.24E-02	
Beryllium	7440-41-7	mg/kg	0.98	J			64,400	N	156	N	NMED		6.28E-03	
Cadmium	7440-43-9	mg/kg	0.57				85,900	N	70.5	N	NMED		8.09E-03	
Calcium	7440-70-2	mg/kg	38,000				NS	NS	13,000,000	N	NMED		2.92E-03	
Chromium (Total) (3)	7440-47-3	mg/kg	14				96.6	N	45,200	N	NMED		3.10E-04	
Cobalt	7440-48-4	mg/kg	4.9				17,200	N	23.4	N	NMED		2.09E-01	Endocrine
Copper	7440-50-8	mg/kg	92				NS	NS	3,130	N	NMED		2.94E-02	
Iron	7439-89-6	mg/kg	9,900				NS	NS	54,800	N	NMED		1.81E-01	
Lead	7439-92-1	mg/kg	12				NS	NS	200	N	RSL			
Magnesium	7439-95-4	mg/kg	7,300				NS	NS	15,600,000	N	NMED		4.68E-04	
Manganese	7439-96-5	mg/kg	450				NS	NS	10,500	N	NMED		4.29E-02	
Mercury (Elemental)	7439-97-6	mg/kg	0.024	J			NS	NS	23.8	N	NMED		1.01E-03	
Nickel	7440-02-0	mg/kg	12				595,000	N	1,560	N	NMED		7.69E-03	
Potassium	7440-09-7	mg/kg	2,300				NS	NS	15,600,000	N	NMED		1.47E-04	
Selenium	7782-49-2	mg/kg	1.2				NS	NS	391	N	NMED		3.07E-03	
Silver	7440-22-4	mg/kg	0.094	J			NS	NS	391	N	NMED		2.40E-04	
Sodium	7440-23-5	mg/kg	61				NS	NS	7,820,000	N	NMED		7.80E-06	
Thallium	7440-28-0	mg/kg	0.08	J			NS	NS	0.782	N	NMED		1.02E-01	Hair/Coat/Eyes
Vanadium	7440-62-2	mg/kg	12				NS	NS	394	N	NMED		3.05E-02	
Zinc	7440-66-6	mg/kg	27				NS	NS	23,500	N	NMED		1.15E-03	

TABLE D1-J25-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR HIGH DENSITY BUFFER AREA GRID J25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.32	UJ			NS	NS	11.2	N	NMED			
Nitrate	14797-55-8	mg/kg	38	J			NS	NS	125,000	N	NMED		3.04E-04	
Perchlorate	14797-73-0	mg/kg	0.0041	UJ			NS	NS	54.8	N	NMED			
										Cumulative Risk/Hazard		**2E-09**	**1.1**	
										Exceeds Target Level		**N**	**Y**	

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect

System	Hazard Quotient
Nervous	0.3
Endocrine	0.36
Heart	0.15
Hair/Coat	0.10
Eyes	0.10
All Others	0.34

TABLE D1-J25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID J25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.002	UJ			137	N	39,400	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.002	UJ			NS	NS	72,500	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.002	UJ			39	N	26,000	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.002	UJ			92	N	12	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.002	UJ			383	N	260,000	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.002	UJ			NS	NS	2,260	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.002	UJ			146	N	695	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.002	UJ			NS	NS	930	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0049	UJ			1	N	34	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.002	UJ			1,250	N	423	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.002	UJ			NS	NS	1,800	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0049	UJ			1	N	41	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.002	UJ			3	N	738	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.002	UJ			NS	NS	13,000	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.002	UJ			41	N	286	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.002	UJ			87	N	137	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.002	UJ			NS	NS	1,500	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.002	UJ			6,730	N	90,800	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.002	UJ			NS	NS	23,000	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.002	UJ			6,730	N	90,800	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.002	UJ			87	N	137	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.003	UJ			NS	NS	411,000	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.002	UJ			NS	NS	26,000	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.002	UJ			NS	NS	1,300	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.002	UJ			NS	NS	23,000	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.002	UJ			NS	NS	81,600	N	RSL		
Acetone	67-64-1	mg/kg	0.068	J			NS	NS	960,000	N	NMED		7.08E-08
Benzene	71-43-2	mg/kg	0.002	UJ			87	N	729	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.002	UJ			NS	NS	1,800	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.002	UJ			NS	NS	630	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.002	UJ			30	N	26,000	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.002	UJ			1,760	N	18,300	N	NMED		
Bromomethane	74-83-9	mg/kg	0.002	UJ			NS	NS	95	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.002	UJ			NS	NS	8,540	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.002	UJ			53	N	1,020	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.002	UJ			NS	NS	2,160	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.002	UJ			NS	NS	89,500	N	NMED		
Chloroform	67-66-3	mg/kg	0.002	UJ			29	N	2,000	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0049	UJ			201	N	1,260	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.002	UJ			NS	NS	2,600	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.002	UJ			146	N	695	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.002	UJ			67	N	18,300	N	NMED		

TABLE D1-J25-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID J25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.002	UJ			NS	NS	288	N	NMED		
Dichlorodifluoromethane	75-71-8	mg/kg	0.002	UJ			NS	NS	865	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.002	UJ			29,000	N	368	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.002	UJ			52	N	916	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.002	UJ			NS	NS	14,200	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0049	UJ			NS	NS	3,730	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.002	UJ			4,820	N	178,000	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.0099	UJ			14,400	N	5,130	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.002	UJ			NS	NS	58,000	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.002	UJ			NS	NS	24,000	N	RSL		
Naphthalene	91-20-3	mg/kg	0.002	UJ			108	N	843	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0025	UJ			NS	NS	3,940	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.002	UJ			NS	NS	14,200	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.002	UJ			NS	NS	120,000	N	RSL		
Styrene	100-42-5	mg/kg	0.002	UJ			NS	NS	51,300	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.002	UJ			NS	NS	120,000	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.002	UJ			1,650	N	629	N	NMED		
Toluene	108-88-3	mg/kg	0.002	UJ			NS	NS	61,300	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.002	UJ			NS	NS	1,100	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.002	UJ			146	N	695	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.002	UJ			112	N	37	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.002	UJ			NS	NS	6,030	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.002	UJ			28	N	46	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	UJ			1,250	N	423	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	UJ			NS	NS	13,000	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	UJ			6,730	N	90,800	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	UJ			6,730	N	90,800	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	UJ			NS	NS	91,600	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	UJ			2,330	N	916	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	UJ			NS	NS	2,750	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	UJ			NS	NS	18,300	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	UJ			NS	NS	1,830	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	UJ			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	UJ			17	N	276	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	UJ			NS	NS	104,000	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.17	UJ			NS	NS	6,490	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.17	UJ			NS	NS	3,370	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	UJ			NS	NS	41,000	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.17	UJ			NS	NS	8,000	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	UJ			NS	NS	410	N	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.17	UJ			1,100	N	3,300	N	RSL[S]		

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	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	UJ			NS	NS	73	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	UJ			NS	NS	82,000	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.17	UJ			110	N	410	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.17	UJ			1,100	N	3,300	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.17	UJ			NS	NS	50,500	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.17	UJ			NS	NS	25,300	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.17	UJ			NS	NS	253,000	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.17	UJ			32	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.13	UJ			24	N	251	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	UJ			32	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	UJ			NS	NS	25,300	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	UJ			323	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.17	UJ			NS	NS	3,300,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.17	UJ			NS	NS	82,000	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	UJ			NS	NS	2,500	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	UJ			16	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	UJ			519	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	UJ			1,830	N	18,300	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.17	UJ			12,000	N	160,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.17	UJ			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.17	UJ			3,230	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.17	UJ			NS	NS	91,600	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.17	UJ			NS	NS	8,200	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	UJ			3	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.17	UJ			NS	NS	1,200	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.17	UJ			NS	NS	733,000	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.17	UJ			NS	NS	916,000	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.17	UJ			NS	NS	33,700	N	NMED		
Fluorene	86-73-7	mg/kg	0.17	UJ			NS	NS	33,700	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.17	UJ			16	N	733	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	UJ			52	N	916	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.17	UJ			641	N	641	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	UJ			32	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.17	UJ			27,000	N	183,000	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.021	UJ			3	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.17	UJ			1	N	7	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	UJ			5,240	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.17	UJ			108	N	843	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.17	UJ			293	N	1,540	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.17	UJ			45	N	3,180	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.17	UJ			NS	NS	27,500	N	NMED		
Phenol	108-95-2	mg/kg	0.17	UJ			NS	NS	275,000	N	NMED		
Pyrene	129-00-0	mg/kg	0.17	UJ			NS	NS	25,300	N	NMED		

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MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			5,300	N	7,400	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.02	UJ			304	N	57	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.02	UJ			9	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.01	UJ			9	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.01	UJ			11	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.01	UJ			11	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.01	UJ			11	N	16	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.01	UJ			11	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		UJ	0.000000096	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg		UJ	0.0000022	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		UJ	0.000000052	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		UJ	0.000000078	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		UJ	0.000000066	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		UJ	0.00000011	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg	0.000000011	J	0.00000011	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		UJ	0.00000011	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		UJ	0.000000056	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		UJ	0.00000014	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		UJ	0.000000057	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		UJ	0.000000086	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		UJ	0.000000098	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		UJ	0.000000078	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		UJ	0.000000089	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		UJ	0.00000028	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		UJ	0.000000097	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.000000011				0.000238	N	0.000808	N	NMED	4.62E-10	1.36E-05

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METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	20,000				NS	NS	1,290,000	N	NMED		1.55E-02
Antimony	7440-36-0	mg/kg	0.15	UJ			NS	NS	519	N	NMED		
Arsenic	7440-38-2	mg/kg	1.9				36	N	208	N	NMED	5.29E-07	9.13E-03
Barium	7440-39-3	mg/kg	350				NS	NS	255,000	N	NMED		1.37E-03
Beryllium	7440-41-7	mg/kg	0.98	J			313,000	N	2,580	N	NMED	3.13E-11	3.80E-04
Cadmium	7440-43-9	mg/kg	0.57				417,000	N	1,110	N	NMED	1.37E-11	5.14E-04
Calcium	7440-70-2	mg/kg	38,000				NS	NS	32,400,000	N	NMED		1.17E-03
Chromium (Total) (3)	7440-47-3	mg/kg	14				505	N	314,000	N	NMED	2.77E-07	4.46E-05
Cobalt	7440-48-4	mg/kg	4.9				83,400	N	388	N	NMED	5.88E-10	1.26E-02
Copper	7440-50-8	mg/kg	92				NS	NS	51,900	N	NMED		1.77E-03
Iron	7439-89-6	mg/kg	9,900				NS	NS	908,000	N	NMED		1.09E-02
Lead	7439-92-1	mg/kg	12				NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	7,300				NS	NS	5,680,000	N	NMED		1.29E-03
Manganese	7439-96-5	mg/kg	450				NS	NS	160,000	N	NMED		2.81E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.024	J			NS	NS	112	N	NMED		2.14E-04
Nickel	7440-02-0	mg/kg	12				2,890,000	N	25,700	N	NMED	4.15E-11	4.67E-04
Potassium	7440-09-7	mg/kg	2,300				NS	NS	76,200,000	N	NMED		3.02E-05
Selenium	7782-49-2	mg/kg	1.2				NS	NS	6,490	N	NMED		1.85E-04
Silver	7440-22-4	mg/kg	0.094	J			NS	NS	6,490	N	NMED		1.45E-05
Sodium	7440-23-5	mg/kg	61				NS	NS	37,300,000	N	NMED		1.64E-06
Thallium	7440-28-0	mg/kg	0.08	J			NS	NS	13	N	NMED		6.15E-03
Vanadium	7440-62-2	mg/kg	12				NS	NS	6,530	N	NMED		1.84E-03
Zinc	7440-66-6	mg/kg	27				NS	NS	38,900	N	NMED		6.94E-04

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OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.32	UJ			NS	NS	63	N	NMED		
Nitrate	14797-55-8	mg/kg	38	J			NS	NS	2,080,000	N	NMED		1.83E-05
Perchlorate	14797-73-0	mg/kg	0.0041	UJ			NS	NS	908	N	NMED		
										Cumulative Risk/Hazard		**8E-07**	**0.07**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
IEUBK = Integrated Exposure Uptake Biokentic Model
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect

TABLE D1-J25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID J25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.002	UJ			659	N	10,600	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.002	UJ			NS	NS	13,600	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.002	UJ			197	N	7,080	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.002	UJ			4,300	N	2	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.002	UJ			1,820	N	70,800	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.002	UJ			NS	NS	424	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.002	UJ			781	N	130	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.002	UJ			NS	NS	283	N	NMED[C]			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0049	UJ			8	N	6	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.002	UJ			8,540	N	79	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.002	UJ			NS	NS	492	N	NMED[C]			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0049	UJ			6	N	8	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.002	UJ			16	N	140	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.002	UJ			NS	NS	2,500	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.002	UJ			195	N	54	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.002	UJ			415	N	25	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.002	UJ			NS	NS	422	N	NMED[C]			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.002	UJ			45,900	N	24,800	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.002	UJ			NS	NS	7,080	N	NMED[C]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.002	UJ			45,900	N	24,800	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.002	UJ			415	N	25	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.003	UJ			NS	NS	90,700	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.002	UJ			NS	NS	7,080	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.002	UJ			NS	NS	599	N	NMED[C]			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.002	UJ			NS	NS	7,080	N	NMED[C]			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.002	UJ			NS	NS	20,400	N	NMED[C]			
Acetone	67-64-1	mg/kg	0.068	J			NS	NS	242,000	N	NMED		2.81E-07	
Benzene	71-43-2	mg/kg	0.002	UJ			423	N	142	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.002	UJ			NS	NS	538	N	NMED[C]			
Bromochloromethane	74-97-5	mg/kg	0.002	UJ			NS	NS	296	N	NMED[C]			
Bromodichloromethane	75-27-4	mg/kg	0.002	UJ			143	N	7,080	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.002	UJ			23,700	N	5,380	N	NMED			
Bromomethane	74-83-9	mg/kg	0.002	UJ			NS	NS	18	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.002	UJ			NS	NS	1,620	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.002	UJ			252	N	202	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.002	UJ			NS	NS	412	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.002	UJ			NS	NS	16,600	N	NMED			
Chloroform	67-66-3	mg/kg	0.002	UJ			134	N	391	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0049	UJ			956	N	235	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.002	UJ			NS	NS	708	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.002	UJ			781	N	130	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.002	UJ			340	N	5,380	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.002	UJ			NS	NS	54	N	NMED			

TABLE D1-J25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID J25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Dichlorodifluoromethane	75-71-8	mg/kg	0.002	UJ			NS	NS	161	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.002	UJ			1,770	N	5,800	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.002	UJ			2,400	N	269	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.002	UJ			NS	NS	2,740	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0049	UJ			NS	NS	696	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.002	UJ			24,200	N	33,100	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.0099	UJ			89,600	N	1,210	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.002	UJ			NS	NS	17,700	N	NMED[C]			
n-Propylbenzene	103-65-1	mg/kg	0.002	UJ			NS	NS	6,730	N	NMED[C]			
Naphthalene	91-20-3	mg/kg	0.002	UJ			633	N	159	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0025	UJ			NS	NS	736	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.002	UJ			NS	NS	2,740	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.002	UJ			NS	NS	35,400	N	NMED[C]			
Styrene	100-42-5	mg/kg	0.002	UJ			NS	NS	10,200	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.002	UJ			NS	NS	35,400	N	NMED[C]			
Tetrachloroethene	127-18-4	mg/kg	0.002	UJ			7,910	N	120	N	NMED			
Toluene	108-88-3	mg/kg	0.002	UJ			NS	NS	14,000	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.002	UJ			NS	NS	206	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.002	UJ			781	N	130	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.002	UJ			5,370	N	7	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.002	UJ			NS	NS	1,130	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.002	UJ			161	N	162	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	UJ			8,540	N	79	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	UJ			NS	NS	2,500	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	UJ			45,900	N	24,800	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	UJ			45,900	N	24,800	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	UJ			NS	NS	26,900	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	UJ			17,000	N	269	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	UJ			NS	NS	807	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	UJ			NS	NS	5,380	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	UJ			NS	NS	538	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	UJ			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	UJ			165	N	81	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	UJ			NS	NS	28,300	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.17	UJ			NS	NS	1,770	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.17	UJ			NS	NS	1,000	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	UJ			NS	NS	13,500	N	NMED[C]			
2-Nitroaniline	88-74-4	mg/kg	0.17	UJ			NS	NS	2,690	N	NMED[C]			
2-Nitrophenol	88-75-5	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	UJ			410	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.17	UJ			135	N	1,080	N	NMED[SC]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	UJ			NS	NS	22	N	NMED			

TABLE D1-J25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID J25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	UJ			NS	NS	26,900	N	NMED[C]			
4-Chloroaniline	106-47-8	mg/kg	0.17	UJ			14	N	135	N	NMED[C]			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.17	UJ			135	N	1,080	N	NMED[C]			
4-Nitrophenol	100-02-7	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.17	UJ			NS	NS	15,100	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.17	UJ			NS	NS	7,530	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.17	UJ			NS	NS	75,300	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.17	UJ			240	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.13	UJ			173	N	15	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	UJ			240	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	UJ			NS	NS	7,530	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	UJ			2,310	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.17	UJ			NS	NS	1,080,000	N	NMED[C]			
Benzyl Alcohol	100-51-6	mg/kg	0.17	UJ			NS	NS	26,900	N	NMED[C]			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	UJ			NS	NS	807	N	NMED[C]			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	UJ			2	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	UJ			3,540	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	UJ			13,400	N	5,380	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.17	UJ			1,420	N	53,800	N	NMED[C]			
Carbazole	86-74-8	mg/kg	0.17	UJ			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.17	UJ			23,100	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.17	UJ			NS	NS	26,900	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.17	UJ			NS	NS	2,690	N	NMED[C]			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	UJ			24	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.17	UJ			NS	NS	269	N	NMED[C]			
Diethylphthalate	84-66-2	mg/kg	0.17	UJ			NS	NS	215,000	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.17	UJ			NS	NS	269,000	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.17	UJ			NS	NS	10,000	N	NMED			
Fluorene	86-73-7	mg/kg	0.17	UJ			NS	NS	10,000	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.17	UJ			117	N	215	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	UJ			2,400	N	269	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.17	UJ			4,670	N	188	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	UJ			240	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.17	UJ			198,000	N	53,700	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.021	UJ			0.38	N	NA	N	NMED[C]			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.17	UJ			4	N	2	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	UJ			37,900	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.17	UJ			633	N	159	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.17	UJ			1,350	N	353	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.17	UJ			346	N	989	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.17	UJ			NS	NS	8,070	N	NMED			
Phenol	108-95-2	mg/kg	0.17	UJ			NS	NS	77,400	N	NMED			
Pyrene	129-00-0	mg/kg	0.17	UJ			NS	NS	7,530	N	NMED			

TABLE D1-J25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID J25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	8,070	N	NMED[C]			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	27	N	NMED[C]			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			626	N	2,420	N	NMED[C]			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.02	UJ			2,440	N	17	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.02	UJ			55	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.01	UJ			58	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.01	UJ			85	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.01	UJ			85	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.01	UJ			85	N	5	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.01	UJ			85	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (3)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		UJ	0.000000096	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg		UJ	0.0000022	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		UJ	0.000000052	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		UJ	0.000000078	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		UJ	0.000000066	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		UJ	0.00000011	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg	0.000000011	J	0.00000011	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		UJ	0.00000011	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		UJ	0.000000056	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		UJ	0.00000014	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		UJ	0.000000057	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		UJ	0.000000086	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		UJ	0.000000098	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		UJ	0.000000078	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		UJ	0.000000089	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		UJ	0.00000028	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		UJ	0.000000097	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.000000011				0.00172	N	0.000226	N	NMED	6.40E-11	4.87E-05	

TABLE D1-J25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID J25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	20,000				NS	NS	41,400	N	NMED		4.83E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	UJ			NS	NS	142	N	NMED			
Arsenic	7440-38-2	mg/kg	1.9				216	N	41	N	NMED		4.61E-02	
Barium	7440-39-3	mg/kg	350				NS	NS	4,390	N	NMED		7.97E-02	
Beryllium	7440-41-7	mg/kg	0.98	J			2,710	N	148	N	NMED		6.62E-03	
Cadmium	7440-43-9	mg/kg	0.57				3,610	N	72	N	NMED		7.91E-03	
Calcium	7440-70-2	mg/kg	38,000				NS	NS	8,850,000	N	NMED		4.29E-03	
Chromium (Total) (4)	7440-47-3	mg/kg	14				468	N	134	N	NMED		1.04E-01	GI, Blood
Cobalt	7440-48-4	mg/kg	4.9				722	N	37	N	NMED		1.34E-01	Endocrine
Copper	7440-50-8	mg/kg	92				NS	NS	14,200	N	NMED		6.48E-03	
Iron	7439-89-6	mg/kg	9,900				NS	NS	248,000	N	NMED		3.99E-02	
Lead	7439-92-1	mg/kg	12				NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	7,300				NS	NS	1,550,000	N	NMED		4.71E-03	
Manganese	7439-96-5	mg/kg	450				NS	NS	464	N	NMED		9.70E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.024	J			NS	NS	21	N	NMED		1.16E-03	
Nickel	7440-02-0	mg/kg	12				20,500	N	753	N	NMED		1.59E-02	
Potassium	7440-09-7	mg/kg	2,300				NS	NS	20,800,000	N	NMED		1.11E-04	
Selenium	7782-49-2	mg/kg	1.2				NS	NS	1,750	N	NMED		6.86E-04	
Silver	7440-22-4	mg/kg	0.094	J			NS	NS	1,770	N	NMED		5.31E-05	
Sodium	7440-23-5	mg/kg	61				NS	NS	10,200,000	N	NMED		5.98E-06	
Thallium	7440-28-0	mg/kg	0.08	J			NS	NS	4	N	NMED		2.26E-02	
Vanadium	7440-62-2	mg/kg	12				NS	NS	614	N	NMED		1.95E-02	
Zinc	7440-66-6	mg/kg	27				NS	NS	106,000	N	NMED		2.55E-04	

TABLE D1-J25-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR HIGH DENSITY BUFFER AREA GRID J25
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.32	UJ			NS	NS	12	N	NMED			
Nitrate	14797-55-8	mg/kg	38	J			NS	NS	566,000	N	NMED		6.71E-05	
Perchlorate	14797-73-0	mg/kg	0.0041	UJ			NS	NS	248	N	NMED			
										Cumulative Risk/Hazard		**6E-11**	**1.9**	
										Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	1.5
Endocrine	0.13
GI	0.10
Blood	0.10
All Others	0.26

Notes:

[s] = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update).

2) NMED[C] = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

3) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

4) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service

J = Estimated

mg/kg = milligrams per kilogram

NS = No Standard

U = Nondetect

UJ = Estimated Nondetect

TABLE D1-K22-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID K22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0023	U			28.1	N	2,350	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0023	U			NS	NS	14,400	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0023	U			7.98	N	1,560	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0023	U			18.8	N	2.61	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0023	U			78.6	N	15,600	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0023	U			NS	NS	440	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0023	U			29.3	N	141	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0023	U			NS	NS	63	N	RSL			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0058	U			0.051	N	7.09	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0023	U			240	N	82.9	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0023	U			NS	NS	300	N	RSL			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0058	U			0.0858	N	5.88	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0023	U			0.672	N	135	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0023	U			NS	NS	2,150	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0023	U			8.32	N	55.6	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0023	U			17.8	N	29	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0023	U			NS	NS	270	N	RSL			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0023	U			1,290	N	5,480	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0023	U			NS	NS	1,600	N	RSL			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0023	U			1,290	N	5,480	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0023	U			17.8	N	29	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.0035	U			NS	NS	37,400	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0023	U			NS	NS	1,560	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.0023	U			NS	NS	200	N	RSL			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0023	U			NS	NS	1,600	N	RSL			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0023	U			NS	NS	5,810	N	RSL			
Acetone	67-64-1	mg/kg	0.16				NS	NS	66,300	N	NMED		2.41E-06	
Benzene	71-43-2	mg/kg	0.0023	U			17.8	N	114	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.0023	U			NS	NS	290	N	RSL			
Bromochloromethane	74-97-5	mg/kg	0.0023	U			NS	NS	150	N	RSL			
Bromodichloromethane	75-27-4	mg/kg	0.0023	U			6.19	N	1,560	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0023	U			674	N	1,230	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0023	U			NS	NS	17.7	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.0023	U			NS	NS	1,550	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0023	U			10.7	N	144	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0023	U			NS	NS	378	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0023	U			NS	NS	19,000	N	NMED			
Chloroform	67-66-3	mg/kg	0.0023	U			5.9	N	306	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0058	U			41.1	N	268	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0023	U			NS	NS	156	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0023	U			29.3	N	141	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0023	U			13.9	N	1,230	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0023	U			NS	NS	57.9	N	NMED			

TABLE D1-K22-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID K22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Dichlorodifluoromethane	75-71-8	mg/kg	0.0023	U			NS	NS	182	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.0023	U			75.1	N	3,930	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0023	U			68.3	N	61.6	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0023	U			NS	NS	2,360	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0058	U			NS	NS	764	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0023	U			975	N	37,800	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.012	U			766	N	409	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0023	U			NS	NS	3,900	N	RSL			
n-Propylbenzene	103-65-1	mg/kg	0.0023	U			NS	NS	3,800	N	RSL			
Naphthalene	91-20-3	mg/kg	0.0023	U			22.6	N	162	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0029	U			NS	NS	805	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.0023	U			NS	NS	2,360	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.0023	U			NS	NS	7,800	N	RSL			
Styrene	100-42-5	mg/kg	0.0023	U			NS	NS	7,260	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0023	U			NS	NS	7,800	N	RSL			
Tetrachloroethene	127-18-4	mg/kg	0.0023	U			337	N	111	N	NMED			
Toluene	108-88-3	mg/kg	0.0023	U			NS	NS	5,230	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0023	U			NS	NS	210	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0023	U			29.3	N	141	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0023	U			15.5	N	6.77	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0023	U			NS	NS	1,230	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0023	U			0.742	N	113	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.18	U			240	N	82.9	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.18	U			NS	NS	2,150	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.18	U			1,290	N	5,480	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.18	U			1,290	N	5,480	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.18	U			NS	NS	6,160	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.18	U			484	N	61.6	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.18	U			NS	NS	185	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.18	U			NS	NS	1,230	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.18	U			NS	NS	123	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.18	U			17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.18	U			3.56	N	18.5	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.18	U			NS	NS	6,260	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.18	U			NS	NS	391	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.18	U			NS	NS	232	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.18	U			NS	NS	3,200	N	RSL			
2-Nitroaniline	88-74-4	mg/kg	0.18	U			NS	NS	630	N	RSL			
2-Nitrophenol	88-75-5	mg/kg	0.18	U			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.18	U			11.8	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.18	U			270	N	250	N	RSL[S]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.18	U			NS	NS	4.93	N	NMED			
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.18	U			NS	NS	NS	NS	NS			

TABLE D1-K22-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID K22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.18	U			NS	NS	6,300	N	RSL			
4-Chloroaniline	106-47-8	mg/kg	0.18	U			27	N	32	N	RSL			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.18	U			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.18	U			270	N	250	N	RSL			
4-Nitrophenol	100-02-7	mg/kg	0.18	U			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.18	U			NS	NS	3,480	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.18	U			NS	NS	1,740	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.18	U			NS	NS	17,400	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.18	U			1.53	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			1.12	N	17.4	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.18	U			1.53	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.18	U			NS	NS	1,740	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.18	U			15.3	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.18	U			NS	NS	250,000	N	RSL			
Benzyl Alcohol	100-51-6	mg/kg	0.18	U			NS	NS	6,300	N	RSL			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.18	U			NS	NS	190	N	RSL			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.18	U			3.11	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.18	U			99.3	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.18	U			380	N	1,230	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.18	U			2,900	N	13,000	N	RSL			
Carbazole	86-74-8	mg/kg	0.18	U			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.18	U			153	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.18	U			NS	NS	6,160	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.18	U			NS	NS	630	N	RSL			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			0.153	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.18	U			NS	NS	78	N	RSL			
Diethylphthalate	84-66-2	mg/kg	0.18	U			NS	NS	49,300	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.18	U			NS	NS	61,600	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.18	U			NS	NS	2,320	N	NMED			
Fluorene	86-73-7	mg/kg	0.18	U			NS	NS	2,320	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.18	U			3.33	N	49.3	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.18	U			68.3	N	61.6	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.18	U			133	N	43.1	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.18	U			1.53	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.18	U			5,610	N	12,300	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.18	U			0.78	N	NS	NS	RSL			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	UJ			0.0234	N	0.493	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.18	U			1,090	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.18	U			22.6	N	162	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.18	U			60.4	N	131	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.18	U			9.85	N	234	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.18	U			NS	NS	1,740	N	NMED			
Phenol	108-95-2	mg/kg	0.18	U			NS	NS	18,500	N	NMED			
Pyrene	129-00-0	mg/kg	0.18	U			NS	NS	1,740	N	NMED			

TABLE D1-K22-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID K22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	2,200	N	RSL			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	6.3	N	RSL			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			211	N	36	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			3.56	N	18.5	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	7.7	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			31.6	N	70.4	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	6.16	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	7.64	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			333	N	247	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			83.1	N	301	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	156	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			60.4	N	131	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			313	N	6.16	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	3,850	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			1,300	N	570	N	RSL			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.021	U			69.6	N	3.98	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.021	U			1.81	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.011	U			1.86	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.011	U			2.43	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.011	U			2.43	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.011	U			2.43	N	1.14	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.011	U			2.43	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (2)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000048	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg		U	0.0000085	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000013	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.000001	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000017	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.00000023	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.00000022	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		UJ	0.00000028	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000015	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.00000017	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		UJ	0.00000029	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000016	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000029	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000098	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.0				0.000049	N	0.0000506	N	NMED			

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HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID K22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	33,000	J			NS	NS	78,000	N	NMED		4.23E-01	Nervous Sys
Antimony	7440-36-0	mg/kg	0.18	J			NS	NS	31.3	N	NMED		5.75E-03	
Arsenic	7440-38-2	mg/kg	1.2				7.07	N	13	N	NMED		9.23E-02	
Barium	7440-39-3	mg/kg	740	J			NS	NS	15,600	N	NMED		4.74E-02	
Beryllium	7440-41-7	mg/kg	1.7				64,400	N	156	N	NMED		1.09E-02	
Cadmium	7440-43-9	mg/kg	0.99				85,900	N	70.5	N	NMED		1.40E-02	
Calcium	7440-70-2	mg/kg	36,000				NS	NS	13,000,000	N	NMED		2.77E-03	
Chromium (Total) (3)	7440-47-3	mg/kg	19	J			96.6	N	45,200	N	NMED		4.20E-04	
Cobalt	7440-48-4	mg/kg	8.2	J			17,200	N	23.4	N	NMED		3.50E-01	Endocrine
Copper	7440-50-8	mg/kg	140				NS	NS	3,130	N	NMED		4.47E-02	
Iron	7439-89-6	mg/kg	23,000	J			NS	NS	54,800	N	NMED		4.20E-01	GI
Lead	7439-92-1	mg/kg	18				NS	NS	200	N	RSL			
Magnesium	7439-95-4	mg/kg	16,000	J			NS	NS	15,600,000	N	NMED		1.03E-03	
Manganese	7439-96-5	mg/kg	500				NS	NS	10,500	N	NMED		4.76E-02	
Mercury (Elemental)	7439-97-6	mg/kg	0.016	J			NS	NS	23.8	N	NMED		6.72E-04	
Nickel	7440-02-0	mg/kg	17	J			595,000	N	1,560	N	NMED		1.09E-02	
Potassium	7440-09-7	mg/kg	1,400				NS	NS	15,600,000	N	NMED		8.97E-05	
Selenium	7782-49-2	mg/kg	1.7				NS	NS	391	N	NMED		4.35E-03	
Silver	7440-22-4	mg/kg	0.055	J			NS	NS	391	N	NMED		1.41E-04	
Sodium	7440-23-5	mg/kg	59				NS	NS	7,820,000	N	NMED		7.54E-06	
Thallium	7440-28-0	mg/kg	0.082	J			NS	NS	0.782	N	NMED		1.05E-01	Hair/Coat/Eyes
Vanadium	7440-62-2	mg/kg	22	J			NS	NS	394	N	NMED		5.58E-02	
Zinc	7440-66-6	mg/kg	40				NS	NS	23,500	N	NMED		1.70E-03	

TABLE D1-K22-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID K22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.33	U			NS	NS	11.2	N	NMED			
Nitrate	14797-55-8	mg/kg	7.1	J			NS	NS	125,000	N	NMED		5.68E-05	
Perchlorate	14797-73-0	mg/kg	0.0021	U			NS	NS	54.8	N	NMED			
										Cumulative Risk/Hazard		**0E+00**	**1.6**	
										Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	0.42
Endocrine	0.35
GI	0.42
Hair/Coat	0.10
Eyes	0.10
All Others	0.76

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect

TABLE D1-K22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID K22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0023	U			137	N	39,400	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0023	U			NS	NS	72,500	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0023	U			39	N	26,000	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0023	U			92	N	12	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0023	U			383	N	260,000	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0023	U			NS	NS	2,260	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0023	U			146	N	695	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0023	U			NS	NS	930	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0058	U			1	N	34	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0023	U			1,250	N	423	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0023	U			NS	NS	1,800	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0058	U			1	N	41	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0023	U			3	N	738	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0023	U			NS	NS	13,000	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0023	U			41	N	286	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0023	U			87	N	137	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0023	U			NS	NS	1,500	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0023	U			6,730	N	90,800	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0023	U			NS	NS	23,000	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0023	U			6,730	N	90,800	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0023	U			87	N	137	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0035	U			NS	NS	411,000	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0023	U			NS	NS	26,000	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0023	U			NS	NS	1,300	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0023	U			NS	NS	23,000	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0023	U			NS	NS	81,600	N	RSL		
Acetone	67-64-1	mg/kg	0.16				NS	NS	960,000	N	NMED		1.67E-07
Benzene	71-43-2	mg/kg	0.0023	U			87	N	729	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0023	U			NS	NS	1,800	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0023	U			NS	NS	630	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0023	U			30	N	26,000	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0023	U			1,760	N	18,300	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0023	U			NS	NS	95	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0023	U			NS	NS	8,540	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0023	U			53	N	1,020	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0023	U			NS	NS	2,160	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0023	U			NS	NS	89,500	N	NMED		
Chloroform	67-66-3	mg/kg	0.0023	U			29	N	2,000	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0058	U			201	N	1,260	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0023	U			NS	NS	2,600	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0023	U			146	N	695	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0023	U			67	N	18,300	N	NMED		

TABLE D1-K22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID K22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0023	U			NS	NS	288	N	NMED		
Dichlorodifluoromethane	75-71-8	mg/kg	0.0023	U			NS	NS	865	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0023	U			29,000	N	368	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0023	U			52	N	916	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0023	U			NS	NS	14,200	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0058	U			NS	NS	3,730	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0023	U			4,820	N	178,000	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.012	U			14,400	N	5,130	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0023	U			NS	NS	58,000	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0023	U			NS	NS	24,000	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0023	U			108	N	843	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0029	U			NS	NS	3,940	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0023	U			NS	NS	14,200	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0023	U			NS	NS	120,000	N	RSL		
Styrene	100-42-5	mg/kg	0.0023	U			NS	NS	51,300	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0023	U			NS	NS	120,000	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0023	U			1,650	N	629	N	NMED		
Toluene	108-88-3	mg/kg	0.0023	U			NS	NS	61,300	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0023	U			NS	NS	1,100	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0023	U			146	N	695	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0023	U			112	N	37	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0023	U			NS	NS	6,030	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0023	U			28	N	46	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.18	U			1,250	N	423	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.18	U			NS	NS	13,000	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.18	U			6,730	N	90,800	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.18	U			6,730	N	90,800	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.18	U			NS	NS	91,600	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.18	U			2,330	N	916	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.18	U			NS	NS	2,750	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.18	U			NS	NS	18,300	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.18	U			NS	NS	1,830	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.18	U			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.18	U			17	N	276	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.18	U			NS	NS	104,000	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.18	U			NS	NS	6,490	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.18	U			NS	NS	3,370	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.18	U			NS	NS	41,000	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.18	U			NS	NS	8,000	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.18	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.18	U			NS	NS	410	N	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.18	U			1,100	N	3,300	N	RSL[S]		

TABLE D1-K22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID K22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.18	U			NS	NS	73	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.18	U			NS	NS	NS	NS	NS		
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.18	U			NS	NS	82,000	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.18	U			110	N	410	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.18	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.18	U			1,100	N	3,300	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.18	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.18	U			NS	NS	50,500	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.18	U			NS	NS	25,300	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.18	U			NS	NS	253,000	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.18	U			32	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			24	N	251	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.18	U			32	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.18	U			NS	NS	25,300	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.18	U			323	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.18	U			NS	NS	3,300,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.18	U			NS	NS	82,000	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.18	U			NS	NS	2,500	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.18	U			16	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.18	U			519	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.18	U			1,830	N	18,300	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.18	U			12,000	N	160,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.18	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.18	U			3,230	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.18	U			NS	NS	91,600	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.18	U			NS	NS	8,200	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			3	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.18	U			NS	NS	1,200	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.18	U			NS	NS	733,000	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.18	U			NS	NS	916,000	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.18	U			NS	NS	33,700	N	NMED		
Fluorene	86-73-7	mg/kg	0.18	U			NS	NS	33,700	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.18	U			16	N	733	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.18	U			52	N	916	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.18	U			641	N	641	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.18	U			32	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.18	U			27,000	N	183,000	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.18	U			3	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	UJ			1	N	7	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.18	U			5,240	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.18	U			108	N	843	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.18	U			293	N	1,540	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.18	U			45	N	3,180	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.18	U			NS	NS	27,500	N	NMED		
Phenol	108-95-2	mg/kg	0.18	U			NS	NS	275,000	N	NMED		
Pyrene	129-00-0	mg/kg	0.18	U			NS	NS	25,300	N	NMED		

TABLE D1-K22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID K22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			5,300	N	7,400	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.021	U			304	N	57	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.021	U			9	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.011	U			9	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.011	U			11	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.011	U			11	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.011	U			11	N	16	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.011	U			11	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (3)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000048	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg		U	0.0000085	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000013	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.000001	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000017	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.00000023	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.00000022	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		UJ	0.00000028	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000015	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.00000017	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		UJ	0.00000029	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000016	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000029	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000098	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.0				0.000238	N	0.000808	N	NMED		

TABLE D1-K22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID K22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	33,000	J			NS	NS	1,290,000	N	NMED		2.56E-02
Antimony	7440-36-0	mg/kg	0.18	J			NS	NS	519	N	NMED		3.47E-04
Arsenic	7440-38-2	mg/kg	1.2				36	N	208	N	NMED	3.34E-07	5.77E-03
Barium	7440-39-3	mg/kg	740	J			NS	NS	255,000	N	NMED		2.90E-03
Beryllium	7440-41-7	mg/kg	1.7				313,000	N	2,580	N	NMED	5.43E-11	6.59E-04
Cadmium	7440-43-9	mg/kg	0.99				417,000	N	1,110	N	NMED	2.37E-11	8.92E-04
Calcium	7440-70-2	mg/kg	36,000				NS	NS	32,400,000	N	NMED		1.11E-03
Chromium (Total) (4)	7440-47-3	mg/kg	19	J			505	N	314,000	N	NMED	3.76E-07	6.05E-05
Cobalt	7440-48-4	mg/kg	8.2	J			83,400	N	388	N	NMED	9.83E-10	2.11E-02
Copper	7440-50-8	mg/kg	140				NS	NS	51,900	N	NMED		2.70E-03
Iron	7439-89-6	mg/kg	23,000	J			NS	NS	908,000	N	NMED		2.53E-02
Lead	7439-92-1	mg/kg	18				NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	16,000	J			NS	NS	5,680,000	N	NMED		2.82E-03
Manganese	7439-96-5	mg/kg	500				NS	NS	160,000	N	NMED		3.13E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.016	J			NS	NS	112	N	NMED		1.43E-04
Nickel	7440-02-0	mg/kg	17	J			2,890,000	N	25,700	N	NMED	5.88E-11	6.61E-04
Potassium	7440-09-7	mg/kg	1,400				NS	NS	76,200,000	N	NMED		1.84E-05
Selenium	7782-49-2	mg/kg	1.7				NS	NS	6,490	N	NMED		2.62E-04
Silver	7440-22-4	mg/kg	0.055	J			NS	NS	6,490	N	NMED		8.47E-06
Sodium	7440-23-5	mg/kg	59				NS	NS	37,300,000	N	NMED		1.58E-06
Thallium	7440-28-0	mg/kg	0.082	J			NS	NS	13	N	NMED		6.31E-03
Vanadium	7440-62-2	mg/kg	22	J			NS	NS	6,530	N	NMED		3.37E-03
Zinc	7440-66-6	mg/kg	40				NS	NS	38,900	N	NMED		1.03E-03

TABLE D1-K22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID K22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.33	U			NS	NS	63	N	NMED		
Nitrate	14797-55-8	mg/kg	7.1	J			NS	NS	2,080,000	N	NMED		3.41E-06
Perchlorate	14797-73-0	mg/kg	0.0021	U			NS	NS	908	N	NMED		
										Cumulative Risk/Hazard		**7E-07**	**0.10**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect

TABLE D1-K22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID K22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0023	U			659	N	10,600	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0023	U			NS	NS	13,600	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0023	U			197	N	7,080	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0023	U			4,300	N	2	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0023	U			1,820	N	70,800	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0023	U			NS	NS	424	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0023	U			781	N	130	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0023	U			NS	NS	283	N	NMED[C]			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0058	U			8	N	6	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0023	U			8,540	N	79	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0023	U			NS	NS	492	N	NMED[C]			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0058	U			6	N	8	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0023	U			16	N	140	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0023	U			NS	NS	2,500	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0023	U			195	N	54	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0023	U			415	N	25	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0023	U			NS	NS	422	N	NMED[C]			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0023	U			45,900	N	24,800	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0023	U			NS	NS	7,080	N	NMED[C]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0023	U			45,900	N	24,800	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0023	U			415	N	25	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.0035	U			NS	NS	90,700	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0023	U			NS	NS	7,080	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.0023	U			NS	NS	599	N	NMED[C]			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0023	U			NS	NS	7,080	N	NMED[C]			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0023	U			NS	NS	20,400	N	NMED[C]			
Acetone	67-64-1	mg/kg	0.16				NS	NS	242,000	N	NMED		6.61E-07	
Benzene	71-43-2	mg/kg	0.0023	U			423	N	142	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.0023	U			NS	NS	538	N	NMED[C]			
Bromochloromethane	74-97-5	mg/kg	0.0023	U			NS	NS	296	N	NMED[C]			
Bromodichloromethane	75-27-4	mg/kg	0.0023	U			143	N	7,080	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0023	U			23,700	N	5,380	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0023	U			NS	NS	18	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.0023	U			NS	NS	1,620	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0023	U			252	N	202	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0023	U			NS	NS	412	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0023	U			NS	NS	16,600	N	NMED			
Chloroform	67-66-3	mg/kg	0.0023	U			134	N	391	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0058	U			956	N	235	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0023	U			NS	NS	708	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0023	U			781	N	130	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0023	U			340	N	5,380	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0023	U			NS	NS	54	N	NMED			

TABLE D1-K22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID K22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Dichlorodifluoromethane	75-71-8	mg/kg	0.0023	U			NS	NS	161	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.0023	U			1,770	N	5,800	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0023	U			2,400	N	269	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0023	U			NS	NS	2,740	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0058	U			NS	NS	696	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0023	U			24,200	N	33,100	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.012	U			89,600	N	1,210	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0023	U			NS	NS	17,700	N	NMED[C]			
n-Propylbenzene	103-65-1	mg/kg	0.0023	U			NS	NS	6,730	N	NMED[C]			
Naphthalene	91-20-3	mg/kg	0.0023	U			633	N	159	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0029	U			NS	NS	736	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.0023	U			NS	NS	2,740	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.0023	U			NS	NS	35,400	N	NMED[C]			
Styrene	100-42-5	mg/kg	0.0023	U			NS	NS	10,200	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0023	U			NS	NS	35,400	N	NMED[C]			
Tetrachloroethene	127-18-4	mg/kg	0.0023	U			7,910	N	120	N	NMED			
Toluene	108-88-3	mg/kg	0.0023	U			NS	NS	14,000	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0023	U			NS	NS	206	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0023	U			781	N	130	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0023	U			5,370	N	7	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0023	U			NS	NS	1,130	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0023	U			161	N	162	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.18	U			8,540	N	79	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.18	U			NS	NS	2,500	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.18	U			45,900	N	24,800	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.18	U			45,900	N	24,800	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.18	U			NS	NS	26,900	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.18	U			17,000	N	269	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.18	U			NS	NS	807	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.18	U			NS	NS	5,380	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.18	U			NS	NS	538	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.18	U			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.18	U			165	N	81	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.18	U			NS	NS	28,300	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.18	U			NS	NS	1,770	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.18	U			NS	NS	1,000	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.18	U			NS	NS	13,500	N	NMED[C]			
2-Nitroaniline	88-74-4	mg/kg	0.18	U			NS	NS	2,690	N	NMED[C]			
2-Nitrophenol	88-75-5	mg/kg	0.18	U			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.18	U			410	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.18	U			135	N	1,080	N	NMED[SC]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.18	U			NS	NS	22	N	NMED			

TABLE D1-K22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID K22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.18	U			NS	NS	NS	NS	NS			
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.18	U			NS	NS	26,900	N	NMED[C]			
4-Chloroaniline	106-47-8	mg/kg	0.18	U			14	N	135	N	NMED[C]			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.18	U			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.18	U			135	N	1,080	N	NMED[C]			
4-Nitrophenol	100-02-7	mg/kg	0.18	U			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.18	U			NS	NS	15,100	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.18	U			NS	NS	7,530	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.18	U			NS	NS	75,300	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.18	U			240	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			173	N	15	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.18	U			240	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.18	U			NS	NS	7,530	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.18	U			2,310	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.18	U			NS	NS	1,080,000	N	NMED[C]			
Benzyl Alcohol	100-51-6	mg/kg	0.18	U			NS	NS	26,900	N	NMED[C]			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.18	U			NS	NS	807	N	NMED[C]			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.18	U			2	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.18	U			3,540	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.18	U			13,400	N	5,380	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.18	U			1,420	N	53,800	N	NMED[C]			
Carbazole	86-74-8	mg/kg	0.18	U			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.18	U			23,100	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.18	U			NS	NS	26,900	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.18	U			NS	NS	2,690	N	NMED[C]			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			24	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.18	U			NS	NS	269	N	NMED[C]			
Diethylphthalate	84-66-2	mg/kg	0.18	U			NS	NS	215,000	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.18	U			NS	NS	269,000	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.18	U			NS	NS	10,000	N	NMED			
Fluorene	86-73-7	mg/kg	0.18	U			NS	NS	10,000	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.18	U			117	N	215	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.18	U			2,400	N	269	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.18	U			4,670	N	188	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.18	U			240	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.18	U			198,000	N	53,700	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.18	U			0.38	N	NA	N	NMED[C]			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	UJ			4	N	2	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.18	U			37,900	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.18	U			633	N	159	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.18	U			1,350	N	353	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.18	U			346	N	989	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.18	U			NS	NS	8,070	N	NMED			
Phenol	108-95-2	mg/kg	0.18	U			NS	NS	77,400	N	NMED			
Pyrene	129-00-0	mg/kg	0.18	U			NS	NS	7,530	N	NMED			

TABLE D1-K22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID K22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	8,070	N	NMED[C]			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	27	N	NMED[C]			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			626	N	2,420	N	NMED[C]			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.021	U			2,440	N	17	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.021	U			55	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.011	U			58	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.011	U			85	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.011	U			85	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.011	U			85	N	5	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.011	U			85	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (3)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000048	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg		U	0.0000085	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000013	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.000001	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000017	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.00000023	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.00000022	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		UJ	0.00000028	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000015	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.00000017	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		UJ	0.00000029	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000016	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000029	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000098	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.000				0.00172	N	0.000226	N	NMED			

TABLE D1-K22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID K22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	33,000	J			NS	NS	41,400	N	NMED		7.97E-01	Nervous
Antimony	7440-36-0	mg/kg	0.18	J			NS	NS	142	N	NMED		1.27E-03	
Arsenic	7440-38-2	mg/kg	1.2				216	N	41	N	NMED	5.56E-08	2.91E-02	
Barium	7440-39-3	mg/kg	740	J			NS	NS	4,390	N	NMED		1.69E-01	Kidneys
Beryllium	7440-41-7	mg/kg	1.7				2,710	N	148	N	NMED	6.27E-09	1.15E-02	
Cadmium	7440-43-9	mg/kg	0.99				3,610	N	72	N	NMED	2.74E-09	1.37E-02	
Calcium	7440-70-2	mg/kg	36,000				NS	NS	8,850,000	N	NMED		4.07E-03	
Chromium (Total) (4)	7440-47-3	mg/kg	19	J			468	N	134	N	NMED	4.06E-07	1.42E-01	GI, Blood
Cobalt	7440-48-4	mg/kg	8.2	J			722	N	37	N	NMED	1.14E-07	2.23E-01	Endocrine
Copper	7440-50-8	mg/kg	140				NS	NS	14,200	N	NMED		9.86E-03	
Iron	7439-89-6	mg/kg	23,000	J			NS	NS	248,000	N	NMED		9.27E-02	
Lead	7439-92-1	mg/kg	18				NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	16,000	J			NS	NS	1,550,000	N	NMED		1.03E-02	
Manganese	7439-96-5	mg/kg	500				NS	NS	464	Y	NMED		1.08E+00	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.016	J			NS	NS	21	N	NMED		7.73E-04	
Nickel	7440-02-0	mg/kg	17	J			20,500	N	753	N	NMED	8.29E-09	2.26E-02	
Potassium	7440-09-7	mg/kg	1,400				NS	NS	20,800,000	N	NMED		6.73E-05	
Selenium	7782-49-2	mg/kg	1.7				NS	NS	1,750	N	NMED		9.71E-04	
Silver	7440-22-4	mg/kg	0.055	J			NS	NS	1,770	N	NMED		3.11E-05	
Sodium	7440-23-5	mg/kg	59				NS	NS	10,200,000	N	NMED		5.78E-06	
Thallium	7440-28-0	mg/kg	0.082	J			NS	NS	4	N	NMED		2.32E-02	
Vanadium	7440-62-2	mg/kg	22	J			NS	NS	614	N	NMED		3.58E-02	
Zinc	7440-66-6	mg/kg	40				NS	NS	106,000	N	NMED		3.77E-04	

TABLE D1-K22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID K22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.33	U			NS	NS	12	N	NMED			
Nitrate	14797-55-8	mg/kg	7.1	J			NS	NS	566,000	N	NMED		1.25E-05	
Perchlorate	14797-73-0	mg/kg	0.0021	U			NS	NS	248	N	NMED			
										Cumulative Risk/Hazard		**6E-07**	**2.7**	
										Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	1.9
Endocrine	0.22
GI	0.14
Blood	0.14
Kidneys	0.17
All Others	0.26

Notes:

[s] = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update).

2) NMED[C] = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

3) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

4) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service

J = Estimated

mg/kg = milligrams per kilogram

NS = No Standard

U = Nondetect

UJ = Estimated Nondetect

TABLE D1-L22-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID L22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0021	U			28.1	N	2,350	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0021	U			NS	NS	14,400	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0021	U			7.98	N	1,560	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0021	U			18.8	N	2.61	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0021	U			78.6	N	15,600	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0021	U			NS	NS	440	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0021	U			29.3	N	141	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0021	U			NS	NS	63	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0051	U			0.051	N	7.09	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0021	U			240	N	82.9	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0021	U			NS	NS	300	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0051	U			0.0858	N	5.88	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0021	U			0.672	N	135	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0021	U			NS	NS	2,150	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0021	U			8.32	N	55.6	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0021	U			17.8	N	29	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0021	U			NS	NS	270	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0021	U			1,290	N	5,480	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0021	U			NS	NS	1,600	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0021	U			1,290	N	5,480	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0021	U			17.8	N	29	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0031	U			NS	NS	37,400	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0021	U			NS	NS	1,560	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0021	U			NS	NS	200	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0021	U			NS	NS	1,600	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0021	U			NS	NS	5,810	N	RSL		
Acetone	67-64-1	mg/kg	0.092				NS	NS	66,300	N	NMED		1.39E-06
Benzene	71-43-2	mg/kg	0.0021	U			17.8	N	114	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0021	U			NS	NS	290	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0021	U			NS	NS	150	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0021	U			6.19	N	1,560	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0021	U			674	N	1,230	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0021	U			NS	NS	17.7	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0021	U			NS	NS	1,550	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0021	U			10.7	N	144	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0021	U			NS	NS	378	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0021	U			NS	NS	19,000	N	NMED		
Chloroform	67-66-3	mg/kg	0.0021	U			5.9	N	306	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0051	U			41.1	N	268	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0021	U			NS	NS	156	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0021	U			29.3	N	141	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0021	U			13.9	N	1,230	N	NMED		
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0021	U			NS	NS	57.9	N	NMED		

TABLE D1-L22-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID L22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dichlorodifluoromethane	75-71-8	mg/kg	0.0021	U			NS	NS	182	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0021	U			75.1	N	3,930	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0021	U			68.3	N	61.6	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0021	U			NS	NS	2,360	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0051	U			NS	NS	764	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0021	U			975	N	37,800	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.01	U			766	N	409	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0021	U			NS	NS	3,900	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0021	U			NS	NS	3,800	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0021	U			22.6	N	162	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0026	U			NS	NS	805	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.017				NS	NS	2,360	N	NMED[S]		7.20E-06
sec-Butylbenzene	135-98-8	mg/kg	0.0021	U			NS	NS	7,800	N	RSL		
Styrene	100-42-5	mg/kg	0.0021	U			NS	NS	7,260	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0021	U			NS	NS	7,800	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0021	U			337	N	111	N	NMED		
Toluene	108-88-3	mg/kg	0.032				NS	NS	5,230	N	NMED		6.12E-06
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0021	U			NS	NS	210	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0021	U			29.3	N	141	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0021	U			15.5	N	6.77	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0021	U			NS	NS	1,230	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0021	U			0.742	N	113	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.18	U			240	N	82.9	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.18	U			NS	NS	2,150	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.18	U			1,290	N	5,480	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.18	U			1,290	N	5,480	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.18	U			NS	NS	6,160	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.18	U			484	N	61.6	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.18	U			NS	NS	185	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.18	U			NS	NS	1,230	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.18	U			NS	NS	123	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.18	U			17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.18	U			3.56	N	18.5	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.18	U			NS	NS	6,260	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.18	U			NS	NS	391	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.18	U			NS	NS	232	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.18	U			NS	NS	3,200	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.18	U			NS	NS	630	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.18	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.18	U			11.8	N	NS	NS	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.18	U			270	N	250	N	RSL[S]		
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.18	U			NS	NS	4.93	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.18	U			NS	NS	NS	NS	NS		

TABLE D1-L22-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID L22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.18	U			NS	NS	6,300	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.18	U			27	N	32	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.18	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.18	U			270	N	250	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.18	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.18	U			NS	NS	3,480	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.18	U			NS	NS	1,740	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.18	U			NS	NS	17,400	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.18	U			1.53	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			1.12	N	17.4	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.18	U			1.53	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.18	U			NS	NS	1,740	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.18	U			15.3	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.18	U			NS	NS	250,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.18	U			NS	NS	6,300	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.18	U			NS	NS	190	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.18	U			3.11	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.18	U			99.3	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.18	U			380	N	1,230	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.18	U			2,900	N	13,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.18	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.18	U			153	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.18	U			NS	NS	6,160	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.18	U			NS	NS	630	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			0.153	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.18	U			NS	NS	78	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.18	U			NS	NS	49,300	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.18	U			NS	NS	61,600	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.18	U			NS	NS	2,320	N	NMED		
Fluorene	86-73-7	mg/kg	0.18	U			NS	NS	2,320	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.18	U			3.33	N	49.3	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.18	U			68.3	N	61.6	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.18	U			133	N	43.1	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.18	U			1.53	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.18	U			5,610	N	12,300	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.18	U			0.78	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	U			0.0234	N	0.493	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.18	U			1,090	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.18	U			22.6	N	162	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.18	U			60.4	N	131	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.18	U			9.85	N	234	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.18	U			NS	NS	1,740	N	NMED		
Phenol	108-95-2	mg/kg	0.18	U			NS	NS	18,500	N	NMED		
Pyrene	129-00-0	mg/kg	0.18	U			NS	NS	1,740	N	NMED		

TABLE D1-L22-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID L22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.07	J			83.1	N	301	N	NMED	8.42E-09	2.33E-04
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			1,300	N	570	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.021	U			69.6	N	3.98	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.021	U			1.81	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.011	U			1.86	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.011	U			2.43	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.011	U			2.43	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.011	U			2.43	N	1.14	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.011	U			2.43	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000023	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg		U	0.0000024	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000012	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.0000000079	J	0.00000079	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000015	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000068	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000055	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000093	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000056	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.000000072	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.000000096	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.00000011	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.00000013	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.000000088	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000015	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000099	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.0000000079				0.000049	N	0.0000506	N	NMED	1.61E-09	1.56E-04

TABLE D1-L22-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID L22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	21,000				NS	NS	78,000	N	NMED		2.69E-01
Antimony	7440-36-0	mg/kg	0.16	J			NS	NS	31.3	N	NMED		5.11E-03
Arsenic	7440-38-2	mg/kg	0.8				7.07	N	13	N	NMED	1.13E-06	6.15E-02
Barium	7440-39-3	mg/kg	330				NS	NS	15,600	N	NMED		2.12E-02
Beryllium	7440-41-7	mg/kg	1				64,400	N	156	N	NMED	1.55E-10	6.41E-03
Cadmium	7440-43-9	mg/kg	0.46				85,900	N	70.5	N	NMED	5.36E-11	6.52E-03
Calcium	7440-70-2	mg/kg	48,000				NS	NS	13,000,000	N	NMED		3.69E-03
Chromium (Total) (3)	7440-47-3	mg/kg	13				96.6	N	45,200	N	NMED	1.35E-06	2.88E-04
Cobalt	7440-48-4	mg/kg	4.3				17,200	N	23.4	N	NMED	2.50E-09	1.84E-01
Copper	7440-50-8	mg/kg	62				NS	NS	3,130	N	NMED		1.98E-02
Iron	7439-89-6	mg/kg	11,000				NS	NS	54,800	N	NMED		2.01E-01
Lead	7439-92-1	mg/kg	9.2				NS	NS	200	N	RSL		
Magnesium	7439-95-4	mg/kg	7,600				NS	NS	15,600,000	N	NMED		4.87E-04
Manganese	7439-96-5	mg/kg	680				NS	NS	10,500	N	NMED		6.48E-02
Mercury (Elemental)	7439-97-6	mg/kg	0.015	J			NS	NS	23.8	N	NMED		6.30E-04
Nickel	7440-02-0	mg/kg	11				595,000	N	1,560	N	NMED	1.85E-10	7.05E-03
Potassium	7440-09-7	mg/kg	1,900				NS	NS	15,600,000	N	NMED		1.22E-04
Selenium	7782-49-2	mg/kg	1.3				NS	NS	391	N	NMED		3.32E-03
Silver	7440-22-4	mg/kg	0.049	J			NS	NS	391	N	NMED		1.25E-04
Sodium	7440-23-5	mg/kg	76				NS	NS	7,820,000	N	NMED		9.72E-06
Thallium	7440-28-0	mg/kg	0.069	J			NS	NS	0.782	N	NMED		8.82E-02
Vanadium	7440-62-2	mg/kg	11				NS	NS	394	N	NMED		2.79E-02
Zinc	7440-66-6	mg/kg	26				NS	NS	23,500	N	NMED		1.11E-03

TABLE D1-L22-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID L22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.34	U			NS	NS	11.2	N	NMED		
Nitrate	14797-55-8	mg/kg	2.1	J			NS	NS	125,000	N	NMED		1.68E-05
Perchlorate	14797-73-0	mg/kg	0.0043	U			NS	NS	54.8	N	NMED		
										Cumulative Risk/Hazard		**2E-06**	**0.97**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect

TABLE D1-L22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID L22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0021	U			137	N	39,400	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0021	U			NS	NS	72,500	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0021	U			39	N	26,000	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0021	U			92	N	12	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0021	U			383	N	260,000	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0021	U			NS	NS	2,260	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0021	U			146	N	695	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0021	U			NS	NS	930	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0051	U			1	N	34	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0021	U			1,250	N	423	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0021	U			NS	NS	1,800	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0051	U			1	N	41	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0021	U			3	N	738	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0021	U			NS	NS	13,000	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0021	U			41	N	286	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0021	U			87	N	137	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0021	U			NS	NS	1,500	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0021	U			6,730	N	90,800	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0021	U			NS	NS	23,000	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0021	U			6,730	N	90,800	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0021	U			87	N	137	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0031	U			NS	NS	411,000	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0021	U			NS	NS	26,000	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0021	U			NS	NS	1,300	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0021	U			NS	NS	23,000	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0021	U			NS	NS	81,600	N	RSL		
Acetone	67-64-1	mg/kg	0.092				NS	NS	960,000	N	NMED		9.58E-08
Benzene	71-43-2	mg/kg	0.0021	U			87	N	729	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0021	U			NS	NS	1,800	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0021	U			NS	NS	630	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0021	U			30	N	26,000	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0021	U			1,760	N	18,300	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0021	U			NS	NS	95	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0021	U			NS	NS	8,540	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0021	U			53	N	1,020	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0021	U			NS	NS	2,160	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0021	U			NS	NS	89,500	N	NMED		
Chloroform	67-66-3	mg/kg	0.0021	U			29	N	2,000	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0051	U			201	N	1,260	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0021	U			NS	NS	2,600	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0021	U			146	N	695	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0021	U			67	N	18,300	N	NMED		

TABLE D1-L22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID L22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0021	U			NS	NS	288	N	NMED		
Dichlorodifluoromethane	75-71-8	mg/kg	0.0021	U			NS	NS	865	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0021	U			29,000	N	368	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0021	U			52	N	916	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0021	U			NS	NS	14,200	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0051	U			NS	NS	3,730	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0021	U			4,820	N	178,000	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.01	U			14,400	N	5,130	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0021	U			NS	NS	58,000	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0021	U			NS	NS	24,000	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0021	U			108	N	843	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0026	U			NS	NS	3,940	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.017				NS	NS	14,200	N	NMED[S]		1.20E-06
sec-Butylbenzene	135-98-8	mg/kg	0.0021	U			NS	NS	120,000	N	RSL		
Styrene	100-42-5	mg/kg	0.0021	U			NS	NS	51,300	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0021	U			NS	NS	120,000	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0021	U			1,650	N	629	N	NMED		
Toluene	108-88-3	mg/kg	0.032				NS	NS	61,300	N	NMED		5.22E-07
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0021	U			NS	NS	1,100	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0021	U			146	N	695	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0021	U			112	N	37	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0021	U			NS	NS	6,030	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0021	U			28	N	46	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.18	U			1,250	N	423	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.18	U			NS	NS	13,000	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.18	U			6,730	N	90,800	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.18	U			6,730	N	90,800	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.18	U			NS	NS	91,600	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.18	U			2,330	N	916	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.18	U			NS	NS	2,750	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.18	U			NS	NS	18,300	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.18	U			NS	NS	1,830	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.18	U			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.18	U			17	N	276	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.18	U			NS	NS	104,000	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.18	U			NS	NS	6,490	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.18	U			NS	NS	3,370	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.18	U			NS	NS	41,000	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.18	U			NS	NS	8,000	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.18	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.18	U			NS	NS	410	N	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.18	U			1,100	N	3,300	N	RSL[S]		

TABLE D1-L22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID L22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.18	U			NS	NS	73	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.18	U			NS	NS	NS	NS	NS		
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.18	U			NS	NS	82,000	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.18	U			110	N	410	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.18	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.18	U			1,100	N	3,300	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.18	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.18	U			NS	NS	50,500	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.18	U			NS	NS	25,300	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.18	U			NS	NS	253,000	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.18	U			32	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			24	N	251	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.18	U			32	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.18	U			NS	NS	25,300	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.18	U			323	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.18	U			NS	NS	3,300,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.18	U			NS	NS	82,000	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.18	U			NS	NS	2,500	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.18	U			16	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.18	U			519	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.18	U			1,830	N	18,300	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.18	U			12,000	N	160,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.18	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.18	U			3,230	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.18	U			NS	NS	91,600	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.18	U			NS	NS	8,200	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			3	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.18	U			NS	NS	1,200	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.18	U			NS	NS	733,000	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.18	U			NS	NS	916,000	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.18	U			NS	NS	33,700	N	NMED		
Fluorene	86-73-7	mg/kg	0.18	U			NS	NS	33,700	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.18	U			16	N	733	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.18	U			52	N	916	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.18	U			641	N	641	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.18	U			32	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.18	U			27,000	N	183,000	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.18	U			3	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	U			1	N	7	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.18	U			5,240	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.18	U			108	N	843	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.18	U			293	N	1,540	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.18	U			45	N	3,180	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.18	U			NS	NS	27,500	N	NMED		
Phenol	108-95-2	mg/kg	0.18	U			NS	NS	275,000	N	NMED		
Pyrene	129-00-0	mg/kg	0.18	U			NS	NS	25,300	N	NMED		

TABLE D1-L22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID L22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.07	J			428	N	4,890	N	NMED	1.64E-09	1.43E-05
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			5,300	N	7,400	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.021	U			304	N	57	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.021	U			9	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.011	U			9	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.011	U			11	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.011	U			11	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.011	U			11	N	16	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.011	U			11	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (3)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000023	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg		U	0.0000024	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000012	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.0000000079	J	0.00000079	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000015	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000068	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000055	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000093	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000056	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.000000072	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.000000096	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.00000011	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.00000013	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.000000088	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000015	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000099	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.0				0.000238	N	0.000808	N	NMED	3.32E-10	9.78E-06

TABLE D1-L22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID L22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	21,000				NS	NS	1,290,000	N	NMED		1.63E-02
Antimony	7440-36-0	mg/kg	0.16	J			NS	NS	519	N	NMED		3.08E-04
Arsenic	7440-38-2	mg/kg	0.8				36	N	208	N	NMED	2.23E-07	3.85E-03
Barium	7440-39-3	mg/kg	330				NS	NS	255,000	N	NMED		1.29E-03
Beryllium	7440-41-7	mg/kg	1				313,000	N	2,580	N	NMED	3.19E-11	3.88E-04
Cadmium	7440-43-9	mg/kg	0.46				417,000	N	1,110	N	NMED	1.10E-11	4.14E-04
Calcium	7440-70-2	mg/kg	48,000				NS	NS	32,400,000	N	NMED		1.48E-03
Chromium (Total) (4)	7440-47-3	mg/kg	13				505	N	314,000	N	NMED	2.57E-07	4.14E-05
Cobalt	7440-48-4	mg/kg	4.3				83,400	N	388	N	NMED	5.16E-10	1.11E-02
Copper	7440-50-8	mg/kg	62				NS	NS	51,900	N	NMED		1.19E-03
Iron	7439-89-6	mg/kg	11,000				NS	NS	908,000	N	NMED		1.21E-02
Lead	7439-92-1	mg/kg	9.2				NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	7,600				NS	NS	5,680,000	N	NMED		1.34E-03
Manganese	7439-96-5	mg/kg	680				NS	NS	160,000	N	NMED		4.25E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.015	J			NS	NS	112	N	NMED		1.34E-04
Nickel	7440-02-0	mg/kg	11				2,890,000	N	25,700	N	NMED	3.81E-11	4.28E-04
Potassium	7440-09-7	mg/kg	1,900				NS	NS	76,200,000	N	NMED		2.49E-05
Selenium	7782-49-2	mg/kg	1.3				NS	NS	6,490	N	NMED		2.00E-04
Silver	7440-22-4	mg/kg	0.049	J			NS	NS	6,490	N	NMED		7.55E-06
Sodium	7440-23-5	mg/kg	76				NS	NS	37,300,000	N	NMED		2.04E-06
Thallium	7440-28-0	mg/kg	0.069	J			NS	NS	13	N	NMED		5.31E-03
Vanadium	7440-62-2	mg/kg	11				NS	NS	6,530	N	NMED		1.68E-03
Zinc	7440-66-6	mg/kg	26				NS	NS	38,900	N	NMED		6.68E-04

TABLE D1-L22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID L22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.34	U			NS	NS	63	N	NMED		
Nitrate	14797-55-8	mg/kg	2.1	J			NS	NS	2,080,000	N	NMED		1.01E-06
Perchlorate	14797-73-0	mg/kg	0.0043	U			NS	NS	908	N	NMED		
										Cumulative Risk/Hazard		**5E-07**	**0.06**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect

TABLE D1-L22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID L22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2,3)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0021	U			659	N	10,600	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0021	U			NS	NS	13,600	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0021	U			197	N	7,080	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0021	U			4,300	N	2	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0021	U			1,820	N	70,800	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0021	U			NS	NS	424	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0021	U			781	N	130	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0021	U			NS	NS	283	N	NMED[C]			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0051	U			8	N	6	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0021	U			8,540	N	79	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0021	U			NS	NS	492	N	NMED[C]			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0051	U			6	N	8	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0021	U			16	N	140	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0021	U			NS	NS	2,500	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0021	U			195	N	54	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0021	U			415	N	25	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0021	U			NS	NS	422	N	NMED[C]			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0021	U			45,900	N	24,800	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0021	U			NS	NS	7,080	N	NMED[C]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0021	U			45,900	N	24,800	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0021	U			415	N	25	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.0031	U			NS	NS	90,700	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0021	U			NS	NS	7,080	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.0021	U			NS	NS	599	N	NMED[C]			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0021	U			NS	NS	7,080	N	NMED[C]			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0021	U			NS	NS	20,400	N	NMED[C]			
Acetone	67-64-1	mg/kg	0.092				NS	NS	242,000	N	NMED		3.80E-07	
Benzene	71-43-2	mg/kg	0.0021	U			423	N	142	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.0021	U			NS	NS	538	N	NMED[C]			
Bromochloromethane	74-97-5	mg/kg	0.0021	U			NS	NS	296	N	NMED[C]			
Bromodichloromethane	75-27-4	mg/kg	0.0021	U			143	N	7,080	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0021	U			23,700	N	5,380	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0021	U			NS	NS	18	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.0021	U			NS	NS	1,620	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0021	U			252	N	202	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0021	U			NS	NS	412	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0021	U			NS	NS	16,600	N	NMED			
Chloroform	67-66-3	mg/kg	0.0021	U			134	N	391	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0051	U			956	N	235	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0021	U			NS	NS	708	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0021	U			781	N	130	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0021	U			340	N	5,380	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0021	U			NS	NS	54	N	NMED			

TABLE D1-L22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID L22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2,3)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Dichlorodifluoromethane	75-71-8	mg/kg	0.0021	U			NS	NS	161	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.0021	U			1,770	N	5,800	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0021	U			2,400	N	269	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0021	U			NS	NS	2,740	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0051	U			NS	NS	696	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0021	U			24,200	N	33,100	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.01	U			89,600	N	1,210	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0021	U			NS	NS	17,700	N	NMED[C]			
n-Propylbenzene	103-65-1	mg/kg	0.0021	U			NS	NS	6,730	N	NMED[C]			
Naphthalene	91-20-3	mg/kg	0.0021	U			633	N	159	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0026	U			NS	NS	736	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.017				NS	NS	2,740	N	NMED[S]		6.20E-06	
sec-Butylbenzene	135-98-8	mg/kg	0.0021	U			NS	NS	35,400	N	NMED[C]			
Styrene	100-42-5	mg/kg	0.0021	U			NS	NS	10,200	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0021	U			NS	NS	35,400	N	NMED[C]			
Tetrachloroethene	127-18-4	mg/kg	0.0021	U			7,910	N	120	N	NMED			
Toluene	108-88-3	mg/kg	0.032				NS	NS	14,000	N	NMED		2.29E-06	
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0021	U			NS	NS	206	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0021	U			781	N	130	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0021	U			5,370	N	7	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0021	U			NS	NS	1,130	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0021	U			161	N	162	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.18	U			8,540	N	79	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.18	U			NS	NS	2,500	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.18	U			45,900	N	24,800	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.18	U			45,900	N	24,800	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.18	U			NS	NS	26,900	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.18	U			17,000	N	269	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.18	U			NS	NS	807	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.18	U			NS	NS	5,380	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.18	U			NS	NS	538	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.18	U			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.18	U			165	N	81	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.18	U			NS	NS	28,300	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.18	U			NS	NS	1,770	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.18	U			NS	NS	1,000	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.18	U			NS	NS	13,500	N	NMED[C]			
2-Nitroaniline	88-74-4	mg/kg	0.18	U			NS	NS	2,690	N	NMED[C]			
2-Nitrophenol	88-75-5	mg/kg	0.18	U			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.18	U			410	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.18	U			135	N	1,080	N	NMED[SC]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.18	U			NS	NS	22	N	NMED			

TABLE D1-L22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID L22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2,3)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.18	U			NS	NS	NS	NS	NS			
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.18	U			NS	NS	26,900	N	NMED[C]			
4-Chloroaniline	106-47-8	mg/kg	0.18	U			14	N	135	N	NMED[C]			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.18	U			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.18	U			135	N	1,080	N	NMED[C]			
4-Nitrophenol	100-02-7	mg/kg	0.18	U			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.18	U			NS	NS	15,100	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.18	U			NS	NS	7,530	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.18	U			NS	NS	75,300	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.18	U			240	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			173	N	15	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.18	U			240	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.18	U			NS	NS	7,530	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.18	U			2,310	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.18	U			NS	NS	1,080,000	N	NMED[C]			
Benzyl Alcohol	100-51-6	mg/kg	0.18	U			NS	NS	26,900	N	NMED[C]			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.18	U			NS	NS	807	N	NMED[C]			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.18	U			2	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.18	U			3,540	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.18	U			13,400	N	5,380	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.18	U			1,420	N	53,800	N	NMED[C]			
Carbazole	86-74-8	mg/kg	0.18	U			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.18	U			23,100	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.18	U			NS	NS	26,900	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.18	U			NS	NS	2,690	N	NMED[C]			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			24	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.18	U			NS	NS	269	N	NMED[C]			
Diethylphthalate	84-66-2	mg/kg	0.18	U			NS	NS	215,000	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.18	U			NS	NS	269,000	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.18	U			NS	NS	10,000	N	NMED			
Fluorene	86-73-7	mg/kg	0.18	U			NS	NS	10,000	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.18	U			117	N	215	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.18	U			2,400	N	269	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.18	U			4,670	N	188	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.18	U			240	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.18	U			198,000	N	53,700	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.18	U			0.38	N	NA	N	NMED[C]			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	U			4	N	2	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.18	U			37,900	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.18	U			633	N	159	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.18	U			1,350	N	353	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.18	U			346	N	989	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.18	U			NS	NS	8,070	N	NMED			
Phenol	108-95-2	mg/kg	0.18	U			NS	NS	77,400	N	NMED			
Pyrene	129-00-0	mg/kg	0.18	U			NS	NS	7,530	N	NMED			

TABLE D1-L22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID L22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2,3)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	8,070	N	NMED[C]			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	27	N	NMED[C]			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.07	J			2,960	N	1,350	N	NMED	2.36E-10	5.19E-05	
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			626	N	2,420	N	NMED[C]			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.021	U			2,440	N	17	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.021	U			55	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.011	U			58	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.011	U			85	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.011	U			85	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.011	U			85	N	5	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.011	U			85	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (4)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000023	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg		U	0.0000024	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000012	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.0000000079	J	0.00000079	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000015	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000068	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000055	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000093	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000056	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.000000072	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.000000096	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.00000011	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.00000013	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.000000088	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000015	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000099	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.0				0.00172	N	0.000226	N	NMED	4.59E-11	3.50E-05	

TABLE D1-L22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID L22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2,3)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	21,000				NS	NS	41,400	N	NMED		5.07E-01	Nervous
Antimony	7440-36-0	mg/kg	0.16	J			NS	NS	142	N	NMED		1.13E-03	
Arsenic	7440-38-2	mg/kg	0.8				216	N	41	N	NMED	3.70E-08	1.94E-02	
Barium	7440-39-3	mg/kg	330				NS	NS	4,390	N	NMED		7.52E-02	
Beryllium	7440-41-7	mg/kg	1				2,710	N	148	N	NMED	3.69E-09	6.76E-03	
Cadmium	7440-43-9	mg/kg	0.46				3,610	N	72	N	NMED	1.27E-09	6.38E-03	
Calcium	7440-70-2	mg/kg	48,000				NS	NS	8,850,000	N	NMED		5.42E-03	
Chromium (Total) (5)	7440-47-3	mg/kg	13				468	N	134	N	NMED	2.78E-07	9.70E-02	
Cobalt	7440-48-4	mg/kg	4.3				722	N	37	N	NMED	5.96E-08	1.17E-01	Endocrine
Copper	7440-50-8	mg/kg	62				NS	NS	14,200	N	NMED		4.37E-03	
Iron	7439-89-6	mg/kg	11,000				NS	NS	248,000	N	NMED		4.44E-02	
Lead	7439-92-1	mg/kg	9.2				NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	7,600				NS	NS	1,550,000	N	NMED		4.90E-03	
Manganese	7439-96-5	mg/kg	680				NS	NS	464	Y	NMED		1.47E+00	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.015	J			NS	NS	21	N	NMED		7.25E-04	
Nickel	7440-02-0	mg/kg	11				20,500	N	753	N	NMED	5.37E-09	1.46E-02	
Potassium	7440-09-7	mg/kg	1,900				NS	NS	20,800,000	N	NMED		9.13E-05	
Selenium	7782-49-2	mg/kg	1.3				NS	NS	1,750	N	NMED		7.43E-04	
Silver	7440-22-4	mg/kg	0.049	J			NS	NS	1,770	N	NMED		2.77E-05	
Sodium	7440-23-5	mg/kg	76				NS	NS	10,200,000	N	NMED		7.45E-06	
Thallium	7440-28-0	mg/kg	0.069	J			NS	NS	4	N	NMED		1.95E-02	
Vanadium	7440-62-2	mg/kg	11				NS	NS	614	N	NMED		1.79E-02	
Zinc	7440-66-6	mg/kg	26				NS	NS	106,000	N	NMED		2.45E-04	

TABLE D1-L22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID L22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2,3)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.34	U			NS	NS	12	N	NMED			
Nitrate	14797-55-8	mg/kg	2.1	J			NS	NS	566,000	N	NMED		3.71E-06	
Perchlorate	14797-73-0	mg/kg	0.0043	U			NS	NS	248	N	NMED			
										Cumulative Risk/Hazard		**4E-07**	**2.4**	
										Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	2.0
Endocrine	0.12
All Others	0.32

Notes:

[s] = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update).

2) NMED[C] = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

3) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

4) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service

J = Estimated

mg/kg = milligrams per kilogram

NS = No Standard

U = Nondetect

UJ = Estimated Nondetect

TABLE D1-M22-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID M22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0022	U			28.1	N	2,350	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0022	U			NS	NS	14,400	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0022	U			7.98	N	1,560	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0022	U			18.8	N	2.61	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0022	U			78.6	N	15,600	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0022	U			NS	NS	440	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0022	U			29.3	N	141	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0022	U			NS	NS	63	N	RSL			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0055	U			0.051	N	7.09	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0022	U			240	N	82.9	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0022	U			NS	NS	300	N	RSL			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0055	U			0.0858	N	5.88	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0022	U			0.672	N	135	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0022	U			NS	NS	2,150	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0022	U			8.32	N	55.6	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0022	U			17.8	N	29	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0022	U			NS	NS	270	N	RSL			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0022	U			1,290	N	5,480	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0022	U			NS	NS	1,600	N	RSL			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0022	U			1,290	N	5,480	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0022	U			17.8	N	29	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.081				NS	NS	37,400	N	NMED		2.17E-06	
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0022	U			NS	NS	1,560	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.0022	U			NS	NS	200	N	RSL			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0022	U			NS	NS	1,600	N	RSL			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0022	U			NS	NS	5,810	N	RSL			
Acetone	67-64-1	mg/kg	1.2				NS	NS	66,300	N	NMED		1.81E-05	
Benzene	71-43-2	mg/kg	0.0022	U			17.8	N	114	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.0022	U			NS	NS	290	N	RSL			
Bromochloromethane	74-97-5	mg/kg	0.0022	U			NS	NS	150	N	RSL			
Bromodichloromethane	75-27-4	mg/kg	0.0022	U			6.19	N	1,560	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0022	U			674	N	1,230	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0022	U			NS	NS	17.7	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.0022	U			NS	NS	1,550	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0022	U			10.7	N	144	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0022	U			NS	NS	378	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0022	U			NS	NS	19,000	N	NMED			
Chloroform	67-66-3	mg/kg	0.0022	U			5.9	N	306	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0055	U			41.1	N	268	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0022	U			NS	NS	156	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0022	U			29.3	N	141	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0022	U			13.9	N	1,230	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0022	U			NS	NS	57.9	N	NMED			

TABLE D1-M22-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID M22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Dichlorodifluoromethane	75-71-8	mg/kg	0.0022	U			NS	NS	182	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.0022	U			75.1	N	3,930	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0022	U			68.3	N	61.6	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0022	U			NS	NS	2,360	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0055	U			NS	NS	764	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0022	U			975	N	37,800	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.011	U			766	N	409	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0022	U			NS	NS	3,900	N	RSL			
n-Propylbenzene	103-65-1	mg/kg	0.0022	U			NS	NS	3,800	N	RSL			
Naphthalene	91-20-3	mg/kg	0.0022	U			22.6	N	162	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0028	U			NS	NS	805	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.0022	U			NS	NS	2,360	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.0022	U			NS	NS	7,800	N	RSL			
Styrene	100-42-5	mg/kg	0.0022	U			NS	NS	7,260	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0022	U			NS	NS	7,800	N	RSL			
Tetrachloroethene	127-18-4	mg/kg	0.0022	U			337	N	111	N	NMED			
Toluene	108-88-3	mg/kg	0.0022	U			NS	NS	5,230	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0022	U			NS	NS	210	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0022	U			29.3	N	141	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0022	U			15.5	N	6.77	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0022	U			NS	NS	1,230	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0022	U			0.742	N	113	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.18	U			240	N	82.9	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.18	U			NS	NS	2,150	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.18	U			1,290	N	5,480	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.18	U			1,290	N	5,480	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.18	U			NS	NS	6,160	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.18	U			484	N	61.6	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.18	U			NS	NS	185	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.18	U			NS	NS	1,230	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.18	U			NS	NS	123	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.18	U			17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.18	U			3.56	N	18.5	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.18	U			NS	NS	6,260	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.18	U			NS	NS	391	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.18	U			NS	NS	232	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.18	U			NS	NS	3,200	N	RSL			
2-Nitroaniline	88-74-4	mg/kg	0.18	U			NS	NS	630	N	RSL			
2-Nitrophenol	88-75-5	mg/kg	0.18	U			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.18	U			11.8	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.18	U			270	N	250	N	RSL[S]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.18	U			NS	NS	4.93	N	NMED			
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.18	U			NS	NS	NS	NS	NS			

TABLE D1-M22-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID M22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.18	U			NS	NS	6,300	N	RSL			
4-Chloroaniline	106-47-8	mg/kg	0.18	U			27	N	32	N	RSL			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.18	U			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.18	U			270	N	250	N	RSL			
4-Nitrophenol	100-02-7	mg/kg	0.18	U			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.18	U			NS	NS	3,480	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.18	U			NS	NS	1,740	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.18	U			NS	NS	17,400	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.18	U			1.53	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			1.12	N	17.4	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.18	U			1.53	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.18	U			NS	NS	1,740	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.18	U			15.3	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.18	U			NS	NS	250,000	N	RSL			
Benzyl Alcohol	100-51-6	mg/kg	0.18	U			NS	NS	6,300	N	RSL			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.18	U			NS	NS	190	N	RSL			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.18	U			3.11	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.18	U			99.3	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.18	U			380	N	1,230	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.18	U			2,900	N	13,000	N	RSL			
Carbazole	86-74-8	mg/kg	0.18	U			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.18	U			153	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.18	U			NS	NS	6,160	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.18	U			NS	NS	630	N	RSL			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			0.153	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.18	U			NS	NS	78	N	RSL			
Diethylphthalate	84-66-2	mg/kg	0.18	U			NS	NS	49,300	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.18	U			NS	NS	61,600	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.18	U			NS	NS	2,320	N	NMED			
Fluorene	86-73-7	mg/kg	0.18	U			NS	NS	2,320	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.18	U			3.33	N	49.3	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.18	U			68.3	N	61.6	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.18	U			133	N	43.1	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.18	U			1.53	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.18	U			5,610	N	12,300	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.18	U			0.78	N	NS	NS	RSL			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.022	UJ			0.0234	N	0.493	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.18	U			1,090	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.18	U			22.6	N	162	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.18	U			60.4	N	131	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.18	U			9.85	N	234	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.18	U			NS	NS	1,740	N	NMED			
Phenol	108-95-2	mg/kg	0.18	U			NS	NS	18,500	N	NMED			
Pyrene	129-00-0	mg/kg	0.18	U			NS	NS	1,740	N	NMED			

TABLE D1-M22-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID M22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	2,200	N	RSL			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	6.3	N	RSL			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			211	N	36	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			3.56	N	18.5	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	7.7	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			31.6	N	70.4	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	6.16	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	7.64	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			333	N	247	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			83.1	N	301	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	156	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			60.4	N	131	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			313	N	6.16	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	3,850	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			1,300	N	570	N	RSL			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.022	U			69.6	N	3.98	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.022	U			1.81	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.011	U			1.86	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.011	U			2.43	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.011	U			2.43	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.011	U			2.43	N	1.14	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.011	U			2.43	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (2)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.0000011	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000036	J	0.000012	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg	0.0000000095	J	0.00000095	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.000000019	J	0.0000019	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000024	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.00000038	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000023	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.00000021	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.00000021	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		UJ	0.00000021	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000022	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000057	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.00000018	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		UJ	0.00000024	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000041	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000039	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.00000022	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.000000032				0.000049	N	0.0000506	N	NMED	6.55E-09	6.34E-04	

TABLE D1-M22-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID M22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	22,000				NS	NS	78,000	N	NMED		2.82E-01	Nervous
Antimony	7440-36-0	mg/kg	0.28				NS	NS	31.3	N	NMED		8.95E-03	
Arsenic	7440-38-2	mg/kg	1.4				7.07	N	13	N	NMED		1.08E-01	Heart/Endocrine
Barium	7440-39-3	mg/kg	360				NS	NS	15,600	N	NMED		2.31E-02	
Beryllium	7440-41-7	mg/kg	0.81	J			64,400	N	156	N	NMED		5.19E-03	
Cadmium	7440-43-9	mg/kg	0.73				85,900	N	70.5	N	NMED		1.04E-02	
Calcium	7440-70-2	mg/kg	42,000				NS	NS	13,000,000	N	NMED		3.23E-03	
Chromium (Total) (3)	7440-47-3	mg/kg	16				96.6	N	45,200	N	NMED		3.54E-04	
Cobalt	7440-48-4	mg/kg	4.9				17,200	N	23.4	N	NMED		2.09E-01	Endocrine
Copper	7440-50-8	mg/kg	150				NS	NS	3,130	N	NMED		4.79E-02	
Iron	7439-89-6	mg/kg	15,000				NS	NS	54,800	N	NMED		2.74E-01	GI
Lead	7439-92-1	mg/kg	12				NS	NS	200	N	RSL			
Magnesium	7439-95-4	mg/kg	8,700				NS	NS	15,600,000	N	NMED		5.58E-04	
Manganese	7439-96-5	mg/kg	740				NS	NS	10,500	N	NMED		7.05E-02	
Mercury (Elemental)	7439-97-6	mg/kg	0.025	J			NS	NS	23.8	N	NMED		1.05E-03	
Nickel	7440-02-0	mg/kg	13				595,000	N	1,560	N	NMED		8.33E-03	
Potassium	7440-09-7	mg/kg	2,000				NS	NS	15,600,000	N	NMED		1.28E-04	
Selenium	7782-49-2	mg/kg	1.1				NS	NS	391	N	NMED		2.81E-03	
Silver	7440-22-4	mg/kg	0.055	J			NS	NS	391	N	NMED		1.41E-04	
Sodium	7440-23-5	mg/kg	65				NS	NS	7,820,000	N	NMED		8.31E-06	
Thallium	7440-28-0	mg/kg	0.063	J			NS	NS	0.782	N	NMED		8.06E-02	
Vanadium	7440-62-2	mg/kg	12				NS	NS	394	N	NMED		3.05E-02	
Zinc	7440-66-6	mg/kg	28				NS	NS	23,500	N	NMED		1.19E-03	

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OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.34	U			NS	NS	11.2	N	NMED			
Nitrate	14797-55-8	mg/kg	22				NS	NS	125,000	N	NMED		1.76E-04	
Perchlorate	14797-73-0	mg/kg	0.001	J			NS	NS	54.8	N	NMED		1.82E-05	
										Cumulative Risk/Hazard		**7E-09**	**1.2**	
										Exceeds Target Level		**N**	**Y**	

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service

J = Estimated

mg/kg = milligrams per kilogram

NS = No Standard

U = Nondetect

UJ = Estimated Nondetect

System	Hazard Quotient
Nervous	0.28
Endocrine	0.32
GI	0.27
Heart	0.11
All Others	0.30

TABLE D1-M22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID M22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
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	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0022	U			137	N	39,400	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0022	U			NS	NS	72,500	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0022	U			39	N	26,000	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0022	U			92	N	12	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0022	U			383	N	260,000	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0022	U			NS	NS	2,260	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0022	U			146	N	695	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0022	U			NS	NS	930	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0055	U			1	N	34	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0022	U			1,250	N	423	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0022	U			NS	NS	1,800	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0055	U			1	N	41	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0022	U			3	N	738	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0022	U			NS	NS	13,000	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0022	U			41	N	286	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0022	U			87	N	137	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0022	U			NS	NS	1,500	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0022	U			6,730	N	90,800	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0022	U			NS	NS	23,000	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0022	U			6,730	N	90,800	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0022	U			87	N	137	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.081				NS	NS	411,000	N	NMED		1.97E-07
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0022	U			NS	NS	26,000	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0022	U			NS	NS	1,300	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0022	U			NS	NS	23,000	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0022	U			NS	NS	81,600	N	RSL		
Acetone	67-64-1	mg/kg	1.2				NS	NS	960,000	N	NMED		1.25E-06
Benzene	71-43-2	mg/kg	0.0022	U			87	N	729	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0022	U			NS	NS	1,800	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0022	U			NS	NS	630	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0022	U			30	N	26,000	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0022	U			1,760	N	18,300	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0022	U			NS	NS	95	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0022	U			NS	NS	8,540	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0022	U			53	N	1,020	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0022	U			NS	NS	2,160	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0022	U			NS	NS	89,500	N	NMED		
Chloroform	67-66-3	mg/kg	0.0022	U			29	N	2,000	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0055	U			201	N	1,260	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0022	U			NS	NS	2,600	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0022	U			146	N	695	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0022	U			67	N	18,300	N	NMED		

TABLE D1-M22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID M22
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MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0022	U			NS	NS	288	N	NMED		
Dichlorodifluoromethane	75-71-8	mg/kg	0.0022	U			NS	NS	865	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0022	U			29,000	N	368	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0022	U			52	N	916	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0022	U			NS	NS	14,200	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0055	U			NS	NS	3,730	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0022	U			4,820	N	178,000	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.011	U			14,400	N	5,130	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0022	U			NS	NS	58,000	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0022	U			NS	NS	24,000	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0022	U			108	N	843	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0028	U			NS	NS	3,940	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0022	U			NS	NS	14,200	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0022	U			NS	NS	120,000	N	RSL		
Styrene	100-42-5	mg/kg	0.0022	U			NS	NS	51,300	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0022	U			NS	NS	120,000	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0022	U			1,650	N	629	N	NMED		
Toluene	108-88-3	mg/kg	0.0022	U			NS	NS	61,300	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0022	U			NS	NS	1,100	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0022	U			146	N	695	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0022	U			112	N	37	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0022	U			NS	NS	6,030	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0022	U			28	N	46	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.18	U			1,250	N	423	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.18	U			NS	NS	13,000	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.18	U			6,730	N	90,800	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.18	U			6,730	N	90,800	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.18	U			NS	NS	91,600	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.18	U			2,330	N	916	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.18	U			NS	NS	2,750	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.18	U			NS	NS	18,300	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.18	U			NS	NS	1,830	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.18	U			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.18	U			17	N	276	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.18	U			NS	NS	104,000	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.18	U			NS	NS	6,490	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.18	U			NS	NS	3,370	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.18	U			NS	NS	41,000	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.18	U			NS	NS	8,000	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.18	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.18	U			NS	NS	410	N	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.18	U			1,100	N	3,300	N	RSL[S]		

TABLE D1-M22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID M22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.18	U			NS	NS	73	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.18	U			NS	NS	NS	NS	NS		
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.18	U			NS	NS	82,000	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.18	U			110	N	410	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.18	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.18	U			1,100	N	3,300	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.18	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.18	U			NS	NS	50,500	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.18	U			NS	NS	25,300	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.18	U			NS	NS	253,000	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.18	U			32	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			24	N	251	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.18	U			32	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.18	U			NS	NS	25,300	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.18	U			323	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.18	U			NS	NS	3,300,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.18	U			NS	NS	82,000	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.18	U			NS	NS	2,500	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.18	U			16	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.18	U			519	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.18	U			1,830	N	18,300	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.18	U			12,000	N	160,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.18	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.18	U			3,230	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.18	U			NS	NS	91,600	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.18	U			NS	NS	8,200	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			3	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.18	U			NS	NS	1,200	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.18	U			NS	NS	733,000	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.18	U			NS	NS	916,000	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.18	U			NS	NS	33,700	N	NMED		
Fluorene	86-73-7	mg/kg	0.18	U			NS	NS	33,700	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.18	U			16	N	733	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.18	U			52	N	916	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.18	U			641	N	641	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.18	U			32	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.18	U			27,000	N	183,000	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.18	U			3	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.022	UJ			1	N	7	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.18	U			5,240	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.18	U			108	N	843	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.18	U			293	N	1,540	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.18	U			45	N	3,180	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.18	U			NS	NS	27,500	N	NMED		
Phenol	108-95-2	mg/kg	0.18	U			NS	NS	275,000	N	NMED		
Pyrene	129-00-0	mg/kg	0.18	U			NS	NS	25,300	N	NMED		

TABLE D1-M22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID M22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			5,300	N	7,400	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.022	U			304	N	57	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.022	U			9	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.011	U			9	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.011	U			11	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.011	U			11	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.011	U			11	N	16	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.011	U			11	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.0000011	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000036	J	0.000012	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg	0.0000000095	J	0.00000095	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.000000019	J	0.0000019	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000024	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.00000038	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000023	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.00000021	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.00000021	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		UJ	0.00000021	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000022	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000057	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.00000018	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		UJ	0.00000024	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000041	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000039	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.00000022	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.000000032				0.000238	N	0.000808	N	NMED	1.35E-09	3.97E-05

TABLE D1-M22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID M22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	22,000				NS	NS	1,290,000	N	NMED		1.71E-02
Antimony	7440-36-0	mg/kg	0.28				NS	NS	519	N	NMED		5.39E-04
Arsenic	7440-38-2	mg/kg	1.4				36	N	208	N	NMED	3.90E-07	6.73E-03
Barium	7440-39-3	mg/kg	360				NS	NS	255,000	N	NMED		1.41E-03
Beryllium	7440-41-7	mg/kg	0.81	J			313,000	N	2,580	N	NMED	2.59E-11	3.14E-04
Cadmium	7440-43-9	mg/kg	0.73				417,000	N	1,110	N	NMED	1.75E-11	6.58E-04
Calcium	7440-70-2	mg/kg	42,000				NS	NS	32,400,000	N	NMED		1.30E-03
Chromium (Total) (3)	7440-47-3	mg/kg	16				505	N	314,000	N	NMED	3.17E-07	5.10E-05
Cobalt	7440-48-4	mg/kg	4.9				83,400	N	388	N	NMED	5.88E-10	1.26E-02
Copper	7440-50-8	mg/kg	150				NS	NS	51,900	N	NMED		2.89E-03
Iron	7439-89-6	mg/kg	15,000				NS	NS	908,000	N	NMED		1.65E-02
Lead	7439-92-1	mg/kg	12				NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	8,700				NS	NS	5,680,000	N	NMED		1.53E-03
Manganese	7439-96-5	mg/kg	740				NS	NS	160,000	N	NMED		4.63E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.025	J			NS	NS	112	N	NMED		2.23E-04
Nickel	7440-02-0	mg/kg	13				2,890,000	N	25,700	N	NMED	4.50E-11	5.06E-04
Potassium	7440-09-7	mg/kg	2,000				NS	NS	76,200,000	N	NMED		2.62E-05
Selenium	7782-49-2	mg/kg	1.1				NS	NS	6,490	N	NMED		1.69E-04
Silver	7440-22-4	mg/kg	0.055	J			NS	NS	6,490	N	NMED		8.47E-06
Sodium	7440-23-5	mg/kg	65				NS	NS	37,300,000	N	NMED		1.74E-06
Thallium	7440-28-0	mg/kg	0.063	J			NS	NS	13	N	NMED		4.85E-03
Vanadium	7440-62-2	mg/kg	12				NS	NS	6,530	N	NMED		1.84E-03
Zinc	7440-66-6	mg/kg	28				NS	NS	38,900	N	NMED		7.20E-04

TABLE D1-M22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID M22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.34	U			NS	NS	63	N	NMED		
Nitrate	14797-55-8	mg/kg	22				NS	NS	2,080,000	N	NMED		1.06E-05
Perchlorate	14797-73-0	mg/kg	0.001	J			NS	NS	908	N	NMED		1.10E-06
										Cumulative Risk/Hazard		**7E-07**	**0.07**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
IEUBK = Integrated Exposure Uptake Biokentic Model
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect

TABLE D1-M22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID M22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0022	U			659	N	10,600	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0022	U			NS	NS	13,600	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0022	U			197	N	7,080	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0022	U			4,300	N	2	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0022	U			1,820	N	70,800	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0022	U			NS	NS	424	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0022	U			781	N	130	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0022	U			NS	NS	283	N	NMED[C]			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0055	U			8	N	6	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0022	U			8,540	N	79	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0022	U			NS	NS	492	N	NMED[C]			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0055	U			6	N	8	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0022	U			16	N	140	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0022	U			NS	NS	2,500	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0022	U			195	N	54	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0022	U			415	N	25	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0022	U			NS	NS	422	N	NMED[C]			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0022	U			45,900	N	24,800	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0022	U			NS	NS	7,080	N	NMED[C]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0022	U			45,900	N	24,800	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0022	U			415	N	25	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.081				NS	NS	90,700	N	NMED		8.93E-07	
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0022	U			NS	NS	7,080	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.0022	U			NS	NS	599	N	NMED[C]			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0022	U			NS	NS	7,080	N	NMED[C]			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0022	U			NS	NS	20,400	N	NMED[C]			
Acetone	67-64-1	mg/kg	1.2				NS	NS	242,000	N	NMED		4.96E-06	
Benzene	71-43-2	mg/kg	0.0022	U			423	N	142	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.0022	U			NS	NS	538	N	NMED[C]			
Bromochloromethane	74-97-5	mg/kg	0.0022	U			NS	NS	296	N	NMED[C]			
Bromodichloromethane	75-27-4	mg/kg	0.0022	U			143	N	7,080	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0022	U			23,700	N	5,380	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0022	U			NS	NS	18	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.0022	U			NS	NS	1,620	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0022	U			252	N	202	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0022	U			NS	NS	412	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0022	U			NS	NS	16,600	N	NMED			
Chloroform	67-66-3	mg/kg	0.0022	U			134	N	391	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0055	U			956	N	235	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0022	U			NS	NS	708	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0022	U			781	N	130	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0022	U			340	N	5,380	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0022	U			NS	NS	54	N	NMED			

TABLE D1-M22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID M22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Dichlorodifluoromethane	75-71-8	mg/kg	0.0022	U			NS	NS	161	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.0022	U			1,770	N	5,800	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0022	U			2,400	N	269	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0022	U			NS	NS	2,740	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0055	U			NS	NS	696	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0022	U			24,200	N	33,100	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.011	U			89,600	N	1,210	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0022	U			NS	NS	17,700	N	NMED[C]			
n-Propylbenzene	103-65-1	mg/kg	0.0022	U			NS	NS	6,730	N	NMED[C]			
Naphthalene	91-20-3	mg/kg	0.0022	U			633	N	159	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0028	U			NS	NS	736	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.0022	U			NS	NS	2,740	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.0022	U			NS	NS	35,400	N	NMED[C]			
Styrene	100-42-5	mg/kg	0.0022	U			NS	NS	10,200	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0022	U			NS	NS	35,400	N	NMED[C]			
Tetrachloroethene	127-18-4	mg/kg	0.0022	U			7,910	N	120	N	NMED			
Toluene	108-88-3	mg/kg	0.0022	U			NS	NS	14,000	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0022	U			NS	NS	206	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0022	U			781	N	130	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0022	U			5,370	N	7	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0022	U			NS	NS	1,130	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0022	U			161	N	162	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.18	U			8,540	N	79	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.18	U			NS	NS	2,500	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.18	U			45,900	N	24,800	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.18	U			45,900	N	24,800	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.18	U			NS	NS	26,900	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.18	U			17,000	N	269	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.18	U			NS	NS	807	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.18	U			NS	NS	5,380	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.18	U			NS	NS	538	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.18	U			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.18	U			165	N	81	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.18	U			NS	NS	28,300	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.18	U			NS	NS	1,770	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.18	U			NS	NS	1,000	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.18	U			NS	NS	13,500	N	NMED[C]			
2-Nitroaniline	88-74-4	mg/kg	0.18	U			NS	NS	2,690	N	NMED[C]			
2-Nitrophenol	88-75-5	mg/kg	0.18	U			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.18	U			410	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.18	U			135	N	1,080	N	NMED[SC]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.18	U			NS	NS	22	N	NMED			

TABLE D1-M22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID M22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.18	U			NS	NS	NS	NS	NS			
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.18	U			NS	NS	26,900	N	NMED[C]			
4-Chloroaniline	106-47-8	mg/kg	0.18	U			14	N	135	N	NMED[C]			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.18	U			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.18	U			135	N	1,080	N	NMED[C]			
4-Nitrophenol	100-02-7	mg/kg	0.18	U			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.18	U			NS	NS	15,100	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.18	U			NS	NS	7,530	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.18	U			NS	NS	75,300	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.18	U			240	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			173	N	15	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.18	U			240	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.18	U			NS	NS	7,530	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.18	U			2,310	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.18	U			NS	NS	1,080,000	N	NMED[C]			
Benzyl Alcohol	100-51-6	mg/kg	0.18	U			NS	NS	26,900	N	NMED[C]			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.18	U			NS	NS	807	N	NMED[C]			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.18	U			2	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.18	U			3,540	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.18	U			13,400	N	5,380	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.18	U			1,420	N	53,800	N	NMED[C]			
Carbazole	86-74-8	mg/kg	0.18	U			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.18	U			23,100	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.18	U			NS	NS	26,900	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.18	U			NS	NS	2,690	N	NMED[C]			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			24	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.18	U			NS	NS	269	N	NMED[C]			
Diethylphthalate	84-66-2	mg/kg	0.18	U			NS	NS	215,000	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.18	U			NS	NS	269,000	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.18	U			NS	NS	10,000	N	NMED			
Fluorene	86-73-7	mg/kg	0.18	U			NS	NS	10,000	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.18	U			117	N	215	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.18	U			2,400	N	269	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.18	U			4,670	N	188	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.18	U			240	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.18	U			198,000	N	53,700	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.18	U			0.38	N	NA	N	NMED[C]			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.022	UJ			4	N	2	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.18	U			37,900	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.18	U			633	N	159	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.18	U			1,350	N	353	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.18	U			346	N	989	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.18	U			NS	NS	8,070	N	NMED			
Phenol	108-95-2	mg/kg	0.18	U			NS	NS	77,400	N	NMED			
Pyrene	129-00-0	mg/kg	0.18	U			NS	NS	7,530	N	NMED			

TABLE D1-M22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID M22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	8,070	N	NMED[C]			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	27	N	NMED[C]			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			626	N	2,420	N	NMED[C]			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.022	U			2,440	N	17	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.022	U			55	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.011	U			58	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.011	U			85	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.011	U			85	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.011	U			85	N	5	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.011	U			85	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (3)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.0000011	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000036	J	0.000012	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg	0.0000000095	J	0.00000095	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.000000019	J	0.0000019	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000024	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.00000038	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000023	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.00000021	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.00000021	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		UJ	0.00000021	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000022	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000057	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.00000018	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		UJ	0.00000024	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000041	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000039	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.00000022	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.000000032				0.00172	N	0.000226	N	NMED	1.87E-10	1.42E-04	

TABLE D1-M22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID M22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	22,000				NS	NS	41,400	N	NMED		5.31E-01	Nervous
Antimony	7440-36-0	mg/kg	0.28				NS	NS	142	N	NMED		1.97E-03	
Arsenic	7440-38-2	mg/kg	1.4				216	N	41	N	NMED		3.40E-02	
Barium	7440-39-3	mg/kg	360				NS	NS	4,390	N	NMED		8.20E-02	
Beryllium	7440-41-7	mg/kg	0.81	J			2,710	N	148	N	NMED		5.47E-03	
Cadmium	7440-43-9	mg/kg	0.73				3,610	N	72	N	NMED		1.01E-02	
Calcium	7440-70-2	mg/kg	42,000				NS	NS	8,850,000	N	NMED		4.75E-03	
Chromium (Total) (4)	7440-47-3	mg/kg	16				468	N	134	N	NMED		1.19E-01	GI, Blood
Cobalt	7440-48-4	mg/kg	4.9				722	N	37	N	NMED		1.34E-01	Endocrine
Copper	7440-50-8	mg/kg	150				NS	NS	14,200	N	NMED		1.06E-02	
Iron	7439-89-6	mg/kg	15,000				NS	NS	248,000	N	NMED		6.05E-02	
Lead	7439-92-1	mg/kg	12				NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	8,700				NS	NS	1,550,000	N	NMED		5.61E-03	
Manganese	7439-96-5	mg/kg	740				NS	NS	464	Y	NMED		1.59E+00	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.025	J			NS	NS	21	N	NMED		1.21E-03	
Nickel	7440-02-0	mg/kg	13				20,500	N	753	N	NMED		1.73E-02	
Potassium	7440-09-7	mg/kg	2,000				NS	NS	20,800,000	N	NMED		9.62E-05	
Selenium	7782-49-2	mg/kg	1.1				NS	NS	1,750	N	NMED		6.29E-04	
Silver	7440-22-4	mg/kg	0.055	J			NS	NS	1,770	N	NMED		3.11E-05	
Sodium	7440-23-5	mg/kg	65				NS	NS	10,200,000	N	NMED		6.37E-06	
Thallium	7440-28-0	mg/kg	0.063	J			NS	NS	4	N	NMED		1.78E-02	
Vanadium	7440-62-2	mg/kg	12				NS	NS	614	N	NMED		1.95E-02	
Zinc	7440-66-6	mg/kg	28				NS	NS	106,000	N	NMED		2.64E-04	

TABLE D1-M22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID M22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.34	U			NS	NS	12	N	NMED			
Nitrate	14797-55-8	mg/kg	22				NS	NS	566,000	N	NMED		3.89E-05	
Perchlorate	14797-73-0	mg/kg	0.001	J			NS	NS	248	N	NMED		4.03E-06	
										Cumulative Risk/Hazard		**2E-10**	**2.7**	
										Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	2.1
Endocrine	0.13
GI	0.12
Blood	0.12
All Others	0.27

Notes:

[s] = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update).

2) NMED[C] = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

3) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

4) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect

TABLE D1-N22-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID N22
INNER FENCE
FORT WINGATE DEPOT ACTIVITY

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0019	U			28.1	N	2,350	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0019	U			NS	NS	14,400	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0019	U			7.98	N	1,560	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0019	U			18.8	N	2.61	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0019	U			78.6	N	15,600	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0019	U			NS	NS	440	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0019	U			29.3	N	141	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0019	U			NS	NS	63	N	RSL			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0048	U			0.051	N	7.09	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0019	U			240	N	82.9	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0019	U			NS	NS	300	N	RSL			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0048	U			0.0858	N	5.88	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0019	U			0.672	N	135	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0019	U			NS	NS	2,150	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0019	U			8.32	N	55.6	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0019	U			17.8	N	29	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0019	U			NS	NS	270	N	RSL			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0019	U			1,290	N	5,480	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0019	U			NS	NS	1,600	N	RSL			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0019	U			1,290	N	5,480	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0019	U			17.8	N	29	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.0029	U			NS	NS	37,400	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0019	U			NS	NS	1,560	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.0019	U			NS	NS	200	N	RSL			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0019	U			NS	NS	1,600	N	RSL			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0019	U			NS	NS	5,810	N	RSL			
Acetone	67-64-1	mg/kg	0.081				NS	NS	66,300	N	NMED		1.22E-06	
Benzene	71-43-2	mg/kg	0.0019	U			17.8	N	114	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.0019	U			NS	NS	290	N	RSL			
Bromochloromethane	74-97-5	mg/kg	0.0019	U			NS	NS	150	N	RSL			
Bromodichloromethane	75-27-4	mg/kg	0.0019	U			6.19	N	1,560	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0019	U			674	N	1,230	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0019	U			NS	NS	17.7	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.0019	U			NS	NS	1,550	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0019	U			10.7	N	144	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0019	U			NS	NS	378	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0019	U			NS	NS	19,000	N	NMED			
Chloroform	67-66-3	mg/kg	0.0019	U			5.9	N	306	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0048	U			41.1	N	268	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0019	U			NS	NS	156	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0019	U			29.3	N	141	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0019	U			13.9	N	1,230	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0019	U			NS	NS	57.9	N	NMED			

TABLE D1-N22-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID N22
INNER FENCE
FORT WINGATE DEPOT ACTIVITY

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Dichlorodifluoromethane	75-71-8	mg/kg	0.0019	U			NS	NS	182	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.0019	U			75.1	N	3,930	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0019	U			68.3	N	61.6	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0019	U			NS	NS	2,360	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0048	U			NS	NS	764	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0019	U			975	N	37,800	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.0096	U			766	N	409	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0019	U			NS	NS	3,900	N	RSL			
n-Propylbenzene	103-65-1	mg/kg	0.0019	U			NS	NS	3,800	N	RSL			
Naphthalene	91-20-3	mg/kg	0.0019	U			22.6	N	162	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0024	U			NS	NS	805	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.0019	U			NS	NS	2,360	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.0019	U			NS	NS	7,800	N	RSL			
Styrene	100-42-5	mg/kg	0.0019	U			NS	NS	7,260	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0019	U			NS	NS	7,800	N	RSL			
Tetrachloroethene	127-18-4	mg/kg	0.0019	U			337	N	111	N	NMED			
Toluene	108-88-3	mg/kg	0.0019	U			NS	NS	5,230	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0019	U			NS	NS	210	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0019	U			29.3	N	141	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0019	U			15.5	N	6.77	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0019	U			NS	NS	1,230	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0019	U			0.742	N	113	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.18	U			240	N	82.9	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.18	U			NS	NS	2,150	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.18	U			1,290	N	5,480	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.18	U			1,290	N	5,480	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.18	U			NS	NS	6,160	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.18	U			484	N	61.6	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.18	U			NS	NS	185	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.18	U			NS	NS	1,230	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.18	U			NS	NS	123	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.18	U			17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.18	U			3.56	N	18.5	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.18	U			NS	NS	6,260	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.18	U			NS	NS	391	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.18	U			NS	NS	232	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.18	U			NS	NS	3,200	N	RSL			
2-Nitroaniline	88-74-4	mg/kg	0.18	U			NS	NS	630	N	RSL			
2-Nitrophenol	88-75-5	mg/kg	0.18	U			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.18	U			11.8	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.18	U			270	N	250	N	RSL[S]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.18	U			NS	NS	4.93	N	NMED			
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.18	U			NS	NS	NS	NS	NS			

TABLE D1-N22-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID N22
INNER FENCE
FORT WINGATE DEPOT ACTIVITY

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.18	U			NS	NS	6,300	N	RSL			
4-Chloroaniline	106-47-8	mg/kg	0.18	U			27	N	32	N	RSL			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.18	U			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.18	U			270	N	250	N	RSL			
4-Nitrophenol	100-02-7	mg/kg	0.18	U			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.18	U			NS	NS	3,480	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.18	U			NS	NS	1,740	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.18	U			NS	NS	17,400	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.18	U			1.53	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			1.12	N	17.4	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.18	U			1.53	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.18	U			NS	NS	1,740	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.18	U			15.3	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.18	U			NS	NS	250,000	N	RSL			
Benzyl Alcohol	100-51-6	mg/kg	0.18	U			NS	NS	6,300	N	RSL			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.18	U			NS	NS	190	N	RSL			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.18	U			3.11	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.18	U			99.3	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.18	U			380	N	1,230	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.18	U			2,900	N	13,000	N	RSL			
Carbazole	86-74-8	mg/kg	0.18	U			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.18	U			153	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.18	U			NS	NS	6,160	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.18	U			NS	NS	630	N	RSL			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			0.153	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.18	U			NS	NS	78	N	RSL			
Diethylphthalate	84-66-2	mg/kg	0.18	U			NS	NS	49,300	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.18	U			NS	NS	61,600	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.18	U			NS	NS	2,320	N	NMED			
Fluorene	86-73-7	mg/kg	0.18	U			NS	NS	2,320	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.18	U			3.33	N	49.3	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.18	U			68.3	N	61.6	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.18	U			133	N	43.1	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.18	U			1.53	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.18	U			5,610	N	12,300	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.18	U			0.78	N	NS	NS	RSL			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	UJ			0.0234	N	0.493	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.18	U			1,090	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.18	U			22.6	N	162	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.18	U			60.4	N	131	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.18	U			9.85	N	234	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.18	U			NS	NS	1,740	N	NMED			
Phenol	108-95-2	mg/kg	0.18	U			NS	NS	18,500	N	NMED			
Pyrene	129-00-0	mg/kg	0.18	U			NS	NS	1,740	N	NMED			

TABLE D1-N22-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID N22
INNER FENCE
FORT WINGATE DEPOT ACTIVITY

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	2,200	N	RSL			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	6.3	N	RSL			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			211	N	36	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			3.56	N	18.5	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	7.7	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			31.6	N	70.4	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	6.16	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	7.64	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			333	N	247	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			83.1	N	301	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	156	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			60.4	N	131	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			313	N	6.16	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	3,850	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			1,300	N	570	N	RSL			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.021	U			69.6	N	3.98	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.021	U			1.81	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.011	U			1.86	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.011	U			2.43	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.011	U			2.43	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.011	U			2.43	N	1.14	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.011	U			2.43	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (3)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg	0.00000000021	J	0.00000069	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000036	J	0.000012	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000013	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.0000018	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000016	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.00000014	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000069	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.00000013	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.00000007	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		UJ	0.00000013	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000013	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000016	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.00000011	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg	0.00000001	J	0.0000001	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000016	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000034	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.00000011	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.000000014				0.000049	N	0.0000506	N	NMED	2.82E-09	2.73E-04	

TABLE D1-N22-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID N22
INNER FENCE
FORT WINGATE DEPOT ACTIVITY

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	22,000				NS	NS	78,000	N	NMED		2.82E-01	Nervous
Antimony	7440-36-0	mg/kg	0.079	J			NS	NS	31.3	N	NMED		2.52E-03	
Arsenic	7440-38-2	mg/kg	0.89				7.07	N	13	N	NMED	1.26E-06	6.85E-02	
Barium	7440-39-3	mg/kg	480				NS	NS	15,600	N	NMED		3.08E-02	
Beryllium	7440-41-7	mg/kg	1.5				64,400	N	156	N	NMED	2.33E-10	9.62E-03	
Cadmium	7440-43-9	mg/kg	0.64				85,900	N	70.5	N	NMED	7.45E-11	9.08E-03	
Calcium	7440-70-2	mg/kg	50,000				NS	NS	13,000,000	N	NMED		3.85E-03	
Chromium (Total) (4)	7440-47-3	mg/kg	14				96.6	N	45,200	N	NMED	1.45E-06	3.10E-04	
Cobalt	7440-48-4	mg/kg	4.8				17,200	N	23.4	N	NMED	2.79E-09	2.05E-01	Endocrine
Copper	7440-50-8	mg/kg	98				NS	NS	3,130	N	NMED		3.13E-02	
Iron	7439-89-6	mg/kg	15,000				NS	NS	54,800	N	NMED		2.74E-01	GI
Lead	7439-92-1	mg/kg	13				NS	NS	200	N	RSL			
Magnesium	7439-95-4	mg/kg	7,700				NS	NS	15,600,000	N	NMED		4.94E-04	
Manganese	7439-96-5	mg/kg	740				NS	NS	10,500	N	NMED		7.05E-02	
Mercury (Elemental)	7439-97-6	mg/kg	0.019	J			NS	NS	23.8	N	NMED		7.98E-04	
Nickel	7440-02-0	mg/kg	12				595,000	N	1,560	N	NMED	2.02E-10	7.69E-03	
Potassium	7440-09-7	mg/kg	2,400				NS	NS	15,600,000	N	NMED		1.54E-04	
Selenium	7782-49-2	mg/kg	1.2				NS	NS	391	N	NMED		3.07E-03	
Silver	7440-22-4	mg/kg	0.038	J			NS	NS	391	N	NMED		9.72E-05	
Sodium	7440-23-5	mg/kg	76				NS	NS	7,820,000	N	NMED		9.72E-06	
Thallium	7440-28-0	mg/kg	0.094	J			NS	NS	0.782	N	NMED		1.20E-01	Hair/Coat/Eyes
Vanadium	7440-62-2	mg/kg	9.9				NS	NS	394	N	NMED		2.51E-02	
Zinc	7440-66-6	mg/kg	25				NS	NS	23,500	N	NMED		1.06E-03	

TABLE D1-N22-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID N22
INNER FENCE
FORT WINGATE DEPOT ACTIVITY

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.32	U			NS	NS	11.2	N	NMED			
Nitrate	14797-55-8	mg/kg	4	J			NS	NS	125,000	N	NMED		3.20E-05	
Perchlorate	14797-73-0	mg/kg	0.0021	U			NS	NS	54.8	N	NMED			
										Cumulative Risk/Hazard		**3E-06**	**1.1**	
										Exceeds Target Level		**N**	**Y**	

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) Except for arsenic and antimony, background values are the 95% UTLs from the 2009 Background document. For antimony, the background value is the 95% UTL for soil unit 350ss based on the 2012 background study. The arsenic value was determined by December 18, 2013 NMED letter. If arsenic value of 5.6 mg/kg is exceeded then consider the site range compared to 0.2 - 11.2 mg/kg.

2) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

3) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

4) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
RSL = Regional Screening Level
U = Nondetect
UJ = Estimated Nondetect

System	Hazard Quotient
Nervous	0.28
Endocrine	0.21
GI	0.27
Hair/Coat	0.12
Eyes	0.12
All Others	0.54

TABLE D1-N22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID N22
INNER FENCE
FORT WINGATE DEPOT ACTIVITY

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0019	U			137	N	39,400	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0019	U			NS	NS	72,500	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0019	U			39	N	26,000	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0019	U			92	N	12	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0019	U			383	N	260,000	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0019	U			NS	NS	2,260	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0019	U			146	N	695	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0019	U			NS	NS	930	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0048	U			1	N	34	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0019	U			1,250	N	423	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0019	U			NS	NS	1,800	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0048	U			1	N	41	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0019	U			3	N	738	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0019	U			NS	NS	13,000	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0019	U			41	N	286	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0019	U			87	N	137	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0019	U			NS	NS	1,500	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0019	U			6,730	N	90,800	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0019	U			NS	NS	23,000	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0019	U			6,730	N	90,800	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0019	U			87	N	137	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0029	U			NS	NS	411,000	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0019	U			NS	NS	26,000	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0019	U			NS	NS	1,300	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0019	U			NS	NS	23,000	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0019	U			NS	NS	81,600	N	RSL		
Acetone	67-64-1	mg/kg	0.081				NS	NS	960,000	N	NMED		8.44E-08
Benzene	71-43-2	mg/kg	0.0019	U			87	N	729	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0019	U			NS	NS	1,800	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0019	U			NS	NS	630	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0019	U			30	N	26,000	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0019	U			1,760	N	18,300	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0019	U			NS	NS	95	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0019	U			NS	NS	8,540	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0019	U			53	N	1,020	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0019	U			NS	NS	2,160	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0019	U			NS	NS	89,500	N	NMED		
Chloroform	67-66-3	mg/kg	0.0019	U			29	N	2,000	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0048	U			201	N	1,260	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0019	U			NS	NS	2,600	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0019	U			146	N	695	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0019	U			67	N	18,300	N	NMED		

TABLE D1-N22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID N22
INNER FENCE
FORT WINGATE DEPOT ACTIVITY

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0019	U			NS	NS	288	N	NMED		
Dichlorodifluoromethane	75-71-8	mg/kg	0.0019	U			NS	NS	865	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0019	U			29,000	N	368	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0019	U			52	N	916	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0019	U			NS	NS	14,200	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0048	U			NS	NS	3,730	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0019	U			4,820	N	178,000	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.0096	U			14,400	N	5,130	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0019	U			NS	NS	58,000	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0019	U			NS	NS	24,000	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0019	U			108	N	843	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0024	U			NS	NS	3,940	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0019	U			NS	NS	14,200	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0019	U			NS	NS	120,000	N	RSL		
Styrene	100-42-5	mg/kg	0.0019	U			NS	NS	51,300	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0019	U			NS	NS	120,000	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0019	U			1,650	N	629	N	NMED		
Toluene	108-88-3	mg/kg	0.0019	U			NS	NS	61,300	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0019	U			NS	NS	1,100	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0019	U			146	N	695	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0019	U			112	N	37	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0019	U			NS	NS	6,030	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0019	U			28	N	46	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.18	U			1,250	N	423	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.18	U			NS	NS	13,000	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.18	U			6,730	N	90,800	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.18	U			6,730	N	90,800	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.18	U			NS	NS	91,600	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.18	U			2,330	N	916	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.18	U			NS	NS	2,750	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.18	U			NS	NS	18,300	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.18	U			NS	NS	1,830	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.18	U			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.18	U			17	N	276	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.18	U			NS	NS	104,000	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.18	U			NS	NS	6,490	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.18	U			NS	NS	3,370	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.18	U			NS	NS	41,000	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.18	U			NS	NS	8,000	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.18	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.18	U			NS	NS	410	N	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.18	U			1,100	N	3,300	N	RSL[S]		

TABLE D1-N22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID N22
INNER FENCE
FORT WINGATE DEPOT ACTIVITY

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.18	U			NS	NS	73	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.18	U			NS	NS	NS	NS	NS		
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.18	U			NS	NS	82,000	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.18	U			110	N	410	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.18	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.18	U			1,100	N	3,300	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.18	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.18	U			NS	NS	50,500	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.18	U			NS	NS	25,300	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.18	U			NS	NS	253,000	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.18	U			32	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			24	N	251	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.18	U			32	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.18	U			NS	NS	25,300	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.18	U			323	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.18	U			NS	NS	3,300,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.18	U			NS	NS	82,000	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.18	U			NS	NS	2,500	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.18	U			16	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.18	U			519	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.18	U			1,830	N	18,300	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.18	U			12,000	N	160,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.18	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.18	U			3,230	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.18	U			NS	NS	91,600	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.18	U			NS	NS	8,200	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			3	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.18	U			NS	NS	1,200	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.18	U			NS	NS	733,000	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.18	U			NS	NS	916,000	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.18	U			NS	NS	33,700	N	NMED		
Fluorene	86-73-7	mg/kg	0.18	U			NS	NS	33,700	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.18	U			16	N	733	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.18	U			52	N	916	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.18	U			641	N	641	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.18	U			32	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.18	U			27,000	N	183,000	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.18	U			3	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	UJ			1	N	7	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.18	U			5,240	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.18	U			108	N	843	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.18	U			293	N	1,540	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.18	U			45	N	3,180	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.18	U			NS	NS	27,500	N	NMED		
Phenol	108-95-2	mg/kg	0.18	U			NS	NS	275,000	N	NMED		
Pyrene	129-00-0	mg/kg	0.18	U			NS	NS	25,300	N	NMED		

TABLE D1-N22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID N22
INNER FENCE
FORT WINGATE DEPOT ACTIVITY

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			5,300	N	7,400	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.021	U			304	N	57	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.021	U			9	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.011	U			9	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.011	U			11	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.011	U			11	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.011	U			11	N	16	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.011	U			11	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg	0.00000000021	J	0.00000069	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000036	J	0.000012	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000013	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.0000018	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000016	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.00000014	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000069	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.00000013	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.00000007	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		UJ	0.00000013	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000013	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000016	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.00000011	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg	0.00000001	J	0.0000001	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000016	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000034	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.00000011	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.000000014				0.000238	N	0.000808	N	NMED	5.80E-10	1.71E-05

TABLE D1-N22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID N22
INNER FENCE
FORT WINGATE DEPOT ACTIVITY

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	22,000				NS	NS	1,290,000	N	NMED		1.71E-02
Antimony	7440-36-0	mg/kg	0.079	J			NS	NS	519	N	NMED		1.52E-04
Arsenic	7440-38-2	mg/kg	0.89				36	N	208	N	NMED	2.48E-07	4.28E-03
Barium	7440-39-3	mg/kg	480				NS	NS	255,000	N	NMED		1.88E-03
Beryllium	7440-41-7	mg/kg	1.5				313,000	N	2,580	N	NMED	4.79E-11	5.81E-04
Cadmium	7440-43-9	mg/kg	0.64				417,000	N	1,110	N	NMED	1.53E-11	5.77E-04
Calcium	7440-70-2	mg/kg	50,000				NS	NS	32,400,000	N	NMED		1.54E-03
Chromium (Total) (3)	7440-47-3	mg/kg	14				505	N	314,000	N	NMED	2.77E-07	4.46E-05
Cobalt	7440-48-4	mg/kg	4.8				83,400	N	388	N	NMED	5.76E-10	1.24E-02
Copper	7440-50-8	mg/kg	98				NS	NS	51,900	N	NMED		1.89E-03
Iron	7439-89-6	mg/kg	15,000				NS	NS	908,000	N	NMED		1.65E-02
Lead	7439-92-1	mg/kg	13				NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	7,700				NS	NS	5,680,000	N	NMED		1.36E-03
Manganese	7439-96-5	mg/kg	740				NS	NS	160,000	N	NMED		4.63E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.019	J			NS	NS	112	N	NMED		1.70E-04
Nickel	7440-02-0	mg/kg	12				2,890,000	N	25,700	N	NMED	4.15E-11	4.67E-04
Potassium	7440-09-7	mg/kg	2,400				NS	NS	76,200,000	N	NMED		3.15E-05
Selenium	7782-49-2	mg/kg	1.2				NS	NS	6,490	N	NMED		1.85E-04
Silver	7440-22-4	mg/kg	0.038	J			NS	NS	6,490	N	NMED		5.86E-06
Sodium	7440-23-5	mg/kg	76				NS	NS	37,300,000	N	NMED		2.04E-06
Thallium	7440-28-0	mg/kg	0.094	J			NS	NS	13	N	NMED		7.23E-03
Vanadium	7440-62-2	mg/kg	9.9				NS	NS	6,530	N	NMED		1.52E-03
Zinc	7440-66-6	mg/kg	25				NS	NS	38,900	N	NMED		6.43E-04

TABLE D1-N22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID N22
INNER FENCE
FORT WINGATE DEPOT ACTIVITY

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.32	U			NS	NS	63	N	NMED		
Nitrate	14797-55-8	mg/kg	4	J			NS	NS	2,080,000	N	NMED		1.92E-06
Perchlorate	14797-73-0	mg/kg	0.0021	U			NS	NS	908	N	NMED		
										Cumulative Risk/Hazard		**5E-07**	**0.07**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
RSL = Regional Screening Level
U = Nondetect
UJ = Estimated Nondetect

TABLE D1-N22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID N22
INNER FENCE
FORT WINGATE DEPOT ACTIVITY

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2,3)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0019	U			659	N	10,600	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0019	U			NS	NS	13,600	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0019	U			197	N	7,080	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0019	U			4,300	N	2	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0019	U			1,820	N	70,800	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0019	U			NS	NS	424	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0019	U			781	N	130	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0019	U			NS	NS	283	N	NMED[C]			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0048	U			8	N	6	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0019	U			8,540	N	79	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0019	U			NS	NS	492	N	NMED[C]			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0048	U			6	N	8	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0019	U			16	N	140	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0019	U			NS	NS	2,500	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0019	U			195	N	54	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0019	U			415	N	25	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0019	U			NS	NS	422	N	NMED[C]			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0019	U			45,900	N	24,800	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0019	U			NS	NS	7,080	N	NMED[C]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0019	U			45,900	N	24,800	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0019	U			415	N	25	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.0029	U			NS	NS	90,700	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0019	U			NS	NS	7,080	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.0019	U			NS	NS	599	N	NMED[C]			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0019	U			NS	NS	7,080	N	NMED[C]			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0019	U			NS	NS	20,400	N	NMED[C]			
Acetone	67-64-1	mg/kg	0.081				NS	NS	242,000	N	NMED		3.35E-07	
Benzene	71-43-2	mg/kg	0.0019	U			423	N	142	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.0019	U			NS	NS	538	N	NMED[C]			
Bromochloromethane	74-97-5	mg/kg	0.0019	U			NS	NS	296	N	NMED[C]			
Bromodichloromethane	75-27-4	mg/kg	0.0019	U			143	N	7,080	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0019	U			23,700	N	5,380	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0019	U			NS	NS	18	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.0019	U			NS	NS	1,620	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0019	U			252	N	202	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0019	U			NS	NS	412	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0019	U			NS	NS	16,600	N	NMED			
Chloroform	67-66-3	mg/kg	0.0019	U			134	N	391	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0048	U			956	N	235	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0019	U			NS	NS	708	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0019	U			781	N	130	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0019	U			340	N	5,380	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0019	U			NS	NS	54	N	NMED			

TABLE D1-N22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID N22
INNER FENCE
FORT WINGATE DEPOT ACTIVITY

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2,3)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Dichlorodifluoromethane	75-71-8	mg/kg	0.0019	U			NS	NS	161	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.0019	U			1,770	N	5,800	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0019	U			2,400	N	269	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0019	U			NS	NS	2,740	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0048	U			NS	NS	696	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0019	U			24,200	N	33,100	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.0096	U			89,600	N	1,210	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0019	U			NS	NS	17,700	N	NMED[C]			
n-Propylbenzene	103-65-1	mg/kg	0.0019	U			NS	NS	6,730	N	NMED[C]			
Naphthalene	91-20-3	mg/kg	0.0019	U			633	N	159	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0024	U			NS	NS	736	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.0019	U			NS	NS	2,740	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.0019	U			NS	NS	35,400	N	NMED[C]			
Styrene	100-42-5	mg/kg	0.0019	U			NS	NS	10,200	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0019	U			NS	NS	35,400	N	NMED[C]			
Tetrachloroethene	127-18-4	mg/kg	0.0019	U			7,910	N	120	N	NMED			
Toluene	108-88-3	mg/kg	0.0019	U			NS	NS	14,000	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0019	U			NS	NS	206	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0019	U			781	N	130	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0019	U			5,370	N	7	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0019	U			NS	NS	1,130	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0019	U			161	N	162	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.18	U			8,540	N	79	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.18	U			NS	NS	2,500	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.18	U			45,900	N	24,800	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.18	U			45,900	N	24,800	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.18	U			NS	NS	26,900	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.18	U			17,000	N	269	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.18	U			NS	NS	807	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.18	U			NS	NS	5,380	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.18	U			NS	NS	538	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.18	U			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.18	U			165	N	81	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.18	U			NS	NS	28,300	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.18	U			NS	NS	1,770	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.18	U			NS	NS	1,000	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.18	U			NS	NS	13,500	N	NMED[C]			
2-Nitroaniline	88-74-4	mg/kg	0.18	U			NS	NS	2,690	N	NMED[C]			
2-Nitrophenol	88-75-5	mg/kg	0.18	U			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.18	U			410	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.18	U			135	N	1,080	N	NMED[SC]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.18	U			NS	NS	22	N	NMED			

TABLE D1-N22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID N22
INNER FENCE
FORT WINGATE DEPOT ACTIVITY

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2,3)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.18	U			NS	NS	NS	NS	NS			
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.18	U			NS	NS	26,900	N	NMED[C]			
4-Chloroaniline	106-47-8	mg/kg	0.18	U			14	N	135	N	NMED[C]			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.18	U			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.18	U			135	N	1,080	N	NMED[C]			
4-Nitrophenol	100-02-7	mg/kg	0.18	U			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.18	U			NS	NS	15,100	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.18	U			NS	NS	7,530	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.18	U			NS	NS	75,300	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.18	U			240	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			173	N	15	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.18	U			240	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.18	U			NS	NS	7,530	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.18	U			2,310	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.18	U			NS	NS	1,080,000	N	NMED[C]			
Benzyl Alcohol	100-51-6	mg/kg	0.18	U			NS	NS	26,900	N	NMED[C]			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.18	U			NS	NS	807	N	NMED[C]			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.18	U			2	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.18	U			3,540	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.18	U			13,400	N	5,380	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.18	U			1,420	N	53,800	N	NMED[C]			
Carbazole	86-74-8	mg/kg	0.18	U			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.18	U			23,100	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.18	U			NS	NS	26,900	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.18	U			NS	NS	2,690	N	NMED[C]			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			24	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.18	U			NS	NS	269	N	NMED[C]			
Diethylphthalate	84-66-2	mg/kg	0.18	U			NS	NS	215,000	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.18	U			NS	NS	269,000	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.18	U			NS	NS	10,000	N	NMED			
Fluorene	86-73-7	mg/kg	0.18	U			NS	NS	10,000	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.18	U			117	N	215	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.18	U			2,400	N	269	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.18	U			4,670	N	188	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.18	U			240	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.18	U			198,000	N	53,700	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.18	U			0.38	N	NA	N	NMED[C]			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	UJ			4	N	2	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.18	U			37,900	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.18	U			633	N	159	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.18	U			1,350	N	353	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.18	U			346	N	989	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.18	U			NS	NS	8,070	N	NMED			
Phenol	108-95-2	mg/kg	0.18	U			NS	NS	77,400	N	NMED			
Pyrene	129-00-0	mg/kg	0.18	U			NS	NS	7,530	N	NMED			

TABLE D1-N22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID N22
INNER FENCE
FORT WINGATE DEPOT ACTIVITY

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2,3)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	8,070	N	NMED[C]			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	27	N	NMED[C]			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			626	N	2,420	N	NMED[C]			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.021	U			2,440	N	17	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.021	U			55	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.011	U			58	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.011	U			85	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.011	U			85	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.011	U			85	N	5	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.011	U			85	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (4)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg	0.00000000021	J	0.00000069	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000036	J	0.000012	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000013	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.0000018	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000016	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.00000014	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000069	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.00000013	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.00000007	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		UJ	0.00000013	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000013	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000016	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.00000011	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg	0.00000001	J	0.0000001	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000016	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000034	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.00000011	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.000000014				0.00172	N	0.000226	N	NMED	8.03E-11	6.11E-05	

TABLE D1-N22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID N22
INNER FENCE
FORT WINGATE DEPOT ACTIVITY

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2,3)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	22,000				NS	NS	41,400	N	NMED		5.31E-01	Nervous
Antimony	7440-36-0	mg/kg	0.079	J			NS	NS	142	N	NMED		5.56E-04	
Arsenic	7440-38-2	mg/kg	0.89				216	N	41	N	NMED	4.12E-08	2.16E-02	
Barium	7440-39-3	mg/kg	480				NS	NS	4,390	N	NMED		1.09E-01	Kidneys
Beryllium	7440-41-7	mg/kg	1.5				2,710	N	148	N	NMED	5.54E-09	1.01E-02	
Cadmium	7440-43-9	mg/kg	0.64				3,610	N	72	N	NMED	1.77E-09	8.88E-03	
Calcium	7440-70-2	mg/kg	50,000				NS	NS	8,850,000	N	NMED		5.65E-03	
Chromium (Total) (5)	7440-47-3	mg/kg	14				468	N	134	N	NMED	2.99E-07	1.04E-01	GI, Blood
Cobalt	7440-48-4	mg/kg	4.8				722	N	37	N	NMED	6.65E-08	1.31E-01	Endocrine
Copper	7440-50-8	mg/kg	98				NS	NS	14,200	N	NMED		6.90E-03	
Iron	7439-89-6	mg/kg	15,000				NS	NS	248,000	N	NMED		6.05E-02	
Lead	7439-92-1	mg/kg	13				NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	7,700				NS	NS	1,550,000	N	NMED		4.97E-03	
Manganese	7439-96-5	mg/kg	740				NS	NS	464	Y	NMED		1.59E+00	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.019	J			NS	NS	21	N	NMED		9.18E-04	
Nickel	7440-02-0	mg/kg	12				20,500	N	753	N	NMED	5.85E-09	1.59E-02	
Potassium	7440-09-7	mg/kg	2,400				NS	NS	20,800,000	N	NMED		1.15E-04	
Selenium	7782-49-2	mg/kg	1.2				NS	NS	1,750	N	NMED		6.86E-04	
Silver	7440-22-4	mg/kg	0.038	J			NS	NS	1,770	N	NMED		2.15E-05	
Sodium	7440-23-5	mg/kg	76				NS	NS	10,200,000	N	NMED		7.45E-06	
Thallium	7440-28-0	mg/kg	0.094	J			NS	NS	4	N	NMED		2.66E-02	
Vanadium	7440-62-2	mg/kg	9.9				NS	NS	614	N	NMED		1.61E-02	
Zinc	7440-66-6	mg/kg	25				NS	NS	106,000	N	NMED		2.36E-04	

TABLE D1-N22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID N22
INNER FENCE
FORT WINGATE DEPOT ACTIVITY

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2,3)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.32	U			NS	NS	12	N	NMED			
Nitrate	14797-55-8	mg/kg	4	J			NS	NS	566,000	N	NMED		7.07E-06	
Perchlorate	14797-73-0	mg/kg	0.0021	U			NS	NS	248	N	NMED			
										Cumulative Risk/Hazard		**4E-07**	**2.7**	
										Exceeds Target Level		**N**	**Y**	

Notes:

[s] = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update).

2) NMED[C] = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

3) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

4) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
RSL = Regional Screening Level
U = Nondetect
UJ = Estimated Nondetect

System	Hazard Quotient
Nervous	2.1
Endocrine	0.13
GI	0.10
Blood	0.10
Kidneys	0.11
All Others	0.18

TABLE D1-O22-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID O22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0019	U			28.1	N	2,350	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0019	U			NS	NS	14,400	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0019	U			7.98	N	1,560	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0019	U			18.8	N	2.61	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0019	U			78.6	N	15,600	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0019	U			NS	NS	440	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0019	U			29.3	N	141	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0019	U			NS	NS	63	N	RSL			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0048	U			0.051	N	7.09	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0019	U			240	N	82.9	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0019	U			NS	NS	300	N	RSL			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0048	U			0.0858	N	5.88	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0019	U			0.672	N	135	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0019	U			NS	NS	2,150	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0019	U			8.32	N	55.6	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0019	U			17.8	N	29	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0019	U			NS	NS	270	N	RSL			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0019	U			1,290	N	5,480	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0019	U			NS	NS	1,600	N	RSL			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0019	U			1,290	N	5,480	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0019	U			17.8	N	29	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.0029	U			NS	NS	37,400	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0019	U			NS	NS	1,560	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.0019	U			NS	NS	200	N	RSL			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0019	U			NS	NS	1,600	N	RSL			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0019	U			NS	NS	5,810	N	RSL			
Acetone	67-64-1	mg/kg	0.11				NS	NS	66,300	N	NMED		1.66E-06	
Benzene	71-43-2	mg/kg	0.0024	J			17.8	N	114	N	NMED	1.35E-09	2.11E-05	
Bromobenzene	108-86-1	mg/kg	0.0019	U			NS	NS	290	N	RSL			
Bromochloromethane	74-97-5	mg/kg	0.0019	U			NS	NS	150	N	RSL			
Bromodichloromethane	75-27-4	mg/kg	0.0019	U			6.19	N	1,560	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0019	U			674	N	1,230	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0019	U			NS	NS	17.7	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.0019	U			NS	NS	1,550	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0019	U			10.7	N	144	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0019	U			NS	NS	378	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0019	U			NS	NS	19,000	N	NMED			
Chloroform	67-66-3	mg/kg	0.0019	U			5.9	N	306	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0048	U			41.1	N	268	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0019	U			NS	NS	156	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0019	U			29.3	N	141	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0019	U			13.9	N	1,230	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0019	U			NS	NS	57.9	N	NMED			

TABLE D1-O22-1
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FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Dichlorodifluoromethane	75-71-8	mg/kg	0.0019	U			NS	NS	182	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.0019	U			75.1	N	3,930	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0019	U			68.3	N	61.6	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0019	U			NS	NS	2,360	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0048	U			NS	NS	764	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0019	U			975	N	37,800	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.0097	U			766	N	409	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0019	U			NS	NS	3,900	N	RSL			
n-Propylbenzene	103-65-1	mg/kg	0.0019	U			NS	NS	3,800	N	RSL			
Naphthalene	91-20-3	mg/kg	0.0019	U			22.6	N	162	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0024	U			NS	NS	805	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.0019	U			NS	NS	2,360	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.0019	U			NS	NS	7,800	N	RSL			
Styrene	100-42-5	mg/kg	0.0019	U			NS	NS	7,260	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0019	U			NS	NS	7,800	N	RSL			
Tetrachloroethene	127-18-4	mg/kg	0.0019	U			337	N	111	N	NMED			
Toluene	108-88-3	mg/kg	0.0019	U			NS	NS	5,230	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0019	U			NS	NS	210	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0019	U			29.3	N	141	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0019	U			15.5	N	6.77	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0019	U			NS	NS	1,230	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0019	U			0.742	N	113	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	U			240	N	82.9	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	U			NS	NS	2,150	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	U			1,290	N	5,480	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	U			1,290	N	5,480	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	U			NS	NS	6,160	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	U			484	N	61.6	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	U			NS	NS	185	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	U			NS	NS	1,230	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	U			NS	NS	123	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	U			17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	U			3.56	N	18.5	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	U			NS	NS	6,260	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.17	U			NS	NS	391	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.17	U			NS	NS	232	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	U			NS	NS	3,200	N	RSL			
2-Nitroaniline	88-74-4	mg/kg	0.17	U			NS	NS	630	N	RSL			
2-Nitrophenol	88-75-5	mg/kg	0.17	U			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	U			11.8	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.17	U			270	N	250	N	RSL[S]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	U			NS	NS	4.93	N	NMED			
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	U			NS	NS	NS	NS	NS			

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FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	U			NS	NS	6,300	N	RSL			
4-Chloroaniline	106-47-8	mg/kg	0.17	U			27	N	32	N	RSL			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	U			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.17	U			270	N	250	N	RSL			
4-Nitrophenol	100-02-7	mg/kg	0.17	U			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.17	U			NS	NS	3,480	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.17	U			NS	NS	1,740	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.17	U			NS	NS	17,400	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.17	U			1.53	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.13	U			1.12	N	17.4	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	U			1.53	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	U			NS	NS	1,740	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	U			15.3	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.17	U			NS	NS	250,000	N	RSL			
Benzyl Alcohol	100-51-6	mg/kg	0.17	U			NS	NS	6,300	N	RSL			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	U			NS	NS	190	N	RSL			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	U			3.11	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	U			99.3	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	U			380	N	1,230	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.17	U			2,900	N	13,000	N	RSL			
Carbazole	86-74-8	mg/kg	0.17	U			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.17	U			153	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.17	U			NS	NS	6,160	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.17	U			NS	NS	630	N	RSL			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	U			0.153	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.17	U			NS	NS	78	N	RSL			
Diethylphthalate	84-66-2	mg/kg	0.17	U			NS	NS	49,300	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.17	U			NS	NS	61,600	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.17	U			NS	NS	2,320	N	NMED			
Fluorene	86-73-7	mg/kg	0.17	U			NS	NS	2,320	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.17	U			3.33	N	49.3	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	U			68.3	N	61.6	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.17	U			133	N	43.1	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	U			1.53	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.17	U			5,610	N	12,300	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	U			0.78	N	NS	NS	RSL			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	UJ			0.0234	N	0.493	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	U			1,090	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.17	U			22.6	N	162	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.17	U			60.4	N	131	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.17	U			9.85	N	234	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.17	U			NS	NS	1,740	N	NMED			
Phenol	108-95-2	mg/kg	0.17	U			NS	NS	18,500	N	NMED			
Pyrene	129-00-0	mg/kg	0.17	U			NS	NS	1,740	N	NMED			

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MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	2,200	N	RSL			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	6.3	N	RSL			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			211	N	36	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			3.56	N	18.5	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	7.7	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			31.6	N	70.4	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	6.16	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	7.64	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			333	N	247	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			83.1	N	301	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	156	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			60.4	N	131	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			313	N	6.16	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	3,850	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			1,300	N	570	N	RSL			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.021	U			69.6	N	3.98	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.021	U			1.81	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.01	U			1.86	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.01	U			2.43	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.01	U			2.43	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.01	U			2.43	N	1.14	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.01	U			2.43	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (2)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000012	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg		U	0.0000027	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.000000024	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.000000062	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.000000031	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000022	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000054	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000031	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000049	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.000000046	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.000000083	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.000000079	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000071	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.000000034	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.000000081	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000019	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000058	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.0				0.000049	N	0.0000506	N	NMED			

TABLE D1-O22-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID O22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	17,000				NS	NS	78,000	N	NMED		2.18E-01	Nervous
Antimony	7440-36-0	mg/kg	0.58				NS	NS	31.3	N	NMED		1.85E-02	
Arsenic	7440-38-2	mg/kg	1.5				7.07	N	13	N	NMED	2.12E-06	1.15E-01	Heart/Endocrine
Barium	7440-39-3	mg/kg	310				NS	NS	15,600	N	NMED		1.99E-02	
Beryllium	7440-41-7	mg/kg	0.81	J			64,400	N	156	N	NMED	1.26E-10	5.19E-03	
Cadmium	7440-43-9	mg/kg	1.8				85,900	N	70.5	N	NMED	2.10E-10	2.55E-02	
Calcium	7440-70-2	mg/kg	19,000				NS	NS	13,000,000	N	NMED		1.46E-03	
Chromium (Total) (3)	7440-47-3	mg/kg	23				96.6	N	45,200	N	NMED	2.38E-06	5.09E-04	
Cobalt	7440-48-4	mg/kg	4.7				17,200	N	23.4	N	NMED	2.73E-09	2.01E-01	Endocrine
Copper	7440-50-8	mg/kg	320				NS	NS	3,130	N	NMED		1.02E-01	GI
Iron	7439-89-6	mg/kg	11,000				NS	NS	54,800	N	NMED		2.01E-01	GI
Lead	7439-92-1	mg/kg	16				NS	NS	200	N	RSL			
Magnesium	7439-95-4	mg/kg	5,500				NS	NS	15,600,000	N	NMED		3.53E-04	
Manganese	7439-96-5	mg/kg	480				NS	NS	10,500	N	NMED		4.57E-02	
Mercury (Elemental)	7439-97-6	mg/kg	0.02	J			NS	NS	23.8	N	NMED		8.40E-04	
Nickel	7440-02-0	mg/kg	16				595,000	N	1,560	N	NMED	2.69E-10	1.03E-02	
Potassium	7440-09-7	mg/kg	1,900				NS	NS	15,600,000	N	NMED		1.22E-04	
Selenium	7782-49-2	mg/kg	1.4				NS	NS	391	N	NMED		3.58E-03	
Silver	7440-22-4	mg/kg	0.2				NS	NS	391	N	NMED		5.12E-04	
Sodium	7440-23-5	mg/kg	63				NS	NS	7,820,000	N	NMED		8.06E-06	
Thallium	7440-28-0	mg/kg	0.07	J			NS	NS	0.782	N	NMED		8.95E-02	
Vanadium	7440-62-2	mg/kg	15				NS	NS	394	N	NMED		3.81E-02	
Zinc	7440-66-6	mg/kg	34				NS	NS	23,500	N	NMED		1.45E-03	

TABLE D1-O22-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID O22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.32	U			NS	NS	11.2	N	NMED			
Nitrate	14797-55-8	mg/kg	3.3	J			NS	NS	125,000	N	NMED		2.64E-05	
Perchlorate	14797-73-0	mg/kg	0.0021	U			NS	NS	54.8	N	NMED			
										Cumulative Risk/Hazard		**5E-06**	**1.1**	
										Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	0.26
Endocrine	0.32
GI	0.30
Heart	0.12
All Others	0.26

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
RSL = Regional Screeing Level
U = Nondetect
UJ = Estimated Nondetect

TABLE D1-O22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID O22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0019	U			137	N	39,400	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0019	U			NS	NS	72,500	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0019	U			39	N	26,000	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0019	U			92	N	12	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0019	U			383	N	260,000	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0019	U			NS	NS	2,260	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0019	U			146	N	695	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0019	U			NS	NS	930	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0048	U			1	N	34	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0019	U			1,250	N	423	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0019	U			NS	NS	1,800	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0048	U			1	N	41	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0019	U			3	N	738	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0019	U			NS	NS	13,000	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0019	U			41	N	286	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0019	U			87	N	137	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0019	U			NS	NS	1,500	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0019	U			6,730	N	90,800	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0019	U			NS	NS	23,000	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0019	U			6,730	N	90,800	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0019	U			87	N	137	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0029	U			NS	NS	411,000	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0019	U			NS	NS	26,000	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0019	U			NS	NS	1,300	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0019	U			NS	NS	23,000	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0019	U			NS	NS	81,600	N	RSL		
Acetone	67-64-1	mg/kg	0.11				NS	NS	960,000	N	NMED		1.15E-07
Benzene	71-43-2	mg/kg	0.0024	J			87	N	729	N	NMED	2.75E-10	3.29E-06
Bromobenzene	108-86-1	mg/kg	0.0019	U			NS	NS	1,800	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0019	U			NS	NS	630	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0019	U			30	N	26,000	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0019	U			1,760	N	18,300	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0019	U			NS	NS	95	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0019	U			NS	NS	8,540	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0019	U			53	N	1,020	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0019	U			NS	NS	2,160	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0019	U			NS	NS	89,500	N	NMED		
Chloroform	67-66-3	mg/kg	0.0019	U			29	N	2,000	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0048	U			201	N	1,260	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0019	U			NS	NS	2,600	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0019	U			146	N	695	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0019	U			67	N	18,300	N	NMED		

TABLE D1-O22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID O22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0019	U			NS	NS	288	N	NMED		
Dichlorodifluoromethane	75-71-8	mg/kg	0.0019	U			NS	NS	865	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0019	U			29,000	N	368	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0019	U			52	N	916	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0019	U			NS	NS	14,200	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0048	U			NS	NS	3,730	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0019	U			4,820	N	178,000	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.0097	U			14,400	N	5,130	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0019	U			NS	NS	58,000	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0019	U			NS	NS	24,000	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0019	U			108	N	843	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0024	U			NS	NS	3,940	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0019	U			NS	NS	14,200	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0019	U			NS	NS	120,000	N	RSL		
Styrene	100-42-5	mg/kg	0.0019	U			NS	NS	51,300	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0019	U			NS	NS	120,000	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0019	U			1,650	N	629	N	NMED		
Toluene	108-88-3	mg/kg	0.0019	U			NS	NS	61,300	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0019	U			NS	NS	1,100	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0019	U			146	N	695	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0019	U			112	N	37	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0019	U			NS	NS	6,030	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0019	U			28	N	46	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	U			1,250	N	423	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	U			NS	NS	13,000	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	U			6,730	N	90,800	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	U			6,730	N	90,800	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	U			NS	NS	91,600	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	U			2,330	N	916	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	U			NS	NS	2,750	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	U			NS	NS	18,300	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	U			NS	NS	1,830	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	U			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	U			17	N	276	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	U			NS	NS	104,000	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.17	U			NS	NS	6,490	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.17	U			NS	NS	3,370	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	U			NS	NS	41,000	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.17	U			NS	NS	8,000	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.17	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	U			NS	NS	410	N	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.17	U			1,100	N	3,300	N	RSL[S]		

TABLE D1-O22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID O22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	U			NS	NS	73	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	U			NS	NS	NS	NS	NS		
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	U			NS	NS	82,000	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.17	U			110	N	410	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.17	U			1,100	N	3,300	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.17	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.17	U			NS	NS	50,500	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.17	U			NS	NS	25,300	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.17	U			NS	NS	253,000	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.17	U			32	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.13	U			24	N	251	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	U			32	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	U			NS	NS	25,300	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	U			323	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.17	U			NS	NS	3,300,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.17	U			NS	NS	82,000	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	U			NS	NS	2,500	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	U			16	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	U			519	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	U			1,830	N	18,300	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.17	U			12,000	N	160,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.17	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.17	U			3,230	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.17	U			NS	NS	91,600	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.17	U			NS	NS	8,200	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	U			3	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.17	U			NS	NS	1,200	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.17	U			NS	NS	733,000	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.17	U			NS	NS	916,000	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.17	U			NS	NS	33,700	N	NMED		
Fluorene	86-73-7	mg/kg	0.17	U			NS	NS	33,700	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.17	U			16	N	733	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	U			52	N	916	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.17	U			641	N	641	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	U			32	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.17	U			27,000	N	183,000	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	U			3	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	UJ			1	N	7	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	U			5,240	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.17	U			108	N	843	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.17	U			293	N	1,540	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.17	U			45	N	3,180	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.17	U			NS	NS	27,500	N	NMED		
Phenol	108-95-2	mg/kg	0.17	U			NS	NS	275,000	N	NMED		
Pyrene	129-00-0	mg/kg	0.17	U			NS	NS	25,300	N	NMED		

TABLE D1-O22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID O22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			5,300	N	7,400	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.021	U			304	N	57	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.021	U			9	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.01	U			9	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.01	U			11	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.01	U			11	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.01	U			11	N	16	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.01	U			11	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000012	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg		U	0.0000027	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.000000024	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.000000062	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.000000031	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000022	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000054	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000031	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000049	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.000000046	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.000000083	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.000000079	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000071	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.000000034	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.000000081	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000019	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000058	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.0				0.000238	N	0.000808	N	NMED		

TABLE D1-O22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID O22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	17,000				NS	NS	1,290,000	N	NMED		1.32E-02
Antimony	7440-36-0	mg/kg	0.58				NS	NS	519	N	NMED		1.12E-03
Arsenic	7440-38-2	mg/kg	1.5				36	N	208	N	NMED	4.18E-07	7.21E-03
Barium	7440-39-3	mg/kg	310				NS	NS	255,000	N	NMED		1.22E-03
Beryllium	7440-41-7	mg/kg	0.81	J			313,000	N	2,580	N	NMED	2.59E-11	3.14E-04
Cadmium	7440-43-9	mg/kg	1.8				417,000	N	1,110	N	NMED	4.32E-11	1.62E-03
Calcium	7440-70-2	mg/kg	19,000				NS	NS	32,400,000	N	NMED		5.86E-04
Chromium (Total) (3)	7440-47-3	mg/kg	23				505	N	314,000	N	NMED	4.55E-07	7.32E-05
Cobalt	7440-48-4	mg/kg	4.7				83,400	N	388	N	NMED	5.64E-10	1.21E-02
Copper	7440-50-8	mg/kg	320				NS	NS	51,900	N	NMED		6.17E-03
Iron	7439-89-6	mg/kg	11,000				NS	NS	908,000	N	NMED		1.21E-02
Lead	7439-92-1	mg/kg	16				NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	5,500				NS	NS	5,680,000	N	NMED		9.68E-04
Manganese	7439-96-5	mg/kg	480				NS	NS	160,000	N	NMED		3.00E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.02	J			NS	NS	112	N	NMED		1.79E-04
Nickel	7440-02-0	mg/kg	16				2,890,000	N	25,700	N	NMED	5.54E-11	6.23E-04
Potassium	7440-09-7	mg/kg	1,900				NS	NS	76,200,000	N	NMED		2.49E-05
Selenium	7782-49-2	mg/kg	1.4				NS	NS	6,490	N	NMED		2.16E-04
Silver	7440-22-4	mg/kg	0.2				NS	NS	6,490	N	NMED		3.08E-05
Sodium	7440-23-5	mg/kg	63				NS	NS	37,300,000	N	NMED		1.69E-06
Thallium	7440-28-0	mg/kg	0.07	J			NS	NS	13	N	NMED		5.38E-03
Vanadium	7440-62-2	mg/kg	15				NS	NS	6,530	N	NMED		2.30E-03
Zinc	7440-66-6	mg/kg	34				NS	NS	38,900	N	NMED		8.74E-04

TABLE D1-O22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID O22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.32	U			NS	NS	63	N	NMED		
Nitrate	14797-55-8	mg/kg	3.3	J			NS	NS	2,080,000	N	NMED		1.59E-06
Perchlorate	14797-73-0	mg/kg	0.0021	U			NS	NS	908	N	NMED		
										Cumulative Risk/Hazard		**9E-07**	**0.07**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
RSL = Regional Screening Level
U = Nondetect
UJ = Estimated Nondetect

TABLE D1-O22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID O22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0019	U			659	N	10,600	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0019	U			NS	NS	13,600	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0019	U			197	N	7,080	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0019	U			4,300	N	2	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0019	U			1,820	N	70,800	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0019	U			NS	NS	424	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0019	U			781	N	130	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0019	U			NS	NS	283	N	NMED[C]			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0048	U			8	N	6	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0019	U			8,540	N	79	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0019	U			NS	NS	492	N	NMED[C]			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0048	U			6	N	8	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0019	U			16	N	140	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0019	U			NS	NS	2,500	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0019	U			195	N	54	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0019	U			415	N	25	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0019	U			NS	NS	422	N	NMED[C]			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0019	U			45,900	N	24,800	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0019	U			NS	NS	7,080	N	NMED[C]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0019	U			45,900	N	24,800	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0019	U			415	N	25	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.0029	U			NS	NS	90,700	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0019	U			NS	NS	7,080	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.0019	U			NS	NS	599	N	NMED[C]			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0019	U			NS	NS	7,080	N	NMED[C]			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0019	U			NS	NS	20,400	N	NMED[C]			
Acetone	67-64-1	mg/kg	0.11				NS	NS	242,000	N	NMED		4.55E-07	
Benzene	71-43-2	mg/kg	0.0024	J			423	N	142	N	NMED	5.67E-11	1.69E-05	
Bromobenzene	108-86-1	mg/kg	0.0019	U			NS	NS	538	N	NMED[C]			
Bromochloromethane	74-97-5	mg/kg	0.0019	U			NS	NS	296	N	NMED[C]			
Bromodichloromethane	75-27-4	mg/kg	0.0019	U			143	N	7,080	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0019	U			23,700	N	5,380	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0019	U			NS	NS	18	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.0019	U			NS	NS	1,620	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0019	U			252	N	202	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0019	U			NS	NS	412	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0019	U			NS	NS	16,600	N	NMED			
Chloroform	67-66-3	mg/kg	0.0019	U			134	N	391	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0048	U			956	N	235	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0019	U			NS	NS	708	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0019	U			781	N	130	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0019	U			340	N	5,380	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0019	U			NS	NS	54	N	NMED			

TABLE D1-O22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID O22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Dichlorodifluoromethane	75-71-8	mg/kg	0.0019	U			NS	NS	161	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.0019	U			1,770	N	5,800	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0019	U			2,400	N	269	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0019	U			NS	NS	2,740	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0048	U			NS	NS	696	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0019	U			24,200	N	33,100	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.0097	U			89,600	N	1,210	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0019	U			NS	NS	17,700	N	NMED[C]			
n-Propylbenzene	103-65-1	mg/kg	0.0019	U			NS	NS	6,730	N	NMED[C]			
Naphthalene	91-20-3	mg/kg	0.0019	U			633	N	159	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0024	U			NS	NS	736	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.0019	U			NS	NS	2,740	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.0019	U			NS	NS	35,400	N	NMED[C]			
Styrene	100-42-5	mg/kg	0.0019	U			NS	NS	10,200	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0019	U			NS	NS	35,400	N	NMED[C]			
Tetrachloroethene	127-18-4	mg/kg	0.0019	U			7,910	N	120	N	NMED			
Toluene	108-88-3	mg/kg	0.0019	U			NS	NS	14,000	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0019	U			NS	NS	206	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0019	U			781	N	130	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0019	U			5,370	N	7	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0019	U			NS	NS	1,130	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0019	U			161	N	162	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	U			8,540	N	79	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	U			NS	NS	2,500	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	U			45,900	N	24,800	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	U			45,900	N	24,800	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	U			NS	NS	26,900	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	U			17,000	N	269	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	U			NS	NS	807	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	U			NS	NS	5,380	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	U			NS	NS	538	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	U			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	U			165	N	81	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	U			NS	NS	28,300	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.17	U			NS	NS	1,770	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.17	U			NS	NS	1,000	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	U			NS	NS	13,500	N	NMED[C]			
2-Nitroaniline	88-74-4	mg/kg	0.17	U			NS	NS	2,690	N	NMED[C]			
2-Nitrophenol	88-75-5	mg/kg	0.17	U			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	U			410	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.17	U			135	N	1,080	N	NMED[SC]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	U			NS	NS	22	N	NMED			

TABLE D1-O22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID O22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	U			NS	NS	NS	NS	NS			
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	U			NS	NS	26,900	N	NMED[C]			
4-Chloroaniline	106-47-8	mg/kg	0.17	U			14	N	135	N	NMED[C]			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	U			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.17	U			135	N	1,080	N	NMED[C]			
4-Nitrophenol	100-02-7	mg/kg	0.17	U			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.17	U			NS	NS	15,100	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.17	U			NS	NS	7,530	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.17	U			NS	NS	75,300	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.17	U			240	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.13	U			173	N	15	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	U			240	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	U			NS	NS	7,530	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	U			2,310	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.17	U			NS	NS	1,080,000	N	NMED[C]			
Benzyl Alcohol	100-51-6	mg/kg	0.17	U			NS	NS	26,900	N	NMED[C]			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	U			NS	NS	807	N	NMED[C]			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	U			2	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	U			3,540	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	U			13,400	N	5,380	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.17	U			1,420	N	53,800	N	NMED[C]			
Carbazole	86-74-8	mg/kg	0.17	U			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.17	U			23,100	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.17	U			NS	NS	26,900	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.17	U			NS	NS	2,690	N	NMED[C]			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	U			24	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.17	U			NS	NS	269	N	NMED[C]			
Diethylphthalate	84-66-2	mg/kg	0.17	U			NS	NS	215,000	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.17	U			NS	NS	269,000	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.17	U			NS	NS	10,000	N	NMED			
Fluorene	86-73-7	mg/kg	0.17	U			NS	NS	10,000	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.17	U			117	N	215	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	U			2,400	N	269	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.17	U			4,670	N	188	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	U			240	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.17	U			198,000	N	53,700	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	U			0.38	N	NA	N	NMED[C]			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	UJ			4	N	2	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	U			37,900	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.17	U			633	N	159	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.17	U			1,350	N	353	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.17	U			346	N	989	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.17	U			NS	NS	8,070	N	NMED			
Phenol	108-95-2	mg/kg	0.17	U			NS	NS	77,400	N	NMED			
Pyrene	129-00-0	mg/kg	0.17	U			NS	NS	7,530	N	NMED			

TABLE D1-O22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID O22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	8,070	N	NMED[C]			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	27	N	NMED[C]			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			626	N	2,420	N	NMED[C]			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.021	U			2,440	N	17	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.021	U			55	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.01	U			58	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.01	U			85	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.01	U			85	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.01	U			85	N	5	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.01	U			85	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (3)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000012	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg		U	0.0000027	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.000000024	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.000000062	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.000000031	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000022	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000054	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000031	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000049	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.000000046	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.000000083	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.000000079	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000071	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.000000034	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.000000081	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000019	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000058	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.0				0.00172	N	0.000226	N	NMED			

TABLE D1-O22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID O22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	17,000				NS	NS	41,400	N	NMED		4.11E-01	Nervous
Antimony	7440-36-0	mg/kg	0.58				NS	NS	142	N	NMED		4.08E-03	
Arsenic	7440-38-2	mg/kg	1.5				216	N	41	N	NMED	6.94E-08	3.64E-02	
Barium	7440-39-3	mg/kg	310				NS	NS	4,390	N	NMED		7.06E-02	
Beryllium	7440-41-7	mg/kg	0.81	J			2,710	N	148	N	NMED	2.99E-09	5.47E-03	
Cadmium	7440-43-9	mg/kg	1.8				3,610	N	72	N	NMED	4.99E-09	2.50E-02	
Calcium	7440-70-2	mg/kg	19,000				NS	NS	8,850,000	N	NMED		2.15E-03	
Chromium (Total) (4)	7440-47-3	mg/kg	23				468	N	134	N	NMED	4.91E-07	1.72E-01	GI, Blood
Cobalt	7440-48-4	mg/kg	4.7				722	N	37	N	NMED	6.51E-08	1.28E-01	Endocrine
Copper	7440-50-8	mg/kg	320				NS	NS	14,200	N	NMED		2.25E-02	
Iron	7439-89-6	mg/kg	11,000				NS	NS	248,000	N	NMED		4.44E-02	
Lead	7439-92-1	mg/kg	16				NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	5,500				NS	NS	1,550,000	N	NMED		3.55E-03	
Manganese	7439-96-5	mg/kg	480				NS	NS	464	Y	NMED		1.03E+00	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.02	J			NS	NS	21	N	NMED		9.66E-04	
Nickel	7440-02-0	mg/kg	16				20,500	N	753	N	NMED	7.80E-09	2.12E-02	
Potassium	7440-09-7	mg/kg	1,900				NS	NS	20,800,000	N	NMED		9.13E-05	
Selenium	7782-49-2	mg/kg	1.4				NS	NS	1,750	N	NMED		8.00E-04	
Silver	7440-22-4	mg/kg	0.2				NS	NS	1,770	N	NMED		1.13E-04	
Sodium	7440-23-5	mg/kg	63				NS	NS	10,200,000	N	NMED		6.18E-06	
Thallium	7440-28-0	mg/kg	0.07	J			NS	NS	4	N	NMED		1.98E-02	
Vanadium	7440-62-2	mg/kg	15				NS	NS	614	N	NMED		2.44E-02	
Zinc	7440-66-6	mg/kg	34				NS	NS	106,000	N	NMED		3.21E-04	

TABLE D1-O22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID O22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.32	U			NS	NS	12	N	NMED			
Nitrate	14797-55-8	mg/kg	3.3	J			NS	NS	566,000	N	NMED		5.83E-06	
Perchlorate	14797-73-0	mg/kg	0.0021	U			NS	NS	248	N	NMED			
										Cumulative Risk/Hazard		**6E-07**	**2.0**	
										Exceeds Target Level		**N**	Y	

System	Hazard Quotient
Nervous	1.4
Endocrine	0.13
GI	0.17
Blood	0.17
All Others	0.28

Notes:

[s] = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update).

2) NMED[C] = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

3) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

4) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service

J = Estimated

mg/kg = milligrams per kilogram

NS = No Standard

U = Nondetect

UJ = Estimated Nondetect

TABLE D1-P22-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID P22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.002	U			28.1	N	2,350	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.002	U			NS	NS	14,400	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.002	U			7.98	N	1,560	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.002	U			18.8	N	2.61	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.002	U			78.6	N	15,600	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.002	U			NS	NS	440	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.002	U			29.3	N	141	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.002	U			NS	NS	63	N	RSL			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0049	U			0.051	N	7.09	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.002	U			240	N	82.9	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.002	U			NS	NS	300	N	RSL			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0049	U			0.0858	N	5.88	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.002	U			0.672	N	135	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.002	U			NS	NS	2,150	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.002	U			8.32	N	55.6	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.002	U			17.8	N	29	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.002	U			NS	NS	270	N	RSL			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.002	U			1,290	N	5,480	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.002	U			NS	NS	1,600	N	RSL			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.002	U			1,290	N	5,480	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.002	U			17.8	N	29	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.0029	U			NS	NS	37,400	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.002	U			NS	NS	1,560	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.002	U			NS	NS	200	N	RSL			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.002	U			NS	NS	1,600	N	RSL			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.002	U			NS	NS	5,810	N	RSL			
Acetone	67-64-1	mg/kg	0.2				NS	NS	66,300	N	NMED		3.02E-06	
Benzene	71-43-2	mg/kg	0.002	U			17.8	N	114	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.002	U			NS	NS	290	N	RSL			
Bromochloromethane	74-97-5	mg/kg	0.002	U			NS	NS	150	N	RSL			
Bromodichloromethane	75-27-4	mg/kg	0.002	U			6.19	N	1,560	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.002	U			674	N	1,230	N	NMED			
Bromomethane	74-83-9	mg/kg	0.002	U			NS	NS	17.7	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.002	U			NS	NS	1,550	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.002	U			10.7	N	144	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.002	U			NS	NS	378	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.002	U			NS	NS	19,000	N	NMED			
Chloroform	67-66-3	mg/kg	0.002	U			5.9	N	306	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0049	U			41.1	N	268	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.002	U			NS	NS	156	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.002	U			29.3	N	141	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.002	U			13.9	N	1,230	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.002	U			NS	NS	57.9	N	NMED			

TABLE D1-P22-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID P22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Dichlorodifluoromethane	75-71-8	mg/kg	0.002	U			NS	NS	182	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.002	U			75.1	N	3,930	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.002	U			68.3	N	61.6	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.002	U			NS	NS	2,360	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0049	U			NS	NS	764	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.002	U			975	N	37,800	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.0098	U			766	N	409	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.002	U			NS	NS	3,900	N	RSL			
n-Propylbenzene	103-65-1	mg/kg	0.002	U			NS	NS	3,800	N	RSL			
Naphthalene	91-20-3	mg/kg	0.002	U			22.6	N	162	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0024	U			NS	NS	805	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.002	U			NS	NS	2,360	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.002	U			NS	NS	7,800	N	RSL			
Styrene	100-42-5	mg/kg	0.002	U			NS	NS	7,260	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.002	U			NS	NS	7,800	N	RSL			
Tetrachloroethene	127-18-4	mg/kg	0.002	U			337	N	111	N	NMED			
Toluene	108-88-3	mg/kg	0.002	U			NS	NS	5,230	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.002	U			NS	NS	210	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.002	U			29.3	N	141	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.002	U			15.5	N	6.77	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.002	U			NS	NS	1,230	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.002	U			0.742	N	113	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	U			240	N	82.9	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	U			NS	NS	2,150	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	U			1,290	N	5,480	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	U			1,290	N	5,480	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	U			NS	NS	6,160	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	U			484	N	61.6	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	U			NS	NS	185	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	U			NS	NS	1,230	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	U			NS	NS	123	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	U			17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	U			3.56	N	18.5	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	U			NS	NS	6,260	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.17	U			NS	NS	391	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.17	U			NS	NS	232	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	U			NS	NS	3,200	N	RSL			
2-Nitroaniline	88-74-4	mg/kg	0.17	U			NS	NS	630	N	RSL			
2-Nitrophenol	88-75-5	mg/kg	0.17	U			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	U			11.8	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.17	U			270	N	250	N	RSL[S]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	U			NS	NS	4.93	N	NMED			
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	U			NS	NS	NS	NS	NS			

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SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	U			NS	NS	6,300	N	RSL			
4-Chloroaniline	106-47-8	mg/kg	0.17	U			27	N	32	N	RSL			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	U			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.17	U			270	N	250	N	RSL			
4-Nitrophenol	100-02-7	mg/kg	0.17	U			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.17	U			NS	NS	3,480	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.17	U			NS	NS	1,740	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.17	U			NS	NS	17,400	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.17	U			1.53	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			1.12	N	17.4	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	U			1.53	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	U			NS	NS	1,740	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	U			15.3	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.17	U			NS	NS	250,000	N	RSL			
Benzyl Alcohol	100-51-6	mg/kg	0.17	U			NS	NS	6,300	N	RSL			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	U			NS	NS	190	N	RSL			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	U			3.11	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	U			99.3	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	U			380	N	1,230	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.17	U			2,900	N	13,000	N	RSL			
Carbazole	86-74-8	mg/kg	0.17	U			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.17	U			153	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.17	U			NS	NS	6,160	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.17	U			NS	NS	630	N	RSL			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			0.153	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.17	U			NS	NS	78	N	RSL			
Diethylphthalate	84-66-2	mg/kg	0.17	U			NS	NS	49,300	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.17	U			NS	NS	61,600	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.17	U			NS	NS	2,320	N	NMED			
Fluorene	86-73-7	mg/kg	0.17	U			NS	NS	2,320	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.17	U			3.33	N	49.3	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	U			68.3	N	61.6	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.17	U			133	N	43.1	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	U			1.53	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.17	U			5,610	N	12,300	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	U			0.78	N	NS	NS	RSL			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	UJ			0.0234	N	0.493	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	U			1,090	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.17	U			22.6	N	162	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.17	U			60.4	N	131	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.17	U			9.85	N	234	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.17	U			NS	NS	1,740	N	NMED			
Phenol	108-95-2	mg/kg	0.17	U			NS	NS	18,500	N	NMED			
Pyrene	129-00-0	mg/kg	0.17	U			NS	NS	1,740	N	NMED			

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EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	2,200	N	RSL			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	6.3	N	RSL			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			211	N	36	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			3.56	N	18.5	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	7.7	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			31.6	N	70.4	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	6.16	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	7.64	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			333	N	247	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			83.1	N	301	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	156	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			60.4	N	131	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			313	N	6.16	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	3,850	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			1,300	N	570	N	RSL			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.021	U			69.6	N	3.98	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.021	U			1.81	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.01	U			1.86	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.01	U			2.43	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.01	U			2.43	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.01	U			2.43	N	1.14	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.01	U			2.43	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (2)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000059	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000033	J	0.000011	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000036	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.00000016	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000036	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.00000014	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000013	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.00000013	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.00000013	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		UJ	0.00000017	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000014	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000011	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg	0.00000022	J	0.00000022	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		UJ	0.00000014	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.000000095	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000021	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000081	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.00000022				0.000049	N	0.0000506	N	NMED	4.56E-08	4.41E-03	

TABLE D1-P22-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID P22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	38,000				NS	NS	78,000	N	NMED		4.87E-01	Nervous
Antimony	7440-36-0	mg/kg	0.17	J			NS	NS	31.3	N	NMED		5.43E-03	
Arsenic	7440-38-2	mg/kg	0.67				7.07	N	13	N	NMED		5.15E-02	
Barium	7440-39-3	mg/kg	260				NS	NS	15,600	N	NMED		1.67E-02	
Beryllium	7440-41-7	mg/kg	1.8				64,400	N	156	N	NMED		1.15E-02	
Cadmium	7440-43-9	mg/kg	0.32				85,900	N	70.5	N	NMED		4.54E-03	
Calcium	7440-70-2	mg/kg	19,000				NS	NS	13,000,000	N	NMED		1.46E-03	
Chromium (Total) (3)	7440-47-3	mg/kg	14				96.6	N	45,200	N	NMED		3.10E-04	
Cobalt	7440-48-4	mg/kg	6.5				17,200	N	23.4	N	NMED		2.78E-01	Endocrine
Copper	7440-50-8	mg/kg	72				NS	NS	3,130	N	NMED		2.30E-02	
Iron	7439-89-6	mg/kg	19,000				NS	NS	54,800	N	NMED		3.47E-01	GI
Lead	7439-92-1	mg/kg	10				NS	NS	200	N	RSL			
Magnesium	7439-95-4	mg/kg	17,000				NS	NS	15,600,000	N	NMED		1.09E-03	
Manganese	7439-96-5	mg/kg	430				NS	NS	10,500	N	NMED		4.10E-02	
Mercury (Elemental)	7439-97-6	mg/kg	0.012	J			NS	NS	23.8	N	NMED		5.04E-04	
Nickel	7440-02-0	mg/kg	12				595,000	N	1,560	N	NMED		7.69E-03	
Potassium	7440-09-7	mg/kg	1,300				NS	NS	15,600,000	N	NMED		8.33E-05	
Selenium	7782-49-2	mg/kg	1.5				NS	NS	391	N	NMED		3.84E-03	
Silver	7440-22-4	mg/kg	0.057	J			NS	NS	391	N	NMED		1.46E-04	
Sodium	7440-23-5	mg/kg	68				NS	NS	7,820,000	N	NMED		8.70E-06	
Thallium	7440-28-0	mg/kg	0.062	J			NS	NS	0.782	N	NMED		7.93E-02	
Vanadium	7440-62-2	mg/kg	24				NS	NS	394	N	NMED		6.09E-02	
Zinc	7440-66-6	mg/kg	39				NS	NS	23,500	N	NMED		1.66E-03	

TABLE D1-P22-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID P22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.32	U			NS	NS	11.2	N	NMED			
Nitrate	14797-55-8	mg/kg	6.6	J			NS	NS	125,000	N	NMED		5.28E-05	
Perchlorate	14797-73-0	mg/kg	0.0021	U			NS	NS	54.8	N	NMED			
										Cumulative Risk/Hazard		**5E-08**	**1.4**	
										Exceeds Target Level		**N**	**Y**	

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

System	Hazard Quotient
Nervous	0.49
Endocrine	0.28
GI	0.35
All Others	0.32

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
RSL = Regional Screening Level
U = Nondetect
UJ = Estimated Nondetect

TABLE D1-P22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID P22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.002	U			137	N	39,400	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.002	U			NS	NS	72,500	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.002	U			39	N	26,000	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.002	U			92	N	12	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.002	U			383	N	260,000	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.002	U			NS	NS	2,260	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.002	U			146	N	695	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.002	U			NS	NS	930	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0049	U			1	N	34	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.002	U			1,250	N	423	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.002	U			NS	NS	1,800	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0049	U			1	N	41	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.002	U			3	N	738	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.002	U			NS	NS	13,000	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.002	U			41	N	286	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.002	U			87	N	137	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.002	U			NS	NS	1,500	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.002	U			6,730	N	90,800	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.002	U			NS	NS	23,000	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.002	U			6,730	N	90,800	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.002	U			87	N	137	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0029	U			NS	NS	411,000	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.002	U			NS	NS	26,000	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.002	U			NS	NS	1,300	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.002	U			NS	NS	23,000	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.002	U			NS	NS	81,600	N	RSL		
Acetone	67-64-1	mg/kg	0.2				NS	NS	960,000	N	NMED		2.08E-07
Benzene	71-43-2	mg/kg	0.002	U			87	N	729	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.002	U			NS	NS	1,800	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.002	U			NS	NS	630	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.002	U			30	N	26,000	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.002	U			1,760	N	18,300	N	NMED		
Bromomethane	74-83-9	mg/kg	0.002	U			NS	NS	95	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.002	U			NS	NS	8,540	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.002	U			53	N	1,020	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.002	U			NS	NS	2,160	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.002	U			NS	NS	89,500	N	NMED		
Chloroform	67-66-3	mg/kg	0.002	U			29	N	2,000	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0049	U			201	N	1,260	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.002	U			NS	NS	2,600	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.002	U			146	N	695	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.002	U			67	N	18,300	N	NMED		

TABLE D1-P22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID P22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.002	U			NS	NS	288	N	NMED		
Dichlorodifluoromethane	75-71-8	mg/kg	0.002	U			NS	NS	865	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.002	U			29,000	N	368	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.002	U			52	N	916	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.002	U			NS	NS	14,200	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0049	U			NS	NS	3,730	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.002	U			4,820	N	178,000	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.0098	U			14,400	N	5,130	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.002	U			NS	NS	58,000	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.002	U			NS	NS	24,000	N	RSL		
Naphthalene	91-20-3	mg/kg	0.002	U			108	N	843	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0024	U			NS	NS	3,940	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.002	U			NS	NS	14,200	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.002	U			NS	NS	120,000	N	RSL		
Styrene	100-42-5	mg/kg	0.002	U			NS	NS	51,300	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.002	U			NS	NS	120,000	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.002	U			1,650	N	629	N	NMED		
Toluene	108-88-3	mg/kg	0.002	U			NS	NS	61,300	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.002	U			NS	NS	1,100	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.002	U			146	N	695	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.002	U			112	N	37	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.002	U			NS	NS	6,030	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.002	U			28	N	46	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	U			1,250	N	423	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	U			NS	NS	13,000	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	U			6,730	N	90,800	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	U			6,730	N	90,800	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	U			NS	NS	91,600	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	U			2,330	N	916	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	U			NS	NS	2,750	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	U			NS	NS	18,300	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	U			NS	NS	1,830	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	U			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	U			17	N	276	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	U			NS	NS	104,000	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.17	U			NS	NS	6,490	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.17	U			NS	NS	3,370	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	U			NS	NS	41,000	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.17	U			NS	NS	8,000	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.17	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	U			NS	NS	410	N	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.17	U			1,100	N	3,300	N	RSL[S]		

TABLE D1-P22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID P22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	U			NS	NS	73	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	U			NS	NS	NS	NS	NS		
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	U			NS	NS	82,000	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.17	U			110	N	410	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.17	U			1,100	N	3,300	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.17	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.17	U			NS	NS	50,500	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.17	U			NS	NS	25,300	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.17	U			NS	NS	253,000	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.17	U			32	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			24	N	251	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	U			32	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	U			NS	NS	25,300	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	U			323	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.17	U			NS	NS	3,300,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.17	U			NS	NS	82,000	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	U			NS	NS	2,500	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	U			16	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	U			519	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	U			1,830	N	18,300	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.17	U			12,000	N	160,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.17	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.17	U			3,230	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.17	U			NS	NS	91,600	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.17	U			NS	NS	8,200	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			3	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.17	U			NS	NS	1,200	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.17	U			NS	NS	733,000	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.17	U			NS	NS	916,000	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.17	U			NS	NS	33,700	N	NMED		
Fluorene	86-73-7	mg/kg	0.17	U			NS	NS	33,700	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.17	U			16	N	733	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	U			52	N	916	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.17	U			641	N	641	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	U			32	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.17	U			27,000	N	183,000	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	U			3	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	UJ			1	N	7	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	U			5,240	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.17	U			108	N	843	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.17	U			293	N	1,540	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.17	U			45	N	3,180	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.17	U			NS	NS	27,500	N	NMED		
Phenol	108-95-2	mg/kg	0.17	U			NS	NS	275,000	N	NMED		
Pyrene	129-00-0	mg/kg	0.17	U			NS	NS	25,300	N	NMED		

TABLE D1-P22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID P22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			5,300	N	7,400	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.021	U			304	N	57	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.021	U			9	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.01	U			9	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.01	U			11	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.01	U			11	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.01	U			11	N	16	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.01	U			11	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (3)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000059	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000033	J	0.000011	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000036	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.00000016	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000036	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.00000014	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000013	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.00000013	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.00000013	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		UJ	0.00000017	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000014	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000011	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg	0.00000022	J	0.00000022	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		UJ	0.00000014	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.000000095	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000021	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000081	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.00000022				0.000238	N	0.000808	N	NMED	9.38E-09	2.76E-04

TABLE D1-P22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID P22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	38,000				NS	NS	1,290,000	N	NMED		2.95E-02
Antimony	7440-36-0	mg/kg	0.17	J			NS	NS	519	N	NMED		3.28E-04
Arsenic	7440-38-2	mg/kg	0.67				36	N	208	N	NMED	1.87E-07	3.22E-03
Barium	7440-39-3	mg/kg	260				NS	NS	255,000	N	NMED		1.02E-03
Beryllium	7440-41-7	mg/kg	1.8				313,000	N	2,580	N	NMED	5.75E-11	6.98E-04
Cadmium	7440-43-9	mg/kg	0.32				417,000	N	1,110	N	NMED	7.67E-12	2.88E-04
Calcium	7440-70-2	mg/kg	19,000				NS	NS	32,400,000	N	NMED		5.86E-04
Chromium (Total) (4)	7440-47-3	mg/kg	14				505	N	314,000	N	NMED	2.77E-07	4.46E-05
Cobalt	7440-48-4	mg/kg	6.5				83,400	N	388	N	NMED	7.79E-10	1.68E-02
Copper	7440-50-8	mg/kg	72				NS	NS	51,900	N	NMED		1.39E-03
Iron	7439-89-6	mg/kg	19,000				NS	NS	908,000	N	NMED		2.09E-02
Lead	7439-92-1	mg/kg	10				NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	17,000				NS	NS	5,680,000	N	NMED		2.99E-03
Manganese	7439-96-5	mg/kg	430				NS	NS	160,000	N	NMED		2.69E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.012	J			NS	NS	112	N	NMED		1.07E-04
Nickel	7440-02-0	mg/kg	12				2,890,000	N	25,700	N	NMED	4.15E-11	4.67E-04
Potassium	7440-09-7	mg/kg	1,300				NS	NS	76,200,000	N	NMED		1.71E-05
Selenium	7782-49-2	mg/kg	1.5				NS	NS	6,490	N	NMED		2.31E-04
Silver	7440-22-4	mg/kg	0.057	J			NS	NS	6,490	N	NMED		8.78E-06
Sodium	7440-23-5	mg/kg	68				NS	NS	37,300,000	N	NMED		1.82E-06
Thallium	7440-28-0	mg/kg	0.062	J			NS	NS	13	N	NMED		4.77E-03
Vanadium	7440-62-2	mg/kg	24				NS	NS	6,530	N	NMED		3.68E-03
Zinc	7440-66-6	mg/kg	39				NS	NS	38,900	N	NMED		1.00E-03

TABLE D1-P22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID P22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.32	U			NS	NS	63	N	NMED		
Nitrate	14797-55-8	mg/kg	6.6	J			NS	NS	2,080,000	N	NMED		3.17E-06
Perchlorate	14797-73-0	mg/kg	0.0021	U			NS	NS	908	N	NMED		
										Cumulative Risk/Hazard		**5E-07**	**0.09**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) Except for arsenic and antimony, background values are the 95% UTLs from the 2009 Background document. For antimony, the background value is the 95% UTL for soil unit 350ss based on the 2012 background study. The arsenic value was determined by December 18, 2013 NMED letter. If arsenic value of 5.6 mg/kg is exceeded then consider the site range compared to 0.2 - 11.2 mg/kg.

2) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

3) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update)

4) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
IEUBK = Integrated Exposure Uptake Biokentic Model
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
RSL = Regional Screening Level
U = Nondetect
UJ = Estimated Nondetect

TABLE D1-P22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID P22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.002	U			659	N	10,600	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.002	U			NS	NS	13,600	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.002	U			197	N	7,080	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.002	U			4,300	N	2	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.002	U			1,820	N	70,800	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.002	U			NS	NS	424	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.002	U			781	N	130	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.002	U			NS	NS	283	N	NMED[C]			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0049	U			8	N	6	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.002	U			8,540	N	79	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.002	U			NS	NS	492	N	NMED[C]			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0049	U			6	N	8	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.002	U			16	N	140	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.002	U			NS	NS	2,500	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.002	U			195	N	54	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.002	U			415	N	25	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.002	U			NS	NS	422	N	NMED[C]			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.002	U			45,900	N	24,800	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.002	U			NS	NS	7,080	N	NMED[C]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.002	U			45,900	N	24,800	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.002	U			415	N	25	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.0029	U			NS	NS	90,700	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.002	U			NS	NS	7,080	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.002	U			NS	NS	599	N	NMED[C]			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.002	U			NS	NS	7,080	N	NMED[C]			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.002	U			NS	NS	20,400	N	NMED[C]			
Acetone	67-64-1	mg/kg	0.2				NS	NS	242,000	N	NMED		8.26E-07	
Benzene	71-43-2	mg/kg	0.002	U			423	N	142	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.002	U			NS	NS	538	N	NMED[C]			
Bromochloromethane	74-97-5	mg/kg	0.002	U			NS	NS	296	N	NMED[C]			
Bromodichloromethane	75-27-4	mg/kg	0.002	U			143	N	7,080	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.002	U			23,700	N	5,380	N	NMED			
Bromomethane	74-83-9	mg/kg	0.002	U			NS	NS	18	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.002	U			NS	NS	1,620	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.002	U			252	N	202	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.002	U			NS	NS	412	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.002	U			NS	NS	16,600	N	NMED			
Chloroform	67-66-3	mg/kg	0.002	U			134	N	391	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0049	U			956	N	235	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.002	U			NS	NS	708	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.002	U			781	N	130	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.002	U			340	N	5,380	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.002	U			NS	NS	54	N	NMED			

TABLE D1-P22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID P22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Dichlorodifluoromethane	75-71-8	mg/kg	0.002	U			NS	NS	161	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.002	U			1,770	N	5,800	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.002	U			2,400	N	269	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.002	U			NS	NS	2,740	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0049	U			NS	NS	696	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.002	U			24,200	N	33,100	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.0098	U			89,600	N	1,210	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.002	U			NS	NS	17,700	N	NMED[C]			
n-Propylbenzene	103-65-1	mg/kg	0.002	U			NS	NS	6,730	N	NMED[C]			
Naphthalene	91-20-3	mg/kg	0.002	U			633	N	159	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0024	U			NS	NS	736	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.002	U			NS	NS	2,740	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.002	U			NS	NS	35,400	N	NMED[C]			
Styrene	100-42-5	mg/kg	0.002	U			NS	NS	10,200	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.002	U			NS	NS	35,400	N	NMED[C]			
Tetrachloroethene	127-18-4	mg/kg	0.002	U			7,910	N	120	N	NMED			
Toluene	108-88-3	mg/kg	0.002	U			NS	NS	14,000	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.002	U			NS	NS	206	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.002	U			781	N	130	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.002	U			5,370	N	7	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.002	U			NS	NS	1,130	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.002	U			161	N	162	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	U			8,540	N	79	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	U			NS	NS	2,500	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	U			45,900	N	24,800	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	U			45,900	N	24,800	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	U			NS	NS	26,900	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	U			17,000	N	269	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	U			NS	NS	807	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	U			NS	NS	5,380	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	U			NS	NS	538	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	U			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	U			165	N	81	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	U			NS	NS	28,300	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.17	U			NS	NS	1,770	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.17	U			NS	NS	1,000	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	U			NS	NS	13,500	N	NMED[C]			
2-Nitroaniline	88-74-4	mg/kg	0.17	U			NS	NS	2,690	N	NMED[C]			
2-Nitrophenol	88-75-5	mg/kg	0.17	U			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	U			410	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.17	U			135	N	1,080	N	NMED[SC]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	U			NS	NS	22	N	NMED			

TABLE D1-P22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID P22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	U			NS	NS	NS	NS	NS			
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	U			NS	NS	26,900	N	NMED[C]			
4-Chloroaniline	106-47-8	mg/kg	0.17	U			14	N	135	N	NMED[C]			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	U			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.17	U			135	N	1,080	N	NMED[C]			
4-Nitrophenol	100-02-7	mg/kg	0.17	U			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.17	U			NS	NS	15,100	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.17	U			NS	NS	7,530	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.17	U			NS	NS	75,300	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.17	U			240	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			173	N	15	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	U			240	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	U			NS	NS	7,530	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	U			2,310	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.17	U			NS	NS	1,080,000	N	NMED[C]			
Benzyl Alcohol	100-51-6	mg/kg	0.17	U			NS	NS	26,900	N	NMED[C]			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	U			NS	NS	807	N	NMED[C]			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	U			2	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	U			3,540	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	U			13,400	N	5,380	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.17	U			1,420	N	53,800	N	NMED[C]			
Carbazole	86-74-8	mg/kg	0.17	U			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.17	U			23,100	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.17	U			NS	NS	26,900	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.17	U			NS	NS	2,690	N	NMED[C]			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			24	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.17	U			NS	NS	269	N	NMED[C]			
Diethylphthalate	84-66-2	mg/kg	0.17	U			NS	NS	215,000	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.17	U			NS	NS	269,000	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.17	U			NS	NS	10,000	N	NMED			
Fluorene	86-73-7	mg/kg	0.17	U			NS	NS	10,000	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.17	U			117	N	215	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	U			2,400	N	269	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.17	U			4,670	N	188	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	U			240	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.17	U			198,000	N	53,700	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	U			0.38	N	NA	N	NMED[C]			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	UJ			4	N	2	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	U			37,900	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.17	U			633	N	159	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.17	U			1,350	N	353	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.17	U			346	N	989	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.17	U			NS	NS	8,070	N	NMED			
Phenol	108-95-2	mg/kg	0.17	U			NS	NS	77,400	N	NMED			
Pyrene	129-00-0	mg/kg	0.17	U			NS	NS	7,530	N	NMED			

TABLE D1-P22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID P22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	8,070	N	NMED[C]			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	27	N	NMED[C]			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			626	N	2,420	N	NMED[C]			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.021	U			2,440	N	17	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.021	U			55	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.01	U			58	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.01	U			85	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.01	U			85	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.01	U			85	N	5	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.01	U			85	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (3)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000059	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000033	J	0.000011	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000036	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.00000016	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000036	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.00000014	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000013	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.00000013	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.00000013	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		UJ	0.00000017	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000014	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000011	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg	0.00000022	J	0.00000022	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		UJ	0.00000014	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.000000095	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000021	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000081	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.00000022				0.00172	N	0.000226	N	NMED	1.30E-09	9.88E-04	

TABLE D1-P22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID P22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	38,000				NS	NS	41,400	N	NMED		9.18E-01	Nervous
Antimony	7440-36-0	mg/kg	0.17	J			NS	NS	142	N	NMED		1.20E-03	
Arsenic	7440-38-2	mg/kg	0.67				216	N	41	N	NMED	3.10E-08	1.63E-02	
Barium	7440-39-3	mg/kg	260				NS	NS	4,390	N	NMED		5.92E-02	
Beryllium	7440-41-7	mg/kg	1.8				2,710	N	148	N	NMED	6.64E-09	1.22E-02	
Cadmium	7440-43-9	mg/kg	0.32				3,610	N	72	N	NMED	8.86E-10	4.44E-03	
Calcium	7440-70-2	mg/kg	19,000				NS	NS	8,850,000	N	NMED		2.15E-03	
Chromium (Total) (4)	7440-47-3	mg/kg	14				468	N	134	N	NMED	2.99E-07	1.04E-01	GI, Blood
Cobalt	7440-48-4	mg/kg	6.5				722	N	37	N	NMED	9.00E-08	1.77E-01	Endocrine
Copper	7440-50-8	mg/kg	72				NS	NS	14,200	N	NMED		5.07E-03	
Iron	7439-89-6	mg/kg	19,000				NS	NS	248,000	N	NMED		7.66E-02	
Lead	7439-92-1	mg/kg	10				NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	17,000				NS	NS	1,550,000	N	NMED		1.10E-02	
Manganese	7439-96-5	mg/kg	430				NS	NS	464	N	NMED		9.27E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.012	J			NS	NS	21	N	NMED		5.80E-04	
Nickel	7440-02-0	mg/kg	12				20,500	N	753	N	NMED	5.85E-09	1.59E-02	
Potassium	7440-09-7	mg/kg	1,300				NS	NS	20,800,000	N	NMED		6.25E-05	
Selenium	7782-49-2	mg/kg	1.5				NS	NS	1,750	N	NMED		8.57E-04	
Silver	7440-22-4	mg/kg	0.057	J			NS	NS	1,770	N	NMED		3.22E-05	
Sodium	7440-23-5	mg/kg	68				NS	NS	10,200,000	N	NMED		6.67E-06	
Thallium	7440-28-0	mg/kg	0.062	J			NS	NS	4	N	NMED		1.75E-02	
Vanadium	7440-62-2	mg/kg	24				NS	NS	614	N	NMED		3.91E-02	
Zinc	7440-66-6	mg/kg	39				NS	NS	106,000	N	NMED		3.68E-04	

TABLE D1-P22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID P22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.32	U			NS	NS	12	N	NMED			
Nitrate	14797-55-8	mg/kg	6.6	J			NS	NS	566,000	N	NMED		1.17E-05	
Perchlorate	14797-73-0	mg/kg	0.0021	U			NS	NS	248	N	NMED			
										Cumulative Risk/Hazard		**4E-07**	**2.4**	
										Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	1.8
Endocrine	0.18
GI	0.10
Blood	0.10
All Others	0.26

Notes:

[s] = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update).

2) NMED[C] = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

3) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

4) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect

TABLE D1-Q22-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID Q22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0022	U			28.1	N	2,350	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0022	U			NS	NS	14,400	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0022	U			7.98	N	1,560	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0022	U			18.8	N	2.61	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0022	U			78.6	N	15,600	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0022	U			NS	NS	440	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0022	U			29.3	N	141	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0022	U			NS	NS	63	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0056	U			0.051	N	7.09	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0022	U			240	N	82.9	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0022	U			NS	NS	300	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0056	U			0.0858	N	5.88	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0022	U			0.672	N	135	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0022	U			NS	NS	2,150	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0022	U			8.32	N	55.6	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0022	U			17.8	N	29	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0022	U			NS	NS	270	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0022	U			1,290	N	5,480	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0022	U			NS	NS	1,600	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0022	U			1,290	N	5,480	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0022	U			17.8	N	29	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0034	U			NS	NS	37,400	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0022	U			NS	NS	1,560	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0022	U			NS	NS	200	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0022	U			NS	NS	1,600	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0022	U			NS	NS	5,810	N	RSL		
Acetone	67-64-1	mg/kg	0.17				NS	NS	66,300	N	NMED		2.56E-06
Benzene	71-43-2	mg/kg	0.0022	U			17.8	N	114	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0022	U			NS	NS	290	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0022	U			NS	NS	150	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0022	U			6.19	N	1,560	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0022	U			674	N	1,230	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0022	U			NS	NS	17.7	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0022	U			NS	NS	1,550	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0022	U			10.7	N	144	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0022	U			NS	NS	378	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0022	U			NS	NS	19,000	N	NMED		
Chloroform	67-66-3	mg/kg	0.0022	U			5.9	N	306	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0056	U			41.1	N	268	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0022	U			NS	NS	156	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0022	U			29.3	N	141	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0022	U			13.9	N	1,230	N	NMED		
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0022	U			NS	NS	57.9	N	NMED		

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HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID Q22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dichlorodifluoromethane	75-71-8	mg/kg	0.0022	U			NS	NS	182	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0022	U			75.1	N	3,930	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0022	U			68.3	N	61.6	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0022	U			NS	NS	2,360	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0056	U			NS	NS	764	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0022	U			975	N	37,800	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.011	U			766	N	409	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0022	U			NS	NS	3,900	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0022	U			NS	NS	3,800	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0022	U			22.6	N	162	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0028	U			NS	NS	805	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0022	U			NS	NS	2,360	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0022	U			NS	NS	7,800	N	RSL		
Styrene	100-42-5	mg/kg	0.0022	U			NS	NS	7,260	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0022	U			NS	NS	7,800	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0022	U			337	N	111	N	NMED		
Toluene	108-88-3	mg/kg	0.0022	U			NS	NS	5,230	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0022	U			NS	NS	210	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0022	U			29.3	N	141	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0022	U			15.5	N	6.77	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0022	U			NS	NS	1,230	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0022	U			0.742	N	113	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.18	U			240	N	82.9	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.18	U			NS	NS	2,150	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.18	U			1,290	N	5,480	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.18	U			1,290	N	5,480	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.18	U			NS	NS	6,160	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.18	U			484	N	61.6	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.18	U			NS	NS	185	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.18	U			NS	NS	1,230	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.18	U			NS	NS	123	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.18	U			17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.18	U			3.56	N	18.5	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.18	U			NS	NS	6,260	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.18	U			NS	NS	391	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.18	U			NS	NS	232	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.18	U			NS	NS	3,200	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.18	U			NS	NS	630	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.18	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.18	U			11.8	N	NS	NS	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.18	U			270	N	250	N	RSL[S]		
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.18	U			NS	NS	4.93	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.18	U			NS	NS	NS	NS	NS		

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FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.18	U			NS	NS	6,300	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.18	U			27	N	32	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.18	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.18	U			270	N	250	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.18	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.18	U			NS	NS	3,480	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.18	U			NS	NS	1,740	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.18	U			NS	NS	17,400	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.18	U			1.53	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			1.12	N	17.4	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.18	U			1.53	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.18	U			NS	NS	1,740	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.18	U			15.3	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.18	U			NS	NS	250,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.18	U			NS	NS	6,300	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.18	U			NS	NS	190	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.18	U			3.11	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.18	U			99.3	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.18	U			380	N	1,230	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.18	U			2,900	N	13,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.18	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.18	U			153	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.18	U			NS	NS	6,160	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.18	U			NS	NS	630	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			0.153	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.18	U			NS	NS	78	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.18	U			NS	NS	49,300	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.18	U			NS	NS	61,600	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.18	U			NS	NS	2,320	N	NMED		
Fluorene	86-73-7	mg/kg	0.18	U			NS	NS	2,320	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.18	U			3.33	N	49.3	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.18	U			68.3	N	61.6	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.18	U			133	N	43.1	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.18	U			1.53	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.18	U			5,610	N	12,300	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.18	U			0.78	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	UJ			0.0234	N	0.493	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.18	U			1,090	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.18	U			22.6	N	162	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.18	U			60.4	N	131	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.18	U			9.85	N	234	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.18	U			NS	NS	1,740	N	NMED		
Phenol	108-95-2	mg/kg	0.18	U			NS	NS	18,500	N	NMED		
Pyrene	129-00-0	mg/kg	0.18	U			NS	NS	1,740	N	NMED		

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HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID Q22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			1,300	N	570	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.021	U			69.6	N	3.98	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.021	U			1.81	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.011	U			1.86	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.011	U			2.43	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.011	U			2.43	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.011	U			2.43	N	1.14	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.011	U			2.43	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000013	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg		U	0.000004	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.000000084	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.00000066	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000011	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000063	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000053	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000059	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000087	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.000000077	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.000000037	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.000000075	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000047	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.000000083	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.000000078	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000018	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000037	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.0				0.000049	N	0.0000506	N	NMED		

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	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	17,000				NS	NS	78,000	N	NMED		2.18E-01
Antimony	7440-36-0	mg/kg	0.14	J			NS	NS	31.3	N	NMED		4.47E-03
Arsenic	7440-38-2	mg/kg	0.67				7.07	N	13	N	NMED	9.48E-07	5.15E-02
Barium	7440-39-3	mg/kg	550				NS	NS	15,600	N	NMED		3.53E-02
Beryllium	7440-41-7	mg/kg	1.1				64,400	N	156	N	NMED	1.71E-10	7.05E-03
Cadmium	7440-43-9	mg/kg	0.58				85,900	N	70.5	N	NMED	6.75E-11	8.23E-03
Calcium	7440-70-2	mg/kg	43,000				NS	NS	13,000,000	N	NMED		3.31E-03
Chromium (Total) (3)	7440-47-3	mg/kg	23				96.6	N	45,200	N	NMED	2.38E-06	5.09E-04
Cobalt	7440-48-4	mg/kg	3.6				17,200	N	23.4	N	NMED	2.09E-09	1.54E-01
Copper	7440-50-8	mg/kg	110				NS	NS	3,130	N	NMED		3.51E-02
Iron	7439-89-6	mg/kg	9,100				NS	NS	54,800	N	NMED		1.66E-01
Lead	7439-92-1	mg/kg	12				NS	NS	200	N	RSL		
Magnesium	7439-95-4	mg/kg	5,900				NS	NS	15,600,000	N	NMED		3.78E-04
Manganese	7439-96-5	mg/kg	760				NS	NS	10,500	N	NMED		7.24E-02
Mercury (Elemental)	7439-97-6	mg/kg	0.016	J			NS	NS	23.8	N	NMED		6.72E-04
Nickel	7440-02-0	mg/kg	8.8				595,000	N	1,560	N	NMED	1.48E-10	5.64E-03
Potassium	7440-09-7	mg/kg	2,200				NS	NS	15,600,000	N	NMED		1.41E-04
Selenium	7782-49-2	mg/kg	1				NS	NS	391	N	NMED		2.56E-03
Silver	7440-22-4	mg/kg	0.14				NS	NS	391	N	NMED		3.58E-04
Sodium	7440-23-5	mg/kg	55				NS	NS	7,820,000	N	NMED		7.03E-06
Thallium	7440-28-0	mg/kg	0.093	J			NS	NS	0.782	N	NMED		1.19E-01
Vanadium	7440-62-2	mg/kg	5.7				NS	NS	394	N	NMED		1.45E-02
Zinc	7440-66-6	mg/kg	19				NS	NS	23,500	N	NMED		8.09E-04

TABLE D1-Q22-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID Q22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.33	U			NS	NS	11.2	N	NMED		
Nitrate	14797-55-8	mg/kg	13				NS	NS	125,000	N	NMED		1.04E-04
Perchlorate	14797-73-0	mg/kg	0.0021	U			NS	NS	54.8	N	NMED		
										Cumulative Risk/Hazard		**3E-06**	**0.9**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
RSL = Regional Screening Level
U = Nondetect
UJ = Estimated Nondetect

TABLE D1-Q22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID Q22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0022	U			137	N	39,400	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0022	U			NS	NS	72,500	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0022	U			39	N	26,000	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0022	U			92	N	12	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0022	U			383	N	260,000	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0022	U			NS	NS	2,260	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0022	U			146	N	695	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0022	U			NS	NS	930	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0056	U			1	N	34	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0022	U			1,250	N	423	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0022	U			NS	NS	1,800	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0056	U			1	N	41	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0022	U			3	N	738	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0022	U			NS	NS	13,000	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0022	U			41	N	286	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0022	U			87	N	137	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0022	U			NS	NS	1,500	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0022	U			6,730	N	90,800	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0022	U			NS	NS	23,000	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0022	U			6,730	N	90,800	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0022	U			87	N	137	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0034	U			NS	NS	411,000	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0022	U			NS	NS	26,000	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0022	U			NS	NS	1,300	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0022	U			NS	NS	23,000	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0022	U			NS	NS	81,600	N	RSL		
Acetone	67-64-1	mg/kg	0.17				NS	NS	960,000	N	NMED		1.77E-07
Benzene	71-43-2	mg/kg	0.0022	U			87	N	729	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0022	U			NS	NS	1,800	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0022	U			NS	NS	630	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0022	U			30	N	26,000	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0022	U			1,760	N	18,300	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0022	U			NS	NS	95	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0022	U			NS	NS	8,540	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0022	U			53	N	1,020	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0022	U			NS	NS	2,160	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0022	U			NS	NS	89,500	N	NMED		
Chloroform	67-66-3	mg/kg	0.0022	U			29	N	2,000	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0056	U			201	N	1,260	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0022	U			NS	NS	2,600	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0022	U			146	N	695	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0022	U			67	N	18,300	N	NMED		

TABLE D1-Q22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID Q22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0022	U			NS	NS	288	N	NMED		
Dichlorodifluoromethane	75-71-8	mg/kg	0.0022	U			NS	NS	865	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0022	U			29,000	N	368	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0022	U			52	N	916	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0022	U			NS	NS	14,200	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0056	U			NS	NS	3,730	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0022	U			4,820	N	178,000	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.011	U			14,400	N	5,130	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0022	U			NS	NS	58,000	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0022	U			NS	NS	24,000	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0022	U			108	N	843	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0028	U			NS	NS	3,940	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0022	U			NS	NS	14,200	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0022	U			NS	NS	120,000	N	RSL		
Styrene	100-42-5	mg/kg	0.0022	U			NS	NS	51,300	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0022	U			NS	NS	120,000	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0022	U			1,650	N	629	N	NMED		
Toluene	108-88-3	mg/kg	0.0022	U			NS	NS	61,300	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0022	U			NS	NS	1,100	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0022	U			146	N	695	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0022	U			112	N	37	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0022	U			NS	NS	6,030	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0022	U			28	N	46	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.18	U			1,250	N	423	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.18	U			NS	NS	13,000	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.18	U			6,730	N	90,800	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.18	U			6,730	N	90,800	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.18	U			NS	NS	91,600	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.18	U			2,330	N	916	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.18	U			NS	NS	2,750	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.18	U			NS	NS	18,300	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.18	U			NS	NS	1,830	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.18	U			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.18	U			17	N	276	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.18	U			NS	NS	104,000	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.18	U			NS	NS	6,490	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.18	U			NS	NS	3,370	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.18	U			NS	NS	41,000	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.18	U			NS	NS	8,000	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.18	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.18	U			NS	NS	410	N	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.18	U			1,100	N	3,300	N	RSL[S]		

TABLE D1-Q22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID Q22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.18	U			NS	NS	73	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.18	U			NS	NS	NS	NS	NS		
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.18	U			NS	NS	82,000	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.18	U			110	N	410	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.18	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.18	U			1,100	N	3,300	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.18	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.18	U			NS	NS	50,500	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.18	U			NS	NS	25,300	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.18	U			NS	NS	253,000	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.18	U			32	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			24	N	251	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.18	U			32	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.18	U			NS	NS	25,300	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.18	U			323	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.18	U			NS	NS	3,300,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.18	U			NS	NS	82,000	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.18	U			NS	NS	2,500	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.18	U			16	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.18	U			519	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.18	U			1,830	N	18,300	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.18	U			12,000	N	160,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.18	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.18	U			3,230	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.18	U			NS	NS	91,600	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.18	U			NS	NS	8,200	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			3	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.18	U			NS	NS	1,200	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.18	U			NS	NS	733,000	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.18	U			NS	NS	916,000	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.18	U			NS	NS	33,700	N	NMED		
Fluorene	86-73-7	mg/kg	0.18	U			NS	NS	33,700	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.18	U			16	N	733	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.18	U			52	N	916	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.18	U			641	N	641	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.18	U			32	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.18	U			27,000	N	183,000	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.18	U			3	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	UJ			1	N	7	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.18	U			5,240	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.18	U			108	N	843	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.18	U			293	N	1,540	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.18	U			45	N	3,180	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.18	U			NS	NS	27,500	N	NMED		
Phenol	108-95-2	mg/kg	0.18	U			NS	NS	275,000	N	NMED		
Pyrene	129-00-0	mg/kg	0.18	U			NS	NS	25,300	N	NMED		

TABLE D1-Q22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID Q22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			5,300	N	7,400	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.021	U			304	N	57	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.021	U			9	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.011	U			9	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.011	U			11	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.011	U			11	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.011	U			11	N	16	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.011	U			11	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000013	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg		U	0.000004	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.000000084	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.00000066	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000011	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000063	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000053	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000059	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000087	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.000000077	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.000000037	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.000000075	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000047	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.000000083	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.000000078	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000018	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000037	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.0				0.000238	N	0.000808	N	NMED		

TABLE D1-Q22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID Q22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	17,000				NS	NS	1,290,000	N	NMED		1.32E-02
Antimony	7440-36-0	mg/kg	0.14	J			NS	NS	519	N	NMED		2.70E-04
Arsenic	7440-38-2	mg/kg	0.67				36	N	208	N	NMED	1.87E-07	3.22E-03
Barium	7440-39-3	mg/kg	550				NS	NS	255,000	N	NMED		2.16E-03
Beryllium	7440-41-7	mg/kg	1.1				313,000	N	2,580	N	NMED	3.51E-11	4.26E-04
Cadmium	7440-43-9	mg/kg	0.58				417,000	N	1,110	N	NMED	1.39E-11	5.23E-04
Calcium	7440-70-2	mg/kg	43,000				NS	NS	32,400,000	N	NMED		1.33E-03
Chromium (Total) (3)	7440-47-3	mg/kg	23				505	N	314,000	N	NMED	4.55E-07	7.32E-05
Cobalt	7440-48-4	mg/kg	3.6				83,400	N	388	N	NMED	4.32E-10	9.28E-03
Copper	7440-50-8	mg/kg	110				NS	NS	51,900	N	NMED		2.12E-03
Iron	7439-89-6	mg/kg	9,100				NS	NS	908,000	N	NMED		1.00E-02
Lead	7439-92-1	mg/kg	12				NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	5,900				NS	NS	5,680,000	N	NMED		1.04E-03
Manganese	7439-96-5	mg/kg	760				NS	NS	160,000	N	NMED		4.75E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.016	J			NS	NS	112	N	NMED		1.43E-04
Nickel	7440-02-0	mg/kg	8.8				2,890,000	N	25,700	N	NMED	3.04E-11	3.42E-04
Potassium	7440-09-7	mg/kg	2,200				NS	NS	76,200,000	N	NMED		2.89E-05
Selenium	7782-49-2	mg/kg	1				NS	NS	6,490	N	NMED		1.54E-04
Silver	7440-22-4	mg/kg	0.14				NS	NS	6,490	N	NMED		2.16E-05
Sodium	7440-23-5	mg/kg	55				NS	NS	37,300,000	N	NMED		1.47E-06
Thallium	7440-28-0	mg/kg	0.093	J			NS	NS	13	N	NMED		7.15E-03
Vanadium	7440-62-2	mg/kg	5.7				NS	NS	6,530	N	NMED		8.73E-04
Zinc	7440-66-6	mg/kg	19				NS	NS	38,900	N	NMED		4.88E-04

TABLE D1-Q22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID Q22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.33	U			NS	NS	63	N	NMED		
Nitrate	14797-55-8	mg/kg	13				NS	NS	2,080,000	N	NMED		6.25E-06
Perchlorate	14797-73-0	mg/kg	0.0021	U			NS	NS	908	N	NMED		
										Cumulative Risk/Hazard		**6E-07**	**0.06**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
RSL = Regional Screening Level
U = Nondetect
UJ = Estimated Nondetect

TABLE D1-Q22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID Q22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0022	U			659	N	10,600	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0022	U			NS	NS	13,600	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0022	U			197	N	7,080	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0022	U			4,300	N	2	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0022	U			1,820	N	70,800	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0022	U			NS	NS	424	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0022	U			781	N	130	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0022	U			NS	NS	283	N	NMED[C]			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0056	U			8	N	6	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0022	U			8,540	N	79	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0022	U			NS	NS	492	N	NMED[C]			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0056	U			6	N	8	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0022	U			16	N	140	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0022	U			NS	NS	2,500	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0022	U			195	N	54	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0022	U			415	N	25	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0022	U			NS	NS	422	N	NMED[C]			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0022	U			45,900	N	24,800	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0022	U			NS	NS	7,080	N	NMED[C]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0022	U			45,900	N	24,800	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0022	U			415	N	25	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.0034	U			NS	NS	90,700	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0022	U			NS	NS	7,080	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.0022	U			NS	NS	599	N	NMED[C]			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0022	U			NS	NS	7,080	N	NMED[C]			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0022	U			NS	NS	20,400	N	NMED[C]			
Acetone	67-64-1	mg/kg	0.17				NS	NS	242,000	N	NMED		7.02E-07	
Benzene	71-43-2	mg/kg	0.0022	U			423	N	142	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.0022	U			NS	NS	538	N	NMED[C]			
Bromochloromethane	74-97-5	mg/kg	0.0022	U			NS	NS	296	N	NMED[C]			
Bromodichloromethane	75-27-4	mg/kg	0.0022	U			143	N	7,080	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0022	U			23,700	N	5,380	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0022	U			NS	NS	18	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.0022	U			NS	NS	1,620	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0022	U			252	N	202	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0022	U			NS	NS	412	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0022	U			NS	NS	16,600	N	NMED			
Chloroform	67-66-3	mg/kg	0.0022	U			134	N	391	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0056	U			956	N	235	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0022	U			NS	NS	708	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0022	U			781	N	130	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0022	U			340	N	5,380	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0022	U			NS	NS	54	N	NMED			

TABLE D1-Q22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID Q22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Dichlorodifluoromethane	75-71-8	mg/kg	0.0022	U			NS	NS	161	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.0022	U			1,770	N	5,800	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0022	U			2,400	N	269	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0022	U			NS	NS	2,740	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0056	U			NS	NS	696	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0022	U			24,200	N	33,100	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.011	U			89,600	N	1,210	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0022	U			NS	NS	17,700	N	NMED[C]			
n-Propylbenzene	103-65-1	mg/kg	0.0022	U			NS	NS	6,730	N	NMED[C]			
Naphthalene	91-20-3	mg/kg	0.0022	U			633	N	159	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0028	U			NS	NS	736	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.0022	U			NS	NS	2,740	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.0022	U			NS	NS	35,400	N	NMED[C]			
Styrene	100-42-5	mg/kg	0.0022	U			NS	NS	10,200	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0022	U			NS	NS	35,400	N	NMED[C]			
Tetrachloroethene	127-18-4	mg/kg	0.0022	U			7,910	N	120	N	NMED			
Toluene	108-88-3	mg/kg	0.0022	U			NS	NS	14,000	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0022	U			NS	NS	206	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0022	U			781	N	130	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0022	U			5,370	N	7	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0022	U			NS	NS	1,130	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0022	U			161	N	162	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.18	U			8,540	N	79	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.18	U			NS	NS	2,500	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.18	U			45,900	N	24,800	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.18	U			45,900	N	24,800	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.18	U			NS	NS	26,900	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.18	U			17,000	N	269	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.18	U			NS	NS	807	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.18	U			NS	NS	5,380	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.18	U			NS	NS	538	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.18	U			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.18	U			165	N	81	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.18	U			NS	NS	28,300	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.18	U			NS	NS	1,770	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.18	U			NS	NS	1,000	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.18	U			NS	NS	13,500	N	NMED[C]			
2-Nitroaniline	88-74-4	mg/kg	0.18	U			NS	NS	2,690	N	NMED[C]			
2-Nitrophenol	88-75-5	mg/kg	0.18	U			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.18	U			410	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.18	U			135	N	1,080	N	NMED[SC]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.18	U			NS	NS	22	N	NMED			

TABLE D1-Q22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID Q22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.18	U			NS	NS	NS	NS	NS			
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.18	U			NS	NS	26,900	N	NMED[C]			
4-Chloroaniline	106-47-8	mg/kg	0.18	U			14	N	135	N	NMED[C]			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.18	U			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.18	U			135	N	1,080	N	NMED[C]			
4-Nitrophenol	100-02-7	mg/kg	0.18	U			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.18	U			NS	NS	15,100	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.18	U			NS	NS	7,530	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.18	U			NS	NS	75,300	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.18	U			240	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			173	N	15	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.18	U			240	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.18	U			NS	NS	7,530	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.18	U			2,310	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.18	U			NS	NS	1,080,000	N	NMED[C]			
Benzyl Alcohol	100-51-6	mg/kg	0.18	U			NS	NS	26,900	N	NMED[C]			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.18	U			NS	NS	807	N	NMED[C]			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.18	U			2	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.18	U			3,540	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.18	U			13,400	N	5,380	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.18	U			1,420	N	53,800	N	NMED[C]			
Carbazole	86-74-8	mg/kg	0.18	U			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.18	U			23,100	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.18	U			NS	NS	26,900	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.18	U			NS	NS	2,690	N	NMED[C]			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			24	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.18	U			NS	NS	269	N	NMED[C]			
Diethylphthalate	84-66-2	mg/kg	0.18	U			NS	NS	215,000	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.18	U			NS	NS	269,000	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.18	U			NS	NS	10,000	N	NMED			
Fluorene	86-73-7	mg/kg	0.18	U			NS	NS	10,000	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.18	U			117	N	215	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.18	U			2,400	N	269	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.18	U			4,670	N	188	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.18	U			240	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.18	U			198,000	N	53,700	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.18	U			0.38	N	NA	N	NMED[C]			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	UJ			4	N	2	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.18	U			37,900	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.18	U			633	N	159	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.18	U			1,350	N	353	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.18	U			346	N	989	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.18	U			NS	NS	8,070	N	NMED			
Phenol	108-95-2	mg/kg	0.18	U			NS	NS	77,400	N	NMED			
Pyrene	129-00-0	mg/kg	0.18	U			NS	NS	7,530	N	NMED			

TABLE D1-Q22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID Q22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	8,070	N	NMED[C]			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	27	N	NMED[C]			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			626	N	2,420	N	NMED[C]			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.021	U			2,440	N	17	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.021	U			55	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.011	U			58	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.011	U			85	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.011	U			85	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.011	U			85	N	5	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.011	U			85	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (3)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000013	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg		U	0.000004	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.000000084	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.00000066	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000011	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000063	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000053	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000059	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000087	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.000000077	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.000000037	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.000000075	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000047	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.000000083	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.000000078	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000018	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000037	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.0				0.00172	N	0.000226	N	NMED			

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MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	17,000				NS	NS	41,400	N	NMED		4.11E-01	Nervous
Antimony	7440-36-0	mg/kg	0.14	J			NS	NS	142	N	NMED		9.86E-04	
Arsenic	7440-38-2	mg/kg	0.67				216	N	41	N	NMED	3.10E-08	1.63E-02	
Barium	7440-39-3	mg/kg	550				NS	NS	4,390	N	NMED		1.25E-01	Kidneys
Beryllium	7440-41-7	mg/kg	1.1				2,710	N	148	N	NMED	4.06E-09	7.43E-03	
Cadmium	7440-43-9	mg/kg	0.58				3,610	N	72	N	NMED	1.61E-09	8.04E-03	
Calcium	7440-70-2	mg/kg	43,000				NS	NS	8,850,000	N	NMED		4.86E-03	
Chromium (Total) (4)	7440-47-3	mg/kg	23				468	N	134	N	NMED	4.91E-07	1.72E-01	GI, Blood
Cobalt	7440-48-4	mg/kg	3.6				722	N	37	N	NMED	4.99E-08	9.81E-02	
Copper	7440-50-8	mg/kg	110				NS	NS	14,200	N	NMED		7.75E-03	
Iron	7439-89-6	mg/kg	9,100				NS	NS	248,000	N	NMED		3.67E-02	
Lead	7439-92-1	mg/kg	12				NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	5,900				NS	NS	1,550,000	N	NMED		3.81E-03	
Manganese	7439-96-5	mg/kg	760				NS	NS	464	Y	NMED		1.64E+00	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.016	J			NS	NS	21	N	NMED		7.73E-04	
Nickel	7440-02-0	mg/kg	8.8				20,500	N	753	N	NMED	4.29E-09	1.17E-02	
Potassium	7440-09-7	mg/kg	2,200				NS	NS	20,800,000	N	NMED		1.06E-04	
Selenium	7782-49-2	mg/kg	1				NS	NS	1,750	N	NMED		5.71E-04	
Silver	7440-22-4	mg/kg	0.14				NS	NS	1,770	N	NMED		7.91E-05	
Sodium	7440-23-5	mg/kg	55				NS	NS	10,200,000	N	NMED		5.39E-06	
Thallium	7440-28-0	mg/kg	0.093	J			NS	NS	4	N	NMED		2.63E-02	
Vanadium	7440-62-2	mg/kg	5.7				NS	NS	614	N	NMED		9.28E-03	
Zinc	7440-66-6	mg/kg	19				NS	NS	106,000	N	NMED		1.79E-04	

TABLE D1-Q22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID Q22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.33	U			NS	NS	12	N	NMED			
Nitrate	14797-55-8	mg/kg	13				NS	NS	566,000	N	NMED		2.30E-05	
Perchlorate	14797-73-0	mg/kg	0.0021	U			NS	NS	248	N	NMED			
										Cumulative Risk/Hazard		**6E-07**	**2.6**	
										Exceeds Target Level		**N**	**Y**	

Notes:

[s] = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update).

2) NMED[C] = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

3) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

4) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

System	Hazard Quotient
Nervous	2.0
Kidneys	0.13
GI	0.17
Blood	0.17
All Others	0.23

CAS = Chemical Abstracts Service
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
RSL = Regional Screening Level
U = Nondetect
UJ = Estimated Nondetect

TABLE D1-R22-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID R22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.002	U			28.1	N	2,350	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.002	U			NS	NS	14,400	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.002	U			7.98	N	1,560	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.002	U			18.8	N	2.61	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.002	U			78.6	N	15,600	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.002	U			NS	NS	440	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.002	U			29.3	N	141	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.002	U			NS	NS	63	N	RSL			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0051	U			0.051	N	7.09	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.002	U			240	N	82.9	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.002	U			NS	NS	300	N	RSL			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0051	U			0.0858	N	5.88	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.002	U			0.672	N	135	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.002	U			NS	NS	2,150	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.002	U			8.32	N	55.6	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.002	U			17.8	N	29	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.002	U			NS	NS	270	N	RSL			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.002	U			1,290	N	5,480	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.002	U			NS	NS	1,600	N	RSL			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.002	U			1,290	N	5,480	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.002	U			17.8	N	29	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.0031	U			NS	NS	37,400	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.002	U			NS	NS	1,560	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.002	U			NS	NS	200	N	RSL			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.002	U			NS	NS	1,600	N	RSL			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.002	U			NS	NS	5,810	N	RSL			
Acetone	67-64-1	mg/kg	0.3				NS	NS	66,300	N	NMED		4.52E-06	
Benzene	71-43-2	mg/kg	0.002	U			17.8	N	114	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.002	U			NS	NS	290	N	RSL			
Bromochloromethane	74-97-5	mg/kg	0.002	U			NS	NS	150	N	RSL			
Bromodichloromethane	75-27-4	mg/kg	0.002	U			6.19	N	1,560	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.002	U			674	N	1,230	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0079				NS	NS	17.7	N	NMED		4.46E-04	
Carbon Disulfide	75-15-0	mg/kg	0.002	U			NS	NS	1,550	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.002	U			10.7	N	144	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.002	U			NS	NS	378	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.002	U			NS	NS	19,000	N	NMED			
Chloroform	67-66-3	mg/kg	0.002	U			5.9	N	306	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0051	U			41.1	N	268	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.002	U			NS	NS	156	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.002	U			29.3	N	141	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.002	U			13.9	N	1,230	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.002	U			NS	NS	57.9	N	NMED			

TABLE D1-R22-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID R22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Dichlorodifluoromethane	75-71-8	mg/kg	0.002	U			NS	NS	182	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.002	U			75.1	N	3,930	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.002	U			68.3	N	61.6	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.002	U			NS	NS	2,360	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0051	U			NS	NS	764	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.002	U			975	N	37,800	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.01	U			766	N	409	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.002	U			NS	NS	3,900	N	RSL			
n-Propylbenzene	103-65-1	mg/kg	0.002	U			NS	NS	3,800	N	RSL			
Naphthalene	91-20-3	mg/kg	0.002	U			22.6	N	162	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0025	U			NS	NS	805	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.002	U			NS	NS	2,360	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.002	U			NS	NS	7,800	N	RSL			
Styrene	100-42-5	mg/kg	0.002	U			NS	NS	7,260	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.002	U			NS	NS	7,800	N	RSL			
Tetrachloroethene	127-18-4	mg/kg	0.002	U			337	N	111	N	NMED			
Toluene	108-88-3	mg/kg	0.002	U			NS	NS	5,230	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.002	U			NS	NS	210	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.002	U			29.3	N	141	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.002	U			15.5	N	6.77	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.002	U			NS	NS	1,230	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.002	U			0.742	N	113	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.18	U			240	N	82.9	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.18	U			NS	NS	2,150	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.18	U			1,290	N	5,480	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.18	U			1,290	N	5,480	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.18	U			NS	NS	6,160	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.18	U			484	N	61.6	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.18	U			NS	NS	185	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.18	U			NS	NS	1,230	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.18	U			NS	NS	123	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.18	U			17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.18	U			3.56	N	18.5	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.18	U			NS	NS	6,260	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.18	U			NS	NS	391	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.18	U			NS	NS	232	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.18	U			NS	NS	3,200	N	RSL			
2-Nitroaniline	88-74-4	mg/kg	0.18	U			NS	NS	630	N	RSL			
2-Nitrophenol	88-75-5	mg/kg	0.18	U			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.18	U			11.8	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.18	U			270	N	250	N	RSL[S]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.18	U			NS	NS	4.93	N	NMED			
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.18	U			NS	NS	NS	NS	NS			

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FORT WINGATE DEPOT ACTIVITY INNER FENCE
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	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.18	U			NS	NS	6,300	N	RSL			
4-Chloroaniline	106-47-8	mg/kg	0.18	U			27	N	32	N	RSL			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.18	U			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.18	U			270	N	250	N	RSL			
4-Nitrophenol	100-02-7	mg/kg	0.18	U			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.18	U			NS	NS	3,480	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.18	U			NS	NS	1,740	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.18	U			NS	NS	17,400	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.18	U			1.53	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			1.12	N	17.4	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.18	U			1.53	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.18	U			NS	NS	1,740	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.18	U			15.3	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.18	U			NS	NS	250,000	N	RSL			
Benzyl Alcohol	100-51-6	mg/kg	0.18	U			NS	NS	6,300	N	RSL			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.18	U			NS	NS	190	N	RSL			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.18	U			3.11	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.18	U			99.3	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.18	U			380	N	1,230	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.18	U			2,900	N	13,000	N	RSL			
Carbazole	86-74-8	mg/kg	0.18	U			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.18	U			153	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.18	U			NS	NS	6,160	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.18	U			NS	NS	630	N	RSL			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			0.153	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.18	U			NS	NS	78	N	RSL			
Diethylphthalate	84-66-2	mg/kg	0.18	U			NS	NS	49,300	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.18	U			NS	NS	61,600	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.18	U			NS	NS	2,320	N	NMED			
Fluorene	86-73-7	mg/kg	0.18	U			NS	NS	2,320	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.18	U			3.33	N	49.3	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.18	U			68.3	N	61.6	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.18	U			133	N	43.1	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.18	U			1.53	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.18	U			5,610	N	12,300	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.18	U			0.78	N	NS	NS	RSL			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	UJ			0.0234	N	0.493	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.18	U			1,090	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.18	U			22.6	N	162	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.18	U			60.4	N	131	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.18	U			9.85	N	234	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.18	U			NS	NS	1,740	N	NMED			
Phenol	108-95-2	mg/kg	0.18	U			NS	NS	18,500	N	NMED			
Pyrene	129-00-0	mg/kg	0.18	U			NS	NS	1,740	N	NMED			

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	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	2,200	N	RSL			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	6.3	N	RSL			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			211	N	36	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			3.56	N	18.5	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	7.7	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			31.6	N	70.4	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	6.16	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	7.64	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			333	N	247	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			83.1	N	301	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	156	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			60.4	N	131	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			313	N	6.16	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	3,850	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			1,300	N	570	N	RSL			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.021	U			69.6	N	3.98	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.021	U			1.81	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.011	U			1.86	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.011	U			2.43	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.011	U			2.43	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.011	U			2.43	N	1.14	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.011	U			2.43	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (3)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000011	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000019	J	0.0000062	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000018	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.00000097	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.000000057	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000083	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000079	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000077	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000072	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.0000001	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.0000001	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.000000084	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000046	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.000000039	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.000000087	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000017	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000063	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.0000000019				0.000049	N	0.0000506	N	NMED	3.80E-10	3.68E-05	

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	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	23,000				NS	NS	78,000	N	NMED		2.95E-01	Nervous
Antimony	7440-36-0	mg/kg	0.19	J			NS	NS	31.3	N	NMED		6.07E-03	
Arsenic	7440-38-2	mg/kg	1.7				7.07	N	13	N	NMED	2.40E-06	1.31E-01	Heart/Endocrine
Barium	7440-39-3	mg/kg	360				NS	NS	15,600	N	NMED		2.31E-02	
Beryllium	7440-41-7	mg/kg	1.1				64,400	N	156	N	NMED	1.71E-10	7.05E-03	
Cadmium	7440-43-9	mg/kg	1.9	J			85,900	N	70.5	N	NMED	2.21E-10	2.70E-02	
Calcium	7440-70-2	mg/kg	18,000				NS	NS	13,000,000	N	NMED		1.38E-03	
Chromium (Total) (4)	7440-47-3	mg/kg	32	J			96.6	N	45,200	N	NMED	3.31E-06	7.08E-04	
Cobalt	7440-48-4	mg/kg	5.2				17,200	N	23.4	N	NMED	3.02E-09	2.22E-01	Endocrine
Copper	7440-50-8	mg/kg	670	J			NS	NS	3,130	N	NMED		2.14E-01	GI
Iron	7439-89-6	mg/kg	12,000				NS	NS	54,800	N	NMED		2.19E-01	GI
Lead	7439-92-1	mg/kg	18				NS	NS	200	N	RSL			
Magnesium	7439-95-4	mg/kg	8,100				NS	NS	15,600,000	N	NMED		5.19E-04	
Manganese	7439-96-5	mg/kg	430				NS	NS	10,500	N	NMED		4.10E-02	
Mercury (Elemental)	7439-97-6	mg/kg	0.027	J			NS	NS	23.8	N	NMED		1.13E-03	
Nickel	7440-02-0	mg/kg	21	J			595,000	N	1,560	N	NMED	3.53E-10	1.35E-02	
Potassium	7440-09-7	mg/kg	2,200				NS	NS	15,600,000	N	NMED		1.41E-04	
Selenium	7782-49-2	mg/kg	1.4				NS	NS	391	N	NMED		3.58E-03	
Silver	7440-22-4	mg/kg	0.48	J			NS	NS	391	N	NMED		1.23E-03	
Sodium	7440-23-5	mg/kg	77				NS	NS	7,820,000	N	NMED		9.85E-06	
Thallium	7440-28-0	mg/kg	0.081	J			NS	NS	0.782	N	NMED		1.04E-01	Hair/Coat/Eyes
Vanadium	7440-62-2	mg/kg	18				NS	NS	394	N	NMED		4.57E-02	
Zinc	7440-66-6	mg/kg	47	J			NS	NS	23,500	N	NMED		2.00E-03	

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	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.33	U			NS	NS	11.2	N	NMED			
Nitrate	14797-55-8	mg/kg	21				NS	NS	125,000	N	NMED		1.68E-04	
Perchlorate	14797-73-0	mg/kg	0.0021	U			NS	NS	54.8	N	NMED			
										Cumulative Risk/Hazard		**6E-06**	**1.4**	
										Exceeds Target Level		**N**	**Y**	

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

2) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect

System	Hazard Quotient
Nervous	0.29
Endocrine	0.35
GI	0.43
Heart	0.13
Hair/Coat	0.10
Eyes	0.10
All Others	0.17

TABLE D1-R22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID R22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.002	U			137	N	39,400	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.002	U			NS	NS	72,500	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.002	U			39	N	26,000	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.002	U			92	N	12	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.002	U			383	N	260,000	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.002	U			NS	NS	2,260	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.002	U			146	N	695	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.002	U			NS	NS	930	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0051	U			1	N	34	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.002	U			1,250	N	423	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.002	U			NS	NS	1,800	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0051	U			1	N	41	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.002	U			3	N	738	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.002	U			NS	NS	13,000	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.002	U			41	N	286	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.002	U			87	N	137	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.002	U			NS	NS	1,500	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.002	U			6,730	N	90,800	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.002	U			NS	NS	23,000	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.002	U			6,730	N	90,800	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.002	U			87	N	137	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0031	U			NS	NS	411,000	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.002	U			NS	NS	26,000	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.002	U			NS	NS	1,300	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.002	U			NS	NS	23,000	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.002	U			NS	NS	81,600	N	RSL		
Acetone	67-64-1	mg/kg	0.3				NS	NS	960,000	N	NMED		3.13E-07
Benzene	71-43-2	mg/kg	0.002	U			87	N	729	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.002	U			NS	NS	1,800	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.002	U			NS	NS	630	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.002	U			30	N	26,000	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.002	U			1,760	N	18,300	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0079				NS	NS	95	N	NMED		8.36E-05
Carbon Disulfide	75-15-0	mg/kg	0.002	U			NS	NS	8,540	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.002	U			53	N	1,020	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.002	U			NS	NS	2,160	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.002	U			NS	NS	89,500	N	NMED		
Chloroform	67-66-3	mg/kg	0.002	U			29	N	2,000	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0051	U			201	N	1,260	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.002	U			NS	NS	2,600	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.002	U			146	N	695	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.002	U			67	N	18,300	N	NMED		

TABLE D1-R22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID R22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.002	U			NS	NS	288	N	NMED		
Dichlorodifluoromethane	75-71-8	mg/kg	0.002	U			NS	NS	865	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.002	U			29,000	N	368	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.002	U			52	N	916	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.002	U			NS	NS	14,200	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0051	U			NS	NS	3,730	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.002	U			4,820	N	178,000	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.01	U			14,400	N	5,130	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.002	U			NS	NS	58,000	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.002	U			NS	NS	24,000	N	RSL		
Naphthalene	91-20-3	mg/kg	0.002	U			108	N	843	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0025	U			NS	NS	3,940	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.002	U			NS	NS	14,200	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.002	U			NS	NS	120,000	N	RSL		
Styrene	100-42-5	mg/kg	0.002	U			NS	NS	51,300	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.002	U			NS	NS	120,000	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.002	U			1,650	N	629	N	NMED		
Toluene	108-88-3	mg/kg	0.002	U			NS	NS	61,300	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.002	U			NS	NS	1,100	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.002	U			146	N	695	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.002	U			112	N	37	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.002	U			NS	NS	6,030	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.002	U			28	N	46	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.18	U			1,250	N	423	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.18	U			NS	NS	13,000	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.18	U			6,730	N	90,800	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.18	U			6,730	N	90,800	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.18	U			NS	NS	91,600	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.18	U			2,330	N	916	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.18	U			NS	NS	2,750	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.18	U			NS	NS	18,300	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.18	U			NS	NS	1,830	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.18	U			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.18	U			17	N	276	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.18	U			NS	NS	104,000	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.18	U			NS	NS	6,490	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.18	U			NS	NS	3,370	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.18	U			NS	NS	41,000	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.18	U			NS	NS	8,000	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.18	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.18	U			NS	NS	410	N	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.18	U			1,100	N	3,300	N	RSL[S]		

TABLE D1-R22-2
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FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.18	U			NS	NS	73	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.18	U			NS	NS	NS	NS	NS		
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.18	U			NS	NS	82,000	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.18	U			110	N	410	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.18	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.18	U			1,100	N	3,300	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.18	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.18	U			NS	NS	50,500	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.18	U			NS	NS	25,300	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.18	U			NS	NS	253,000	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.18	U			32	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			24	N	251	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.18	U			32	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.18	U			NS	NS	25,300	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.18	U			323	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.18	U			NS	NS	3,300,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.18	U			NS	NS	82,000	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.18	U			NS	NS	2,500	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.18	U			16	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.18	U			519	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.18	U			1,830	N	18,300	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.18	U			12,000	N	160,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.18	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.18	U			3,230	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.18	U			NS	NS	91,600	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.18	U			NS	NS	8,200	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			3	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.18	U			NS	NS	1,200	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.18	U			NS	NS	733,000	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.18	U			NS	NS	916,000	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.18	U			NS	NS	33,700	N	NMED		
Fluorene	86-73-7	mg/kg	0.18	U			NS	NS	33,700	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.18	U			16	N	733	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.18	U			52	N	916	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.18	U			641	N	641	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.18	U			32	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.18	U			27,000	N	183,000	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.18	U			3	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	UJ			1	N	7	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.18	U			5,240	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.18	U			108	N	843	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.18	U			293	N	1,540	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.18	U			45	N	3,180	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.18	U			NS	NS	27,500	N	NMED		
Phenol	108-95-2	mg/kg	0.18	U			NS	NS	275,000	N	NMED		
Pyrene	129-00-0	mg/kg	0.18	U			NS	NS	25,300	N	NMED		

TABLE D1-R22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID R22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			5,300	N	7,400	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.021	U			304	N	57	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.021	U			9	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.011	U			9	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.011	U			11	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.011	U			11	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.011	U			11	N	16	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.011	U			11	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000011	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000019	J	0.0000062	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000018	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.00000097	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.000000057	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000083	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000079	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000077	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000072	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.0000001	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.0000001	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.000000084	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000046	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.000000039	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.000000087	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000017	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000063	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.0000000019				0.000238	N	0.000808	N	NMED	7.82E-11	2.30E-06

TABLE D1-R22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID R22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	23,000				NS	NS	1,290,000	N	NMED		1.78E-02
Antimony	7440-36-0	mg/kg	0.19	J			NS	NS	519	N	NMED		3.66E-04
Arsenic	7440-38-2	mg/kg	1.7				36	N	208	N	NMED	4.74E-07	8.17E-03
Barium	7440-39-3	mg/kg	360				NS	NS	255,000	N	NMED		1.41E-03
Beryllium	7440-41-7	mg/kg	1.1				313,000	N	2,580	N	NMED	3.51E-11	4.26E-04
Cadmium	7440-43-9	mg/kg	1.9	J			417,000	N	1,110	N	NMED	4.56E-11	1.71E-03
Calcium	7440-70-2	mg/kg	18,000				NS	NS	32,400,000	N	NMED		5.56E-04
Chromium (Total) (3)	7440-47-3	mg/kg	32	J			505	N	314,000	N	NMED	6.34E-07	1.02E-04
Cobalt	7440-48-4	mg/kg	5.2				83,400	N	388	N	NMED	6.24E-10	1.34E-02
Copper	7440-50-8	mg/kg	670	J			NS	NS	51,900	N	NMED		1.29E-02
Iron	7439-89-6	mg/kg	12,000				NS	NS	908,000	N	NMED		1.32E-02
Lead	7439-92-1	mg/kg	18				NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	8,100				NS	NS	5,680,000	N	NMED		1.43E-03
Manganese	7439-96-5	mg/kg	430				NS	NS	160,000	N	NMED		2.69E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.027	J			NS	NS	112	N	NMED		2.41E-04
Nickel	7440-02-0	mg/kg	21	J			2,890,000	N	25,700	N	NMED	7.27E-11	8.17E-04
Potassium	7440-09-7	mg/kg	2,200				NS	NS	76,200,000	N	NMED		2.89E-05
Selenium	7782-49-2	mg/kg	1.4				NS	NS	6,490	N	NMED		2.16E-04
Silver	7440-22-4	mg/kg	0.48	J			NS	NS	6,490	N	NMED		7.40E-05
Sodium	7440-23-5	mg/kg	77				NS	NS	37,300,000	N	NMED		2.06E-06
Thallium	7440-28-0	mg/kg	0.081	J			NS	NS	13	N	NMED		6.23E-03
Vanadium	7440-62-2	mg/kg	18				NS	NS	6,530	N	NMED		2.76E-03
Zinc	7440-66-6	mg/kg	47	J			NS	NS	38,900	N	NMED		1.21E-03

TABLE D1-R22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID R22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.33	U			NS	NS	63	N	NMED		
Nitrate	14797-55-8	mg/kg	21				NS	NS	2,080,000	N	NMED		1.01E-05
Perchlorate	14797-73-0	mg/kg	0.0021	U			NS	NS	908	N	NMED		
										Cumulative Risk/Hazard		**1E-06**	**0.09**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
IEUBK = Integrated Exposure Uptake Biokentic Model
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect

TABLE D1-R22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID R22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.002	U			659	N	10,600	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.002	U			NS	NS	13,600	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.002	U			197	N	7,080	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.002	U			4,300	N	2	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.002	U			1,820	N	70,800	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.002	U			NS	NS	424	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.002	U			781	N	130	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.002	U			NS	NS	283	N	NMED[C]			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0051	U			8	N	6	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.002	U			8,540	N	79	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.002	U			NS	NS	492	N	NMED[C]			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0051	U			6	N	8	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.002	U			16	N	140	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.002	U			NS	NS	2,500	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.002	U			195	N	54	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.002	U			415	N	25	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.002	U			NS	NS	422	N	NMED[C]			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.002	U			45,900	N	24,800	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.002	U			NS	NS	7,080	N	NMED[C]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.002	U			45,900	N	24,800	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.002	U			415	N	25	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.0031	U			NS	NS	90,700	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.002	U			NS	NS	7,080	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.002	U			NS	NS	599	N	NMED[C]			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.002	U			NS	NS	7,080	N	NMED[C]			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.002	U			NS	NS	20,400	N	NMED[C]			
Acetone	67-64-1	mg/kg	0.3				NS	NS	242,000	N	NMED		1.24E-06	
Benzene	71-43-2	mg/kg	0.002	U			423	N	142	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.002	U			NS	NS	538	N	NMED[C]			
Bromochloromethane	74-97-5	mg/kg	0.002	U			NS	NS	296	N	NMED[C]			
Bromodichloromethane	75-27-4	mg/kg	0.002	U			143	N	7,080	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.002	U			23,700	N	5,380	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0079				NS	NS	18	N	NMED		4.41E-04	
Carbon Disulfide	75-15-0	mg/kg	0.002	U			NS	NS	1,620	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.002	U			252	N	202	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.002	U			NS	NS	412	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.002	U			NS	NS	16,600	N	NMED			
Chloroform	67-66-3	mg/kg	0.002	U			134	N	391	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0051	U			956	N	235	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.002	U			NS	NS	708	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.002	U			781	N	130	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.002	U			340	N	5,380	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.002	U			NS	NS	54	N	NMED			

TABLE D1-R22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID R22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Dichlorodifluoromethane	75-71-8	mg/kg	0.002	U			NS	NS	161	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.002	U			1,770	N	5,800	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.002	U			2,400	N	269	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.002	U			NS	NS	2,740	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0051	U			NS	NS	696	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.002	U			24,200	N	33,100	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.01	U			89,600	N	1,210	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.002	U			NS	NS	17,700	N	NMED[C]			
n-Propylbenzene	103-65-1	mg/kg	0.002	U			NS	NS	6,730	N	NMED[C]			
Naphthalene	91-20-3	mg/kg	0.002	U			633	N	159	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0025	U			NS	NS	736	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.002	U			NS	NS	2,740	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.002	U			NS	NS	35,400	N	NMED[C]			
Styrene	100-42-5	mg/kg	0.002	U			NS	NS	10,200	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.002	U			NS	NS	35,400	N	NMED[C]			
Tetrachloroethene	127-18-4	mg/kg	0.002	U			7,910	N	120	N	NMED			
Toluene	108-88-3	mg/kg	0.002	U			NS	NS	14,000	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.002	U			NS	NS	206	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.002	U			781	N	130	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.002	U			5,370	N	7	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.002	U			NS	NS	1,130	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.002	U			161	N	162	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.18	U			8,540	N	79	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.18	U			NS	NS	2,500	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.18	U			45,900	N	24,800	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.18	U			45,900	N	24,800	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.18	U			NS	NS	26,900	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.18	U			17,000	N	269	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.18	U			NS	NS	807	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.18	U			NS	NS	5,380	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.18	U			NS	NS	538	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.18	U			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.18	U			165	N	81	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.18	U			NS	NS	28,300	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.18	U			NS	NS	1,770	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.18	U			NS	NS	1,000	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.18	U			NS	NS	13,500	N	NMED[C]			
2-Nitroaniline	88-74-4	mg/kg	0.18	U			NS	NS	2,690	N	NMED[C]			
2-Nitrophenol	88-75-5	mg/kg	0.18	U			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.18	U			410	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.18	U			135	N	1,080	N	NMED[SC]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.18	U			NS	NS	22	N	NMED			

TABLE D1-R22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID R22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.18	U			NS	NS	NS	NS	NS			
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.18	U			NS	NS	26,900	N	NMED[C]			
4-Chloroaniline	106-47-8	mg/kg	0.18	U			14	N	135	N	NMED[C]			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.18	U			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.18	U			135	N	1,080	N	NMED[C]			
4-Nitrophenol	100-02-7	mg/kg	0.18	U			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.18	U			NS	NS	15,100	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.18	U			NS	NS	7,530	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.18	U			NS	NS	75,300	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.18	U			240	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			173	N	15	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.18	U			240	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.18	U			NS	NS	7,530	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.18	U			2,310	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.18	U			NS	NS	1,080,000	N	NMED[C]			
Benzyl Alcohol	100-51-6	mg/kg	0.18	U			NS	NS	26,900	N	NMED[C]			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.18	U			NS	NS	807	N	NMED[C]			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.18	U			2	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.18	U			3,540	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.18	U			13,400	N	5,380	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.18	U			1,420	N	53,800	N	NMED[C]			
Carbazole	86-74-8	mg/kg	0.18	U			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.18	U			23,100	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.18	U			NS	NS	26,900	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.18	U			NS	NS	2,690	N	NMED[C]			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			24	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.18	U			NS	NS	269	N	NMED[C]			
Diethylphthalate	84-66-2	mg/kg	0.18	U			NS	NS	215,000	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.18	U			NS	NS	269,000	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.18	U			NS	NS	10,000	N	NMED			
Fluorene	86-73-7	mg/kg	0.18	U			NS	NS	10,000	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.18	U			117	N	215	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.18	U			2,400	N	269	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.18	U			4,670	N	188	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.18	U			240	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.18	U			198,000	N	53,700	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.18	U			0.38	N	NA	N	NMED[C]			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	UJ			4	N	2	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.18	U			37,900	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.18	U			633	N	159	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.18	U			1,350	N	353	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.18	U			346	N	989	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.18	U			NS	NS	8,070	N	NMED			
Phenol	108-95-2	mg/kg	0.18	U			NS	NS	77,400	N	NMED			
Pyrene	129-00-0	mg/kg	0.18	U			NS	NS	7,530	N	NMED			

TABLE D1-R22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID R22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	8,070	N	NMED[C]			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	27	N	NMED[C]			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			626	N	2,420	N	NMED[C]			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.021	U			2,440	N	17	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.021	U			55	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.011	U			58	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.011	U			85	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.011	U			85	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.011	U			85	N	5	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.011	U			85	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (3)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000011	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000019	J	0.0000062	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000018	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.00000097	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.000000057	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000083	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000079	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000077	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000072	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.0000001	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.0000001	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.000000084	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000046	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.000000039	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.000000087	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000017	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000063	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.0000000019				0.00172	N	0.000226	N	NMED	1.08E-11	8.23E-06	

TABLE D1-R22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID R22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	23,000				NS	NS	41,400	N	NMED		5.56E-01	Nervous
Antimony	7440-36-0	mg/kg	0.19	J			NS	NS	142	N	NMED		1.34E-03	
Arsenic	7440-38-2	mg/kg	1.7				216	N	41	N	NMED		4.13E-02	
Barium	7440-39-3	mg/kg	360				NS	NS	4,390	N	NMED		8.20E-02	
Beryllium	7440-41-7	mg/kg	1.1				2,710	N	148	N	NMED		7.43E-03	
Cadmium	7440-43-9	mg/kg	1.9	J			3,610	N	72	N	NMED		2.64E-02	
Calcium	7440-70-2	mg/kg	18,000				NS	NS	8,850,000	N	NMED		2.03E-03	
Chromium (Total) (4)	7440-47-3	mg/kg	32	J			468	N	134	N	NMED		2.39E-01	GI, Blood
Cobalt	7440-48-4	mg/kg	5.2				722	N	37	N	NMED		1.42E-01	Endocrine
Copper	7440-50-8	mg/kg	670	J			NS	NS	14,200	N	NMED		4.72E-02	
Iron	7439-89-6	mg/kg	12,000				NS	NS	248,000	N	NMED		4.84E-02	
Lead	7439-92-1	mg/kg	18				NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	8,100				NS	NS	1,550,000	N	NMED		5.23E-03	
Manganese	7439-96-5	mg/kg	430				NS	NS	464	N	NMED		9.27E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.027	J			NS	NS	21	N	NMED		1.30E-03	
Nickel	7440-02-0	mg/kg	21	J			20,500	N	753	N	NMED		2.79E-02	
Potassium	7440-09-7	mg/kg	2,200				NS	NS	20,800,000	N	NMED		1.06E-04	
Selenium	7782-49-2	mg/kg	1.4				NS	NS	1,750	N	NMED		8.00E-04	
Silver	7440-22-4	mg/kg	0.48	J			NS	NS	1,770	N	NMED		2.71E-04	
Sodium	7440-23-5	mg/kg	77				NS	NS	10,200,000	N	NMED		7.55E-06	
Thallium	7440-28-0	mg/kg	0.081	J			NS	NS	4	N	NMED		2.29E-02	
Vanadium	7440-62-2	mg/kg	18				NS	NS	614	N	NMED		2.93E-02	
Zinc	7440-66-6	mg/kg	47	J			NS	NS	106,000	N	NMED		4.43E-04	

TABLE D1-R22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID R22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.33	U			NS	NS	12	N	NMED			
Nitrate	14797-55-8	mg/kg	21				NS	NS	566,000	N	NMED		3.71E-05	
Perchlorate	14797-73-0	mg/kg	0.0021	U			NS	NS	248	N	NMED			
										Cumulative Risk/Hazard		**1E-11**	**2.2**	
										Exceeds Target Level		**N**	Y	

System	Hazard Quotient
Nervous	1.5
Endocrine	0.14
GI	0.24
Blood	0.24
All Others	0.34

Notes:

[s] = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update).

2) NMED[C] = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

3) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

4) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect

TABLE D1-S22-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID S22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0024	U			28.1	N	2,350	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0024	U			NS	NS	14,400	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0024	U			7.98	N	1,560	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0024	U			18.8	N	2.61	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0024	U			78.6	N	15,600	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0024	U			NS	NS	440	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0024	U			29.3	N	141	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0024	U			NS	NS	63	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.006	U			0.051	N	7.09	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0024	U			240	N	82.9	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0024	U			NS	NS	300	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.006	U			0.0858	N	5.88	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0024	U			0.672	N	135	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0024	U			NS	NS	2,150	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0024	U			8.32	N	55.6	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0024	U			17.8	N	29	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0024	U			NS	NS	270	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0024	U			1,290	N	5,480	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0024	U			NS	NS	1,600	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0024	U			1,290	N	5,480	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0024	U			17.8	N	29	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0036	U			NS	NS	37,400	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0024	U			NS	NS	1,560	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0024	U			NS	NS	200	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0024	U			NS	NS	1,600	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0024	U			NS	NS	5,810	N	RSL		
Acetone	67-64-1	mg/kg	0.67	J			NS	NS	66,300	N	NMED		1.01E-05
Benzene	71-43-2	mg/kg	0.0024	U			17.8	N	114	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0024	U			NS	NS	290	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0024	U			NS	NS	150	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0024	U			6.19	N	1,560	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0024	U			674	N	1,230	N	NMED		
Bromomethane	74-83-9	mg/kg	0.026				NS	NS	17.7	N	NMED		1.47E-03
Carbon Disulfide	75-15-0	mg/kg	0.0024	U			NS	NS	1,550	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0024	U			10.7	N	144	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0024	U			NS	NS	378	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0024	U			NS	NS	19,000	N	NMED		
Chloroform	67-66-3	mg/kg	0.0024	U			5.9	N	306	N	NMED		
Chloromethane	74-87-3	mg/kg	0.006	U			41.1	N	268	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0024	U			NS	NS	156	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0024	U			29.3	N	141	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0024	U			13.9	N	1,230	N	NMED		
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0024	U			NS	NS	57.9	N	NMED		

TABLE D1-S22-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID S22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dichlorodifluoromethane	75-71-8	mg/kg	0.0024	U			NS	NS	182	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0024	U			75.1	N	3,930	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0024	U			68.3	N	61.6	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0024	U			NS	NS	2,360	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.006	U			NS	NS	764	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0024	U			975	N	37,800	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.012	U			766	N	409	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0024	U			NS	NS	3,900	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0024	U			NS	NS	3,800	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0024	U			22.6	N	162	N	NMED		
o-Xylene	95-47-6	mg/kg	0.003	U			NS	NS	805	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0024	U			NS	NS	2,360	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0024	U			NS	NS	7,800	N	RSL		
Styrene	100-42-5	mg/kg	0.0024	U			NS	NS	7,260	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0024	U			NS	NS	7,800	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0024	U			337	N	111	N	NMED		
Toluene	108-88-3	mg/kg	0.0024	U			NS	NS	5,230	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0024	U			NS	NS	210	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0024	U			29.3	N	141	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0024	U			15.5	N	6.77	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0024	U			NS	NS	1,230	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0024	U			0.742	N	113	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.18	U			240	N	82.9	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.18	U			NS	NS	2,150	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.18	U			1,290	N	5,480	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.18	U			1,290	N	5,480	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.18	U			NS	NS	6,160	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.18	U			484	N	61.6	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.18	U			NS	NS	185	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.18	U			NS	NS	1,230	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.18	U			NS	NS	123	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.18	U			17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.18	U			3.56	N	18.5	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.18	U			NS	NS	6,260	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.18	U			NS	NS	391	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.18	U			NS	NS	232	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.18	U			NS	NS	3,200	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.18	U			NS	NS	630	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.18	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.18	U			11.8	N	NS	NS	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.18	U			270	N	250	N	RSL[S]		
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.18	U			NS	NS	4.93	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.18	U			NS	NS	NS	NS	NS		

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FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.18	U			NS	NS	6,300	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.18	U			27	N	32	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.18	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.18	U			270	N	250	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.18	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.18	U			NS	NS	3,480	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.18	U			NS	NS	1,740	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.18	U			NS	NS	17,400	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.18	U			1.53	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			1.12	N	17.4	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.18	U			1.53	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.18	U			NS	NS	1,740	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.18	U			15.3	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.18	U			NS	NS	250,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.18	U			NS	NS	6,300	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.18	U			NS	NS	190	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.18	U			3.11	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.18	U			99.3	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.18	U			380	N	1,230	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.18	U			2,900	N	13,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.18	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.18	U			153	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.18	U			NS	NS	6,160	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.18	U			NS	NS	630	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			0.153	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.18	U			NS	NS	78	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.18	U			NS	NS	49,300	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.18	U			NS	NS	61,600	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.18	U			NS	NS	2,320	N	NMED		
Fluorene	86-73-7	mg/kg	0.18	U			NS	NS	2,320	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.18	U			3.33	N	49.3	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.18	U			68.3	N	61.6	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.18	U			133	N	43.1	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.18	U			1.53	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.18	U			5,610	N	12,300	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.18	U			0.78	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	UJ			0.0234	N	0.493	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.18	U			1,090	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.18	U			22.6	N	162	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.18	U			60.4	N	131	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.18	U			9.85	N	234	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.18	U			NS	NS	1,740	N	NMED		
Phenol	108-95-2	mg/kg	0.18	U			NS	NS	18,500	N	NMED		
Pyrene	129-00-0	mg/kg	0.18	U			NS	NS	1,740	N	NMED		

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FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			1,300	N	570	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.021	U			69.6	N	3.98	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.021	U			1.81	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.01	U			1.86	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.01	U			2.43	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.01	U			2.43	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.01	U			2.43	N	1.14	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.01	U			2.43	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg	0.00000000022	J	0.00000072	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000072	J	0.000024	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000081	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.000000043	J	0.0000043	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000011	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.00000022	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.0000002	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000052	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.00000027	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.000000042	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000029	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000045	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.00000022	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000029	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000031	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.00000004	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.00000005				0.000049	N	0.0000506	N	NMED	1.03E-08	9.96E-04

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HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID S22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	14,000				NS	NS	78,000	N	NMED		1.79E-01
Antimony	7440-36-0	mg/kg	0.37				NS	NS	31.3	N	NMED		1.18E-02
Arsenic	7440-38-2	mg/kg	1.4				7.07	N	13	N	NMED	1.98E-06	1.08E-01
Barium	7440-39-3	mg/kg	250				NS	NS	15,600	N	NMED		1.60E-02
Beryllium	7440-41-7	mg/kg	0.69	J			64,400	N	156	N	NMED	1.07E-10	4.42E-03
Cadmium	7440-43-9	mg/kg	1.1				85,900	N	70.5	N	NMED	1.28E-10	1.56E-02
Calcium	7440-70-2	mg/kg	5,700				NS	NS	13,000,000	N	NMED		4.38E-04
Chromium (Total) (3)	7440-47-3	mg/kg	16				96.6	N	45,200	N	NMED	1.66E-06	3.54E-04
Cobalt	7440-48-4	mg/kg	4.1				17,200	N	23.4	N	NMED	2.38E-09	1.75E-01
Copper	7440-50-8	mg/kg	280				NS	NS	3,130	N	NMED		8.95E-02
Iron	7439-89-6	mg/kg	7,100				NS	NS	54,800	N	NMED		1.30E-01
Lead	7439-92-1	mg/kg	14				NS	NS	200	N	RSL		
Magnesium	7439-95-4	mg/kg	5,600				NS	NS	15,600,000	N	NMED		3.59E-04
Manganese	7439-96-5	mg/kg	370				NS	NS	10,500	N	NMED		3.52E-02
Mercury (Elemental)	7439-97-6	mg/kg	0.022	J			NS	NS	23.8	N	NMED		9.24E-04
Nickel	7440-02-0	mg/kg	12				595,000	N	1,560	N	NMED	2.02E-10	7.69E-03
Potassium	7440-09-7	mg/kg	1,100				NS	NS	15,600,000	N	NMED		7.05E-05
Selenium	7782-49-2	mg/kg	0.96				NS	NS	391	N	NMED		2.46E-03
Silver	7440-22-4	mg/kg	0.19				NS	NS	391	N	NMED		4.86E-04
Sodium	7440-23-5	mg/kg	51				NS	NS	7,820,000	N	NMED		6.52E-06
Thallium	7440-28-0	mg/kg	0.067	J			NS	NS	0.782	N	NMED		8.57E-02
Vanadium	7440-62-2	mg/kg	9.3				NS	NS	394	N	NMED		2.36E-02
Zinc	7440-66-6	mg/kg	34				NS	NS	23,500	N	NMED		1.45E-03

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MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.32	U			NS	NS	11.2	N	NMED		
Nitrate	14797-55-8	mg/kg	21				NS	NS	125,000	N	NMED		1.68E-04
Perchlorate	14797-73-0	mg/kg	0.0021	U			NS	NS	54.8	N	NMED		
										Cumulative Risk/Hazard		**4E-06**	**0.9**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect

TABLE D1-S22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID S22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0024	U			137	N	39,400	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0024	U			NS	NS	72,500	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0024	U			39	N	26,000	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0024	U			92	N	12	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0024	U			383	N	260,000	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0024	U			NS	NS	2,260	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0024	U			146	N	695	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0024	U			NS	NS	930	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.006	U			1	N	34	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0024	U			1,250	N	423	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0024	U			NS	NS	1,800	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.006	U			1	N	41	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0024	U			3	N	738	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0024	U			NS	NS	13,000	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0024	U			41	N	286	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0024	U			87	N	137	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0024	U			NS	NS	1,500	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0024	U			6,730	N	90,800	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0024	U			NS	NS	23,000	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0024	U			6,730	N	90,800	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0024	U			87	N	137	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0036	U			NS	NS	411,000	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0024	U			NS	NS	26,000	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0024	U			NS	NS	1,300	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0024	U			NS	NS	23,000	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0024	U			NS	NS	81,600	N	RSL		
Acetone	67-64-1	mg/kg	0.67	J			NS	NS	960,000	N	NMED		6.98E-07
Benzene	71-43-2	mg/kg	0.0024	U			87	N	729	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0024	U			NS	NS	1,800	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0024	U			NS	NS	630	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0024	U			30	N	26,000	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0024	U			1,760	N	18,300	N	NMED		
Bromomethane	74-83-9	mg/kg	0.026				NS	NS	95	N	NMED		2.75E-04
Carbon Disulfide	75-15-0	mg/kg	0.0024	U			NS	NS	8,540	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0024	U			53	N	1,020	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0024	U			NS	NS	2,160	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0024	U			NS	NS	89,500	N	NMED		
Chloroform	67-66-3	mg/kg	0.0024	U			29	N	2,000	N	NMED		
Chloromethane	74-87-3	mg/kg	0.006	U			201	N	1,260	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0024	U			NS	NS	2,600	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0024	U			146	N	695	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0024	U			67	N	18,300	N	NMED		

TABLE D1-S22-2
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FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0024	U			NS	NS	288	N	NMED		
Dichlorodifluoromethane	75-71-8	mg/kg	0.0024	U			NS	NS	865	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0024	U			29,000	N	368	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0024	U			52	N	916	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0024	U			NS	NS	14,200	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.006	U			NS	NS	3,730	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0024	U			4,820	N	178,000	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.012	U			14,400	N	5,130	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0024	U			NS	NS	58,000	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0024	U			NS	NS	24,000	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0024	U			108	N	843	N	NMED		
o-Xylene	95-47-6	mg/kg	0.003	U			NS	NS	3,940	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0024	U			NS	NS	14,200	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0024	U			NS	NS	120,000	N	RSL		
Styrene	100-42-5	mg/kg	0.0024	U			NS	NS	51,300	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0024	U			NS	NS	120,000	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0024	U			1,650	N	629	N	NMED		
Toluene	108-88-3	mg/kg	0.0024	U			NS	NS	61,300	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0024	U			NS	NS	1,100	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0024	U			146	N	695	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0024	U			112	N	37	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0024	U			NS	NS	6,030	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0024	U			28	N	46	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.18	U			1,250	N	423	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.18	U			NS	NS	13,000	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.18	U			6,730	N	90,800	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.18	U			6,730	N	90,800	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.18	U			NS	NS	91,600	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.18	U			2,330	N	916	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.18	U			NS	NS	2,750	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.18	U			NS	NS	18,300	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.18	U			NS	NS	1,830	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.18	U			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.18	U			17	N	276	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.18	U			NS	NS	104,000	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.18	U			NS	NS	6,490	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.18	U			NS	NS	3,370	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.18	U			NS	NS	41,000	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.18	U			NS	NS	8,000	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.18	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.18	U			NS	NS	410	N	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.18	U			1,100	N	3,300	N	RSL[S]		

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	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.18	U			NS	NS	73	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.18	U			NS	NS	NS	NS	NS		
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.18	U			NS	NS	82,000	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.18	U			110	N	410	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.18	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.18	U			1,100	N	3,300	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.18	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.18	U			NS	NS	50,500	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.18	U			NS	NS	25,300	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.18	U			NS	NS	253,000	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.18	U			32	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			24	N	251	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.18	U			32	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.18	U			NS	NS	25,300	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.18	U			323	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.18	U			NS	NS	3,300,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.18	U			NS	NS	82,000	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.18	U			NS	NS	2,500	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.18	U			16	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.18	U			519	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.18	U			1,830	N	18,300	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.18	U			12,000	N	160,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.18	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.18	U			3,230	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.18	U			NS	NS	91,600	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.18	U			NS	NS	8,200	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			3	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.18	U			NS	NS	1,200	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.18	U			NS	NS	733,000	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.18	U			NS	NS	916,000	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.18	U			NS	NS	33,700	N	NMED		
Fluorene	86-73-7	mg/kg	0.18	U			NS	NS	33,700	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.18	U			16	N	733	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.18	U			52	N	916	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.18	U			641	N	641	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.18	U			32	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.18	U			27,000	N	183,000	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.18	U			3	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	UJ			1	N	7	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.18	U			5,240	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.18	U			108	N	843	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.18	U			293	N	1,540	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.18	U			45	N	3,180	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.18	U			NS	NS	27,500	N	NMED		
Phenol	108-95-2	mg/kg	0.18	U			NS	NS	275,000	N	NMED		
Pyrene	129-00-0	mg/kg	0.18	U			NS	NS	25,300	N	NMED		

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	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			5,300	N	7,400	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.021	U			304	N	57	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.021	U			9	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.01	U			9	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.01	U			11	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.01	U			11	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.01	U			11	N	16	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.01	U			11	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg	0.00000000022	J	0.00000072	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000072	J	0.000024	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000081	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.000000043	J	0.0000043	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000011	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.00000022	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.0000002	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000052	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.00000027	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.000000042	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000029	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000045	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.00000022	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000029	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000031	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.00000004	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.00000005				0.000238	N	0.000808	N	NMED	2.12E-09	6.24E-05

TABLE D1-S22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID S22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	14,000				NS	NS	1,290,000	N	NMED		1.09E-02
Antimony	7440-36-0	mg/kg	0.37				NS	NS	519	N	NMED		7.13E-04
Arsenic	7440-38-2	mg/kg	1.4				36	N	208	N	NMED	3.90E-07	6.73E-03
Barium	7440-39-3	mg/kg	250				NS	NS	255,000	N	NMED		9.80E-04
Beryllium	7440-41-7	mg/kg	0.69	J			313,000	N	2,580	N	NMED	2.20E-11	2.67E-04
Cadmium	7440-43-9	mg/kg	1.1				417,000	N	1,110	N	NMED	2.64E-11	9.91E-04
Calcium	7440-70-2	mg/kg	5,700				NS	NS	32,400,000	N	NMED		1.76E-04
Chromium (Total) (3)	7440-47-3	mg/kg	16				505	N	314,000	N	NMED	3.17E-07	5.10E-05
Cobalt	7440-48-4	mg/kg	4.1				83,400	N	388	N	NMED	4.92E-10	1.06E-02
Copper	7440-50-8	mg/kg	280				NS	NS	51,900	N	NMED		5.39E-03
Iron	7439-89-6	mg/kg	7,100				NS	NS	908,000	N	NMED		7.82E-03
Lead	7439-92-1	mg/kg	14				NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	5,600				NS	NS	5,680,000	N	NMED		9.86E-04
Manganese	7439-96-5	mg/kg	370				NS	NS	160,000	N	NMED		2.31E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.022	J			NS	NS	112	N	NMED		1.96E-04
Nickel	7440-02-0	mg/kg	12				2,890,000	N	25,700	N	NMED	4.15E-11	4.67E-04
Potassium	7440-09-7	mg/kg	1,100				NS	NS	76,200,000	N	NMED		1.44E-05
Selenium	7782-49-2	mg/kg	0.96				NS	NS	6,490	N	NMED		1.48E-04
Silver	7440-22-4	mg/kg	0.19				NS	NS	6,490	N	NMED		2.93E-05
Sodium	7440-23-5	mg/kg	51				NS	NS	37,300,000	N	NMED		1.37E-06
Thallium	7440-28-0	mg/kg	0.067	J			NS	NS	13	N	NMED		5.15E-03
Vanadium	7440-62-2	mg/kg	9.3				NS	NS	6,530	N	NMED		1.42E-03
Zinc	7440-66-6	mg/kg	34				NS	NS	38,900	N	NMED		8.74E-04

TABLE D1-S22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID S22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.32	U			NS	NS	63	N	NMED		
Nitrate	14797-55-8	mg/kg	21				NS	NS	2,080,000	N	NMED		1.01E-05
Perchlorate	14797-73-0	mg/kg	0.0021	U			NS	NS	908	N	NMED		
										Cumulative Risk/Hazard		**7E-07**	**0.06**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service

IEUBK = Integrated Exposure Uptake Biokentic Model

J = Estimated

mg/kg = milligrams per kilogram

NS = No Standard

U = Nondetect

UJ = Estimated Nondetect

TABLE D1-S22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID S22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0024	U			659	N	10,600	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0024	U			NS	NS	13,600	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0024	U			197	N	7,080	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0024	U			4,300	N	2	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0024	U			1,820	N	70,800	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0024	U			NS	NS	424	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0024	U			781	N	130	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0024	U			NS	NS	283	N	NMED[C]			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.006	U			8	N	6	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0024	U			8,540	N	79	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0024	U			NS	NS	492	N	NMED[C]			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.006	U			6	N	8	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0024	U			16	N	140	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0024	U			NS	NS	2,500	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0024	U			195	N	54	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0024	U			415	N	25	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0024	U			NS	NS	422	N	NMED[C]			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0024	U			45,900	N	24,800	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0024	U			NS	NS	7,080	N	NMED[C]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0024	U			45,900	N	24,800	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0024	U			415	N	25	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.0036	U			NS	NS	90,700	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0024	U			NS	NS	7,080	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.0024	U			NS	NS	599	N	NMED[C]			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0024	U			NS	NS	7,080	N	NMED[C]			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0024	U			NS	NS	20,400	N	NMED[C]			
Acetone	67-64-1	mg/kg	0.67	J			NS	NS	242,000	N	NMED		2.77E-06	
Benzene	71-43-2	mg/kg	0.0024	U			423	N	142	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.0024	U			NS	NS	538	N	NMED[C]			
Bromochloromethane	74-97-5	mg/kg	0.0024	U			NS	NS	296	N	NMED[C]			
Bromodichloromethane	75-27-4	mg/kg	0.0024	U			143	N	7,080	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0024	U			23,700	N	5,380	N	NMED			
Bromomethane	74-83-9	mg/kg	0.026				NS	NS	18	N	NMED		1.45E-03	
Carbon Disulfide	75-15-0	mg/kg	0.0024	U			NS	NS	1,620	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0024	U			252	N	202	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0024	U			NS	NS	412	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0024	U			NS	NS	16,600	N	NMED			
Chloroform	67-66-3	mg/kg	0.0024	U			134	N	391	N	NMED			
Chloromethane	74-87-3	mg/kg	0.006	U			956	N	235	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0024	U			NS	NS	708	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0024	U			781	N	130	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0024	U			340	N	5,380	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0024	U			NS	NS	54	N	NMED			

TABLE D1-S22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID S22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Dichlorodifluoromethane	75-71-8	mg/kg	0.0024	U			NS	NS	161	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.0024	U			1,770	N	5,800	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0024	U			2,400	N	269	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0024	U			NS	NS	2,740	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.006	U			NS	NS	696	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0024	U			24,200	N	33,100	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.012	U			89,600	N	1,210	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0024	U			NS	NS	17,700	N	NMED[C]			
n-Propylbenzene	103-65-1	mg/kg	0.0024	U			NS	NS	6,730	N	NMED[C]			
Naphthalene	91-20-3	mg/kg	0.0024	U			633	N	159	N	NMED			
o-Xylene	95-47-6	mg/kg	0.003	U			NS	NS	736	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.0024	U			NS	NS	2,740	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.0024	U			NS	NS	35,400	N	NMED[C]			
Styrene	100-42-5	mg/kg	0.0024	U			NS	NS	10,200	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0024	U			NS	NS	35,400	N	NMED[C]			
Tetrachloroethene	127-18-4	mg/kg	0.0024	U			7,910	N	120	N	NMED			
Toluene	108-88-3	mg/kg	0.0024	U			NS	NS	14,000	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0024	U			NS	NS	206	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0024	U			781	N	130	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0024	U			5,370	N	7	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0024	U			NS	NS	1,130	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0024	U			161	N	162	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.18	U			8,540	N	79	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.18	U			NS	NS	2,500	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.18	U			45,900	N	24,800	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.18	U			45,900	N	24,800	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.18	U			NS	NS	26,900	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.18	U			17,000	N	269	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.18	U			NS	NS	807	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.18	U			NS	NS	5,380	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.18	U			NS	NS	538	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.18	U			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.18	U			165	N	81	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.18	U			NS	NS	28,300	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.18	U			NS	NS	1,770	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.18	U			NS	NS	1,000	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.18	U			NS	NS	13,500	N	NMED[C]			
2-Nitroaniline	88-74-4	mg/kg	0.18	U			NS	NS	2,690	N	NMED[C]			
2-Nitrophenol	88-75-5	mg/kg	0.18	U			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.18	U			410	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.18	U			135	N	1,080	N	NMED[SC]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.18	U			NS	NS	22	N	NMED			

TABLE D1-S22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID S22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.18	U			NS	NS	NS	NS	NS			
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.18	U			NS	NS	26,900	N	NMED[C]			
4-Chloroaniline	106-47-8	mg/kg	0.18	U			14	N	135	N	NMED[C]			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.18	U			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.18	U			135	N	1,080	N	NMED[C]			
4-Nitrophenol	100-02-7	mg/kg	0.18	U			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.18	U			NS	NS	15,100	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.18	U			NS	NS	7,530	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.18	U			NS	NS	75,300	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.18	U			240	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			173	N	15	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.18	U			240	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.18	U			NS	NS	7,530	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.18	U			2,310	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.18	U			NS	NS	1,080,000	N	NMED[C]			
Benzyl Alcohol	100-51-6	mg/kg	0.18	U			NS	NS	26,900	N	NMED[C]			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.18	U			NS	NS	807	N	NMED[C]			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.18	U			2	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.18	U			3,540	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.18	U			13,400	N	5,380	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.18	U			1,420	N	53,800	N	NMED[C]			
Carbazole	86-74-8	mg/kg	0.18	U			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.18	U			23,100	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.18	U			NS	NS	26,900	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.18	U			NS	NS	2,690	N	NMED[C]			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			24	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.18	U			NS	NS	269	N	NMED[C]			
Diethylphthalate	84-66-2	mg/kg	0.18	U			NS	NS	215,000	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.18	U			NS	NS	269,000	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.18	U			NS	NS	10,000	N	NMED			
Fluorene	86-73-7	mg/kg	0.18	U			NS	NS	10,000	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.18	U			117	N	215	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.18	U			2,400	N	269	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.18	U			4,670	N	188	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.18	U			240	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.18	U			198,000	N	53,700	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.18	U			0.38	N	NA	N	NMED[C]			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	UJ			4	N	2	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.18	U			37,900	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.18	U			633	N	159	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.18	U			1,350	N	353	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.18	U			346	N	989	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.18	U			NS	NS	8,070	N	NMED			
Phenol	108-95-2	mg/kg	0.18	U			NS	NS	77,400	N	NMED			
Pyrene	129-00-0	mg/kg	0.18	U			NS	NS	7,530	N	NMED			

TABLE D1-S22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID S22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	8,070	N	NMED[C]			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	27	N	NMED[C]			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			626	N	2,420	N	NMED[C]			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.021	U			2,440	N	17	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.021	U			55	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.01	U			58	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.01	U			85	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.01	U			85	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.01	U			85	N	5	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.01	U			85	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (3)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg	0.00000000022	J	0.00000072	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000072	J	0.000024	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000081	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.000000043	J	0.0000043	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000011	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.00000022	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.0000002	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000052	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.00000027	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.000000042	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000029	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000045	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.00000022	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000029	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000031	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.00000004	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.00000005				0.00172	N	0.000226	N	NMED	2.93E-10	2.23E-04	

TABLE D1-S22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID S22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	14,000				NS	NS	41,400	N	NMED		3.38E-01	Nervous
Antimony	7440-36-0	mg/kg	0.37				NS	NS	142	N	NMED		2.61E-03	
Arsenic	7440-38-2	mg/kg	1.4				216	N	41	N	NMED		3.40E-02	
Barium	7440-39-3	mg/kg	250				NS	NS	4,390	N	NMED		5.69E-02	
Beryllium	7440-41-7	mg/kg	0.69	J			2,710	N	148	N	NMED		4.66E-03	
Cadmium	7440-43-9	mg/kg	1.1				3,610	N	72	N	NMED		1.53E-02	
Calcium	7440-70-2	mg/kg	5,700				NS	NS	8,850,000	N	NMED		6.44E-04	
Chromium (Total) (4)	7440-47-3	mg/kg	16				468	N	134	N	NMED		1.19E-01	GI, Blood
Cobalt	7440-48-4	mg/kg	4.1				722	N	37	N	NMED		1.12E-01	Endocrine
Copper	7440-50-8	mg/kg	280				NS	NS	14,200	N	NMED		1.97E-02	
Iron	7439-89-6	mg/kg	7,100				NS	NS	248,000	N	NMED		2.86E-02	
Lead	7439-92-1	mg/kg	14				NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	5,600				NS	NS	1,550,000	N	NMED		3.61E-03	
Manganese	7439-96-5	mg/kg	370				NS	NS	464	N	NMED		7.97E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.022	J			NS	NS	21	N	NMED		1.06E-03	
Nickel	7440-02-0	mg/kg	12				20,500	N	753	N	NMED		1.59E-02	
Potassium	7440-09-7	mg/kg	1,100				NS	NS	20,800,000	N	NMED		5.29E-05	
Selenium	7782-49-2	mg/kg	0.96				NS	NS	1,750	N	NMED		5.49E-04	
Silver	7440-22-4	mg/kg	0.19				NS	NS	1,770	N	NMED		1.07E-04	
Sodium	7440-23-5	mg/kg	51				NS	NS	10,200,000	N	NMED		5.00E-06	
Thallium	7440-28-0	mg/kg	0.067	J			NS	NS	4	N	NMED		1.89E-02	
Vanadium	7440-62-2	mg/kg	9.3				NS	NS	614	N	NMED		1.51E-02	
Zinc	7440-66-6	mg/kg	34				NS	NS	106,000	N	NMED		3.21E-04	

TABLE D1-S22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID S22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.32	U			NS	NS	12	N	NMED			
Nitrate	14797-55-8	mg/kg	21				NS	NS	566,000	N	NMED		3.71E-05	
Perchlorate	14797-73-0	mg/kg	0.0021	U			NS	NS	248	N	NMED			
										Cumulative Risk/Hazard		**3E-10**	**1.6**	
										Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	1.1
Endocrine	0.11
GI	0.12
Blood	0.12
All Others	0.22

Notes:

[s] = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update).

2) NMED[C] = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

3) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

4) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect

TABLE D1-T22-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID T22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0016	U			28.1	N	2,350	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0016	U			NS	NS	14,400	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0016	U			7.98	N	1,560	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0016	U			18.8	N	2.61	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0016	U			78.6	N	15,600	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0016	U			NS	NS	440	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0016	U			29.3	N	141	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0016	U			NS	NS	63	N	RSL			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.004	U			0.051	N	7.09	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0016	U			240	N	82.9	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0016	U			NS	NS	300	N	RSL			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.004	U			0.0858	N	5.88	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0016	U			0.672	N	135	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0016	U			NS	NS	2,150	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0016	U			8.32	N	55.6	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0016	U			17.8	N	29	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0016	U			NS	NS	270	N	RSL			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0016	U			1,290	N	5,480	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0016	U			NS	NS	1,600	N	RSL			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0016	U			1,290	N	5,480	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0016	U			17.8	N	29	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.0024	U			NS	NS	37,400	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0016	U			NS	NS	1,560	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.0016	U			NS	NS	200	N	RSL			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0016	U			NS	NS	1,600	N	RSL			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0016	U			NS	NS	5,810	N	RSL			
Acetone	67-64-1	mg/kg	0.28				NS	NS	66,300	N	NMED		4.22E-06	
Benzene	71-43-2	mg/kg	0.0016	U			17.8	N	114	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.0016	U			NS	NS	290	N	RSL			
Bromochloromethane	74-97-5	mg/kg	0.0016	U			NS	NS	150	N	RSL			
Bromodichloromethane	75-27-4	mg/kg	0.0016	U			6.19	N	1,560	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0016	U			674	N	1,230	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0016	U			NS	NS	17.7	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.0016	U			NS	NS	1,550	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0016	U			10.7	N	144	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0016	U			NS	NS	378	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0016	U			NS	NS	19,000	N	NMED			
Chloroform	67-66-3	mg/kg	0.0016	U			5.9	N	306	N	NMED			
Chloromethane	74-87-3	mg/kg	0.004	U			41.1	N	268	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0016	U			NS	NS	156	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0016	U			29.3	N	141	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0016	U			13.9	N	1,230	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0016	U			NS	NS	57.9	N	NMED			

TABLE D1-T22-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID T22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Dichlorodifluoromethane	75-71-8	mg/kg	0.0016	U			NS	NS	182	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.0016	U			75.1	N	3,930	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0016	U			68.3	N	61.6	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0016	U			NS	NS	2,360	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.004	U			NS	NS	764	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0016	U			975	N	37,800	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.0081	U			766	N	409	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0016	U			NS	NS	3,900	N	RSL			
n-Propylbenzene	103-65-1	mg/kg	0.0016	U			NS	NS	3,800	N	RSL			
Naphthalene	91-20-3	mg/kg	0.0016	U			22.6	N	162	N	NMED			
o-Xylene	95-47-6	mg/kg	0.002	U			NS	NS	805	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.0016	U			NS	NS	2,360	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.0016	U			NS	NS	7,800	N	RSL			
Styrene	100-42-5	mg/kg	0.0016	U			NS	NS	7,260	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0016	U			NS	NS	7,800	N	RSL			
Tetrachloroethene	127-18-4	mg/kg	0.0016	U			337	N	111	N	NMED			
Toluene	108-88-3	mg/kg	0.0016	U			NS	NS	5,230	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0016	U			NS	NS	210	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0016	U			29.3	N	141	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0016	U			15.5	N	6.77	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0016	U			NS	NS	1,230	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0016	U			0.742	N	113	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	U			240	N	82.9	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	U			NS	NS	2,150	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	U			1,290	N	5,480	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	U			1,290	N	5,480	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	U			NS	NS	6,160	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	U			484	N	61.6	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	U			NS	NS	185	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	U			NS	NS	1,230	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	U			NS	NS	123	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	U			17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	U			3.56	N	18.5	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	U			NS	NS	6,260	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.17	U			NS	NS	391	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.17	U			NS	NS	232	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	U			NS	NS	3,200	N	RSL			
2-Nitroaniline	88-74-4	mg/kg	0.17	U			NS	NS	630	N	RSL			
2-Nitrophenol	88-75-5	mg/kg	0.17	U			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	U			11.8	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.17	U			270	N	250	N	RSL[S]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	U			NS	NS	4.93	N	NMED			
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	U			NS	NS	NS	NS	NS			

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FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	U			NS	NS	6,300	N	RSL			
4-Chloroaniline	106-47-8	mg/kg	0.17	U			27	N	32	N	RSL			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	U			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.17	U			270	N	250	N	RSL			
4-Nitrophenol	100-02-7	mg/kg	0.17	U			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.17	U			NS	NS	3,480	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.17	U			NS	NS	1,740	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.17	U			NS	NS	17,400	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.17	U			1.53	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			1.12	N	17.4	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	U			1.53	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	U			NS	NS	1,740	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	U			15.3	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.17	U			NS	NS	250,000	N	RSL			
Benzyl Alcohol	100-51-6	mg/kg	0.17	U			NS	NS	6,300	N	RSL			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	U			NS	NS	190	N	RSL			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	U			3.11	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	U			99.3	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	U			380	N	1,230	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.17	U			2,900	N	13,000	N	RSL			
Carbazole	86-74-8	mg/kg	0.17	U			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.17	U			153	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.17	U			NS	NS	6,160	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.17	U			NS	NS	630	N	RSL			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			0.153	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.17	U			NS	NS	78	N	RSL			
Diethylphthalate	84-66-2	mg/kg	0.17	U			NS	NS	49,300	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.17	U			NS	NS	61,600	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.17	U			NS	NS	2,320	N	NMED			
Fluorene	86-73-7	mg/kg	0.17	U			NS	NS	2,320	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.17	U			3.33	N	49.3	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	U			68.3	N	61.6	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.17	U			133	N	43.1	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	U			1.53	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.17	U			5,610	N	12,300	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	U			0.78	N	NS	NS	RSL			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	UJ			0.0234	N	0.493	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	U			1,090	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.17	U			22.6	N	162	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.17	U			60.4	N	131	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.17	U			9.85	N	234	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.17	U			NS	NS	1,740	N	NMED			
Phenol	108-95-2	mg/kg	0.17	U			NS	NS	18,500	N	NMED			
Pyrene	129-00-0	mg/kg	0.17	U			NS	NS	1,740	N	NMED			

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FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	2,200	N	RSL			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	6.3	N	RSL			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			211	N	36	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			3.56	N	18.5	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	7.7	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			31.6	N	70.4	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	6.16	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	7.64	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			333	N	247	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			83.1	N	301	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	156	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			60.4	N	131	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			313	N	6.16	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	3,850	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			1,300	N	570	N	RSL			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.021	U			69.6	N	3.98	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.021	U			1.81	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.01	U			1.86	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.01	U			2.43	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.01	U			2.43	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.01	U			2.43	N	1.14	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.01	U			2.43	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (2)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000027	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000017	J	0.0000056	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.000000033	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.000000014	J	0.0000014	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.000000042	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000063	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000009	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.00000015	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000054	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.000000077	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000011	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000023	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000053	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.00000022	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000024	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000016	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000051	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.000000016				0.000049	N	0.0000506	N	NMED	3.20E-09	3.10E-04	

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HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID T22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	16,000				NS	NS	78,000	N	NMED		2.05E-01	Nervous
Antimony	7440-36-0	mg/kg	0.62				NS	NS	31.3	N	NMED		1.98E-02	
Arsenic	7440-38-2	mg/kg	1.8				7.07	N	13	N	NMED		1.38E-01	Heart/Endocrine
Barium	7440-39-3	mg/kg	290				NS	NS	15,600	N	NMED		1.86E-02	
Beryllium	7440-41-7	mg/kg	0.73	J			64,400	N	156	N	NMED		4.68E-03	
Cadmium	7440-43-9	mg/kg	1.3				85,900	N	70.5	N	NMED		1.84E-02	
Calcium	7440-70-2	mg/kg	5,700				NS	NS	13,000,000	N	NMED		4.38E-04	
Chromium (Total) (3)	7440-47-3	mg/kg	19				96.6	N	45,200	N	NMED		4.20E-04	
Cobalt	7440-48-4	mg/kg	4.8				17,200	N	23.4	N	NMED		2.05E-01	Endocrine
Copper	7440-50-8	mg/kg	270				NS	NS	3,130	N	NMED		8.63E-02	
Iron	7439-89-6	mg/kg	8,900				NS	NS	54,800	N	NMED		1.62E-01	GI
Lead	7439-92-1	mg/kg	24	J			NS	NS	200	N	RSL			
Magnesium	7439-95-4	mg/kg	5,900				NS	NS	15,600,000	N	NMED		3.78E-04	
Manganese	7439-96-5	mg/kg	440				NS	NS	10,500	N	NMED		4.19E-02	
Mercury (Elemental)	7439-97-6	mg/kg	0.027	J			NS	NS	23.8	N	NMED		1.13E-03	
Nickel	7440-02-0	mg/kg	13				595,000	N	1,560	N	NMED		8.33E-03	
Potassium	7440-09-7	mg/kg	1,500				NS	NS	15,600,000	N	NMED		9.62E-05	
Selenium	7782-49-2	mg/kg	1				NS	NS	391	N	NMED		2.56E-03	
Silver	7440-22-4	mg/kg	0.23				NS	NS	391	N	NMED		5.88E-04	
Sodium	7440-23-5	mg/kg	54				NS	NS	7,820,000	N	NMED		6.91E-06	
Thallium	7440-28-0	mg/kg	0.076	J			NS	NS	0.782	N	NMED		9.72E-02	
Vanadium	7440-62-2	mg/kg	13				NS	NS	394	N	NMED		3.30E-02	
Zinc	7440-66-6	mg/kg	43				NS	NS	23,500	N	NMED		1.83E-03	

TABLE D1-T22-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID T22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.33	U			NS	NS	11.2	N	NMED			
Nitrate	14797-55-8	mg/kg	11				NS	NS	125,000	N	NMED		8.80E-05	
Perchlorate	14797-73-0	mg/kg	0.0021	U			NS	NS	54.8	N	NMED			
										Cumulative Risk/Hazard		**3E-09**	**1.0**	
										Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	0.21
Endocrine	0.34
GI	0.16
Heart	0.14
All Others	0.64

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect

TABLE D1-T22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID T22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0016	U			137	N	39,400	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0016	U			NS	NS	72,500	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0016	U			39	N	26,000	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0016	U			92	N	12	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0016	U			383	N	260,000	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0016	U			NS	NS	2,260	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0016	U			146	N	695	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0016	U			NS	NS	930	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.004	U			1	N	34	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0016	U			1,250	N	423	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0016	U			NS	NS	1,800	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.004	U			1	N	41	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0016	U			3	N	738	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0016	U			NS	NS	13,000	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0016	U			41	N	286	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0016	U			87	N	137	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0016	U			NS	NS	1,500	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0016	U			6,730	N	90,800	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0016	U			NS	NS	23,000	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0016	U			6,730	N	90,800	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0016	U			87	N	137	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0024	U			NS	NS	411,000	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0016	U			NS	NS	26,000	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0016	U			NS	NS	1,300	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0016	U			NS	NS	23,000	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0016	U			NS	NS	81,600	N	RSL		
Acetone	67-64-1	mg/kg	0.28				NS	NS	960,000	N	NMED		2.92E-07
Benzene	71-43-2	mg/kg	0.0016	U			87	N	729	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0016	U			NS	NS	1,800	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0016	U			NS	NS	630	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0016	U			30	N	26,000	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0016	U			1,760	N	18,300	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0016	U			NS	NS	95	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0016	U			NS	NS	8,540	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0016	U			53	N	1,020	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0016	U			NS	NS	2,160	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0016	U			NS	NS	89,500	N	NMED		
Chloroform	67-66-3	mg/kg	0.0016	U			29	N	2,000	N	NMED		
Chloromethane	74-87-3	mg/kg	0.004	U			201	N	1,260	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0016	U			NS	NS	2,600	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0016	U			146	N	695	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0016	U			67	N	18,300	N	NMED		

TABLE D1-T22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID T22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0016	U			NS	NS	288	N	NMED		
Dichlorodifluoromethane	75-71-8	mg/kg	0.0016	U			NS	NS	865	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0016	U			29,000	N	368	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0016	U			52	N	916	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0016	U			NS	NS	14,200	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.004	U			NS	NS	3,730	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0016	U			4,820	N	178,000	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.0081	U			14,400	N	5,130	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0016	U			NS	NS	58,000	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0016	U			NS	NS	24,000	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0016	U			108	N	843	N	NMED		
o-Xylene	95-47-6	mg/kg	0.002	U			NS	NS	3,940	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0016	U			NS	NS	14,200	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0016	U			NS	NS	120,000	N	RSL		
Styrene	100-42-5	mg/kg	0.0016	U			NS	NS	51,300	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0016	U			NS	NS	120,000	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0016	U			1,650	N	629	N	NMED		
Toluene	108-88-3	mg/kg	0.0016	U			NS	NS	61,300	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0016	U			NS	NS	1,100	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0016	U			146	N	695	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0016	U			112	N	37	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0016	U			NS	NS	6,030	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0016	U			28	N	46	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	U			1,250	N	423	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	U			NS	NS	13,000	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	U			6,730	N	90,800	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	U			6,730	N	90,800	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	U			NS	NS	91,600	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	U			2,330	N	916	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	U			NS	NS	2,750	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	U			NS	NS	18,300	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	U			NS	NS	1,830	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	U			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	U			17	N	276	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	U			NS	NS	104,000	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.17	U			NS	NS	6,490	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.17	U			NS	NS	3,370	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	U			NS	NS	41,000	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.17	U			NS	NS	8,000	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.17	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	U			NS	NS	410	N	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.17	U			1,100	N	3,300	N	RSL[S]		

TABLE D1-T22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID T22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	U			NS	NS	73	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	U			NS	NS	NS	NS	NS		
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	U			NS	NS	82,000	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.17	U			110	N	410	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.17	U			1,100	N	3,300	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.17	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.17	U			NS	NS	50,500	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.17	U			NS	NS	25,300	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.17	U			NS	NS	253,000	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.17	U			32	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			24	N	251	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	U			32	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	U			NS	NS	25,300	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	U			323	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.17	U			NS	NS	3,300,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.17	U			NS	NS	82,000	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	U			NS	NS	2,500	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	U			16	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	U			519	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	U			1,830	N	18,300	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.17	U			12,000	N	160,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.17	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.17	U			3,230	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.17	U			NS	NS	91,600	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.17	U			NS	NS	8,200	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			3	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.17	U			NS	NS	1,200	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.17	U			NS	NS	733,000	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.17	U			NS	NS	916,000	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.17	U			NS	NS	33,700	N	NMED		
Fluorene	86-73-7	mg/kg	0.17	U			NS	NS	33,700	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.17	U			16	N	733	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	U			52	N	916	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.17	U			641	N	641	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	U			32	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.17	U			27,000	N	183,000	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	U			3	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	UJ			1	N	7	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	U			5,240	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.17	U			108	N	843	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.17	U			293	N	1,540	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.17	U			45	N	3,180	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.17	U			NS	NS	27,500	N	NMED		
Phenol	108-95-2	mg/kg	0.17	U			NS	NS	275,000	N	NMED		
Pyrene	129-00-0	mg/kg	0.17	U			NS	NS	25,300	N	NMED		

TABLE D1-T22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID T22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			5,300	N	7,400	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.021	U			304	N	57	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.021	U			9	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.01	U			9	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.01	U			11	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.01	U			11	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.01	U			11	N	16	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.01	U			11	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000027	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000017	J	0.0000056	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.000000033	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.000000014	J	0.0000014	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.000000042	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000063	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000009	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.00000015	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000054	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.000000077	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000011	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000023	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000053	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.00000022	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000024	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000016	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000051	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.000000016				0.000238	N	0.000808	N	NMED	6.59E-10	1.94E-05

TABLE D1-T22-2
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	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	16,000				NS	NS	1,290,000	N	NMED		1.24E-02
Antimony	7440-36-0	mg/kg	0.62				NS	NS	519	N	NMED		1.19E-03
Arsenic	7440-38-2	mg/kg	1.8				36	N	208	N	NMED	5.01E-07	8.65E-03
Barium	7440-39-3	mg/kg	290				NS	NS	255,000	N	NMED		1.14E-03
Beryllium	7440-41-7	mg/kg	0.73	J			313,000	N	2,580	N	NMED	2.33E-11	2.83E-04
Cadmium	7440-43-9	mg/kg	1.3				417,000	N	1,110	N	NMED	3.12E-11	1.17E-03
Calcium	7440-70-2	mg/kg	5,700				NS	NS	32,400,000	N	NMED		1.76E-04
Chromium (Total) (3)	7440-47-3	mg/kg	19				505	N	314,000	N	NMED	3.76E-07	6.05E-05
Cobalt	7440-48-4	mg/kg	4.8				83,400	N	388	N	NMED	5.76E-10	1.24E-02
Copper	7440-50-8	mg/kg	270				NS	NS	51,900	N	NMED		5.20E-03
Iron	7439-89-6	mg/kg	8,900				NS	NS	908,000	N	NMED		9.80E-03
Lead	7439-92-1	mg/kg	24	J			NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	5,900				NS	NS	5,680,000	N	NMED		1.04E-03
Manganese	7439-96-5	mg/kg	440				NS	NS	160,000	N	NMED		2.75E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.027	J			NS	NS	112	N	NMED		2.41E-04
Nickel	7440-02-0	mg/kg	13				2,890,000	N	25,700	N	NMED	4.50E-11	5.06E-04
Potassium	7440-09-7	mg/kg	1,500				NS	NS	76,200,000	N	NMED		1.97E-05
Selenium	7782-49-2	mg/kg	1				NS	NS	6,490	N	NMED		1.54E-04
Silver	7440-22-4	mg/kg	0.23				NS	NS	6,490	N	NMED		3.54E-05
Sodium	7440-23-5	mg/kg	54				NS	NS	37,300,000	N	NMED		1.45E-06
Thallium	7440-28-0	mg/kg	0.076	J			NS	NS	13	N	NMED		5.85E-03
Vanadium	7440-62-2	mg/kg	13				NS	NS	6,530	N	NMED		1.99E-03
Zinc	7440-66-6	mg/kg	43				NS	NS	38,900	N	NMED		1.11E-03

TABLE D1-T22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID T22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.33	U			NS	NS	63	N	NMED		
Nitrate	14797-55-8	mg/kg	11				NS	NS	2,080,000	N	NMED		5.29E-06
Perchlorate	14797-73-0	mg/kg	0.0021	U			NS	NS	908	N	NMED		
										Cumulative Risk/Hazard		**9E-07**	**0.07**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
IEUBK = Integrated Exposure Uptake Biokentic Model
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect

TABLE D1-T22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID T22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0016	U			659	N	10,600	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0016	U			NS	NS	13,600	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0016	U			197	N	7,080	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0016	U			4,300	N	2	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0016	U			1,820	N	70,800	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0016	U			NS	NS	424	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0016	U			781	N	130	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0016	U			NS	NS	283	N	NMED[C]			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.004	U			8	N	6	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0016	U			8,540	N	79	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0016	U			NS	NS	492	N	NMED[C]			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.004	U			6	N	8	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0016	U			16	N	140	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0016	U			NS	NS	2,500	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0016	U			195	N	54	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0016	U			415	N	25	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0016	U			NS	NS	422	N	NMED[C]			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0016	U			45,900	N	24,800	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0016	U			NS	NS	7,080	N	NMED[C]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0016	U			45,900	N	24,800	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0016	U			415	N	25	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.0024	U			NS	NS	90,700	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0016	U			NS	NS	7,080	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.0016	U			NS	NS	599	N	NMED[C]			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0016	U			NS	NS	7,080	N	NMED[C]			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0016	U			NS	NS	20,400	N	NMED[C]			
Acetone	67-64-1	mg/kg	0.28				NS	NS	242,000	N	NMED		1.16E-06	
Benzene	71-43-2	mg/kg	0.0016	U			423	N	142	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.0016	U			NS	NS	538	N	NMED[C]			
Bromochloromethane	74-97-5	mg/kg	0.0016	U			NS	NS	296	N	NMED[C]			
Bromodichloromethane	75-27-4	mg/kg	0.0016	U			143	N	7,080	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0016	U			23,700	N	5,380	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0016	U			NS	NS	18	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.0016	U			NS	NS	1,620	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0016	U			252	N	202	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0016	U			NS	NS	412	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0016	U			NS	NS	16,600	N	NMED			
Chloroform	67-66-3	mg/kg	0.0016	U			134	N	391	N	NMED			
Chloromethane	74-87-3	mg/kg	0.004	U			956	N	235	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0016	U			NS	NS	708	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0016	U			781	N	130	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0016	U			340	N	5,380	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0016	U			NS	NS	54	N	NMED			

TABLE D1-T22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID T22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Dichlorodifluoromethane	75-71-8	mg/kg	0.0016	U			NS	NS	161	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.0016	U			1,770	N	5,800	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0016	U			2,400	N	269	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0016	U			NS	NS	2,740	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.004	U			NS	NS	696	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0016	U			24,200	N	33,100	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.0081	U			89,600	N	1,210	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0016	U			NS	NS	17,700	N	NMED[C]			
n-Propylbenzene	103-65-1	mg/kg	0.0016	U			NS	NS	6,730	N	NMED[C]			
Naphthalene	91-20-3	mg/kg	0.0016	U			633	N	159	N	NMED			
o-Xylene	95-47-6	mg/kg	0.002	U			NS	NS	736	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.0016	U			NS	NS	2,740	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.0016	U			NS	NS	35,400	N	NMED[C]			
Styrene	100-42-5	mg/kg	0.0016	U			NS	NS	10,200	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0016	U			NS	NS	35,400	N	NMED[C]			
Tetrachloroethene	127-18-4	mg/kg	0.0016	U			7,910	N	120	N	NMED			
Toluene	108-88-3	mg/kg	0.0016	U			NS	NS	14,000	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0016	U			NS	NS	206	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0016	U			781	N	130	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0016	U			5,370	N	7	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0016	U			NS	NS	1,130	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0016	U			161	N	162	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	U			8,540	N	79	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	U			NS	NS	2,500	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	U			45,900	N	24,800	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	U			45,900	N	24,800	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	U			NS	NS	26,900	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	U			17,000	N	269	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	U			NS	NS	807	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	U			NS	NS	5,380	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	U			NS	NS	538	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	U			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	U			165	N	81	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	U			NS	NS	28,300	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.17	U			NS	NS	1,770	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.17	U			NS	NS	1,000	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	U			NS	NS	13,500	N	NMED[C]			
2-Nitroaniline	88-74-4	mg/kg	0.17	U			NS	NS	2,690	N	NMED[C]			
2-Nitrophenol	88-75-5	mg/kg	0.17	U			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	U			410	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.17	U			135	N	1,080	N	NMED[SC]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	U			NS	NS	22	N	NMED			

TABLE D1-T22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID T22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	U			NS	NS	NS	NS	NS			
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	U			NS	NS	26,900	N	NMED[C]			
4-Chloroaniline	106-47-8	mg/kg	0.17	U			14	N	135	N	NMED[C]			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	U			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.17	U			135	N	1,080	N	NMED[C]			
4-Nitrophenol	100-02-7	mg/kg	0.17	U			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.17	U			NS	NS	15,100	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.17	U			NS	NS	7,530	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.17	U			NS	NS	75,300	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.17	U			240	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			173	N	15	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	U			240	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	U			NS	NS	7,530	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	U			2,310	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.17	U			NS	NS	1,080,000	N	NMED[C]			
Benzyl Alcohol	100-51-6	mg/kg	0.17	U			NS	NS	26,900	N	NMED[C]			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	U			NS	NS	807	N	NMED[C]			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	U			2	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	U			3,540	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	U			13,400	N	5,380	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.17	U			1,420	N	53,800	N	NMED[C]			
Carbazole	86-74-8	mg/kg	0.17	U			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.17	U			23,100	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.17	U			NS	NS	26,900	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.17	U			NS	NS	2,690	N	NMED[C]			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			24	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.17	U			NS	NS	269	N	NMED[C]			
Diethylphthalate	84-66-2	mg/kg	0.17	U			NS	NS	215,000	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.17	U			NS	NS	269,000	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.17	U			NS	NS	10,000	N	NMED			
Fluorene	86-73-7	mg/kg	0.17	U			NS	NS	10,000	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.17	U			117	N	215	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	U			2,400	N	269	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.17	U			4,670	N	188	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	U			240	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.17	U			198,000	N	53,700	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	U			0.38	N	NA	N	NMED[C]			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	UJ			4	N	2	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	U			37,900	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.17	U			633	N	159	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.17	U			1,350	N	353	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.17	U			346	N	989	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.17	U			NS	NS	8,070	N	NMED			
Phenol	108-95-2	mg/kg	0.17	U			NS	NS	77,400	N	NMED			
Pyrene	129-00-0	mg/kg	0.17	U			NS	NS	7,530	N	NMED			

TABLE D1-T22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID T22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	8,070	N	NMED[C]			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	27	N	NMED[C]			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			626	N	2,420	N	NMED[C]			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.021	U			2,440	N	17	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.021	U			55	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.01	U			58	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.01	U			85	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.01	U			85	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.01	U			85	N	5	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.01	U			85	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (3)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000027	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000017	J	0.0000056	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.000000033	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.000000014	J	0.0000014	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.000000042	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000063	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000009	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.00000015	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000054	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.000000077	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000011	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000023	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000053	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.00000022	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000024	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000016	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000051	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.000000016				0.00172	N	0.000226	N	NMED	9.12E-11	6.94E-05	

TABLE D1-T22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID T22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	16,000				NS	NS	41,400	N	NMED		3.86E-01	Nervous
Antimony	7440-36-0	mg/kg	0.62				NS	NS	142	N	NMED		4.37E-03	
Arsenic	7440-38-2	mg/kg	1.8				216	N	41	N	NMED	8.33E-08	4.37E-02	
Barium	7440-39-3	mg/kg	290				NS	NS	4,390	N	NMED		6.61E-02	
Beryllium	7440-41-7	mg/kg	0.73	J			2,710	N	148	N	NMED	2.69E-09	4.93E-03	
Cadmium	7440-43-9	mg/kg	1.3				3,610	N	72	N	NMED	3.60E-09	1.80E-02	
Calcium	7440-70-2	mg/kg	5,700				NS	NS	8,850,000	N	NMED		6.44E-04	
Chromium (Total) (4)	7440-47-3	mg/kg	19				468	N	134	N	NMED	4.06E-07	1.42E-01	GI, Blood
Cobalt	7440-48-4	mg/kg	4.8				722	N	37	N	NMED	6.65E-08	1.31E-01	Endocrine
Copper	7440-50-8	mg/kg	270				NS	NS	14,200	N	NMED		1.90E-02	
Iron	7439-89-6	mg/kg	8,900				NS	NS	248,000	N	NMED		3.59E-02	
Lead	7439-92-1	mg/kg	24	J			NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	5,900				NS	NS	1,550,000	N	NMED		3.81E-03	
Manganese	7439-96-5	mg/kg	440				NS	NS	464	N	NMED		9.48E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.027	J			NS	NS	21	N	NMED		1.30E-03	
Nickel	7440-02-0	mg/kg	13				20,500	N	753	N	NMED	6.34E-09	1.73E-02	
Potassium	7440-09-7	mg/kg	1,500				NS	NS	20,800,000	N	NMED		7.21E-05	
Selenium	7782-49-2	mg/kg	1				NS	NS	1,750	N	NMED		5.71E-04	
Silver	7440-22-4	mg/kg	0.23				NS	NS	1,770	N	NMED		1.30E-04	
Sodium	7440-23-5	mg/kg	54				NS	NS	10,200,000	N	NMED		5.29E-06	
Thallium	7440-28-0	mg/kg	0.076	J			NS	NS	4	N	NMED		2.15E-02	
Vanadium	7440-62-2	mg/kg	13				NS	NS	614	N	NMED		2.12E-02	
Zinc	7440-66-6	mg/kg	43				NS	NS	106,000	N	NMED		4.06E-04	

TABLE D1-T22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID T22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.33	U			NS	NS	12	N	NMED			
Nitrate	14797-55-8	mg/kg	11				NS	NS	566,000	N	NMED		1.94E-05	
Perchlorate	14797-73-0	mg/kg	0.0021	U			NS	NS	248	N	NMED			
										Cumulative Risk/Hazard		**6E-07**	**1.9**	
										Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	1.3
Endocrine	0.13
GI	0.14
Blood	0.14
All Others	0.26

Notes:

[s] = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update).

2) NMED[C] = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

3) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

4) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service

J = Estimated

mg/kg = milligrams per kilogram

NS = No Standard

U = Nondetect

UJ = Estimated Nondetect

TABLE D1-U22-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID U22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0027	U			28.1	N	2,350	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0027	U			NS	NS	14,400	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0027	U			7.98	N	1,560	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0027	U			18.8	N	2.61	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0027	U			78.6	N	15,600	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0027	U			NS	NS	440	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0027	U			29.3	N	141	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0027	U			NS	NS	63	N	RSL			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0067	U			0.051	N	7.09	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0027	U			240	N	82.9	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0027	U			NS	NS	300	N	RSL			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0067	U			0.0858	N	5.88	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0027	U			0.672	N	135	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0027	U			NS	NS	2,150	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0027	U			8.32	N	55.6	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0027	U			17.8	N	29	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0027	U			NS	NS	270	N	RSL			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0027	U			1,290	N	5,480	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0027	U			NS	NS	1,600	N	RSL			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0027	U			1,290	N	5,480	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0027	U			17.8	N	29	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.004	U			NS	NS	37,400	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0027	U			NS	NS	1,560	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.0027	U			NS	NS	200	N	RSL			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0027	U			NS	NS	1,600	N	RSL			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0027	U			NS	NS	5,810	N	RSL			
Acetone	67-64-1	mg/kg	1.1	J			NS	NS	66,300	N	NMED		1.66E-05	
Benzene	71-43-2	mg/kg	0.0027	U			17.8	N	114	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.0027	U			NS	NS	290	N	RSL			
Bromochloromethane	74-97-5	mg/kg	0.0027	U			NS	NS	150	N	RSL			
Bromodichloromethane	75-27-4	mg/kg	0.0027	U			6.19	N	1,560	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0027	U			674	N	1,230	N	NMED			
Bromomethane	74-83-9	mg/kg	0.013				NS	NS	17.7	N	NMED		7.34E-04	
Carbon Disulfide	75-15-0	mg/kg	0.0027	U			NS	NS	1,550	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0027	U			10.7	N	144	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0027	U			NS	NS	378	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0027	U			NS	NS	19,000	N	NMED			
Chloroform	67-66-3	mg/kg	0.0027	U			5.9	N	306	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0067	U			41.1	N	268	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0027	U			NS	NS	156	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0027	U			29.3	N	141	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0027	U			13.9	N	1,230	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0027	U			NS	NS	57.9	N	NMED			

TABLE D1-U22-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID U22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Dichlorodifluoromethane	75-71-8	mg/kg	0.0027	U			NS	NS	182	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.0027	U			75.1	N	3,930	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0027	U			68.3	N	61.6	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0027	U			NS	NS	2,360	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0067	U			NS	NS	764	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0027	U			975	N	37,800	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.013	U			766	N	409	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0027	U			NS	NS	3,900	N	RSL			
n-Propylbenzene	103-65-1	mg/kg	0.0027	U			NS	NS	3,800	N	RSL			
Naphthalene	91-20-3	mg/kg	0.0027	U			22.6	N	162	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0033	U			NS	NS	805	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.0027	U			NS	NS	2,360	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.0027	U			NS	NS	7,800	N	RSL			
Styrene	100-42-5	mg/kg	0.0027	U			NS	NS	7,260	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0027	U			NS	NS	7,800	N	RSL			
Tetrachloroethene	127-18-4	mg/kg	0.0027	U			337	N	111	N	NMED			
Toluene	108-88-3	mg/kg	0.0027	U			NS	NS	5,230	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0027	U			NS	NS	210	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0027	U			29.3	N	141	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0027	U			15.5	N	6.77	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0027	U			NS	NS	1,230	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0027	U			0.742	N	113	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.36	U			240	N	82.9	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.36	U			NS	NS	2,150	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.36	U			1,290	N	5,480	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.36	U			1,290	N	5,480	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.36	U			NS	NS	6,160	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.36	U			484	N	61.6	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.36	U			NS	NS	185	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.36	U			NS	NS	1,230	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.36	U			NS	NS	123	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.36	U			17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.36	U			3.56	N	18.5	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.36	U			NS	NS	6,260	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.36	U			NS	NS	391	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.36	U			NS	NS	232	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.36	U			NS	NS	3,200	N	RSL			
2-Nitroaniline	88-74-4	mg/kg	0.36	U			NS	NS	630	N	RSL			
2-Nitrophenol	88-75-5	mg/kg	0.36	U			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.36	U			11.8	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.36	U			270	N	250	N	RSL[S]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.36	U			NS	NS	4.93	N	NMED			
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.36	U			NS	NS	NS	NS	NS			

TABLE D1-U22-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID U22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.36	U			NS	NS	6,300	N	RSL			
4-Chloroaniline	106-47-8	mg/kg	0.36	U			27	N	32	N	RSL			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.36	U			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.36	U			270	N	250	N	RSL			
4-Nitrophenol	100-02-7	mg/kg	0.36	U			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.36	U			NS	NS	3,480	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.36	U			NS	NS	1,740	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.36	U			NS	NS	17,400	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.36	U			1.53	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.28	U			1.12	N	17.4	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.36	U			1.53	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.36	U			NS	NS	1,740	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.36	U			15.3	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.36	U			NS	NS	250,000	N	RSL			
Benzyl Alcohol	100-51-6	mg/kg	0.36	U			NS	NS	6,300	N	RSL			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.36	U			NS	NS	190	N	RSL			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.36	U			3.11	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.36	U			99.3	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.36	U			380	N	1,230	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.36	U			2,900	N	13,000	N	RSL			
Carbazole	86-74-8	mg/kg	0.36	U			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.36	U			153	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.36	U			NS	NS	6,160	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.36	U			NS	NS	630	N	RSL			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.28	U			0.153	Y	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.36	U			NS	NS	78	N	RSL			
Diethylphthalate	84-66-2	mg/kg	0.36	U			NS	NS	49,300	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.36	U			NS	NS	61,600	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.36	U			NS	NS	2,320	N	NMED			
Fluorene	86-73-7	mg/kg	0.36	U			NS	NS	2,320	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.36	U			3.33	N	49.3	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.36	U			68.3	N	61.6	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.36	U			133	N	43.1	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.36	U			1.53	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.36	U			5,610	N	12,300	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.36	U			0.78	N	NS	NS	RSL			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.022	UJ			0.0234	N	0.493	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.36	U			1,090	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.36	U			22.6	N	162	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.36	U			60.4	N	131	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.36	U			9.85	N	234	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.36	U			NS	NS	1,740	N	NMED			
Phenol	108-95-2	mg/kg	0.36	U			NS	NS	18,500	N	NMED			
Pyrene	129-00-0	mg/kg	0.36	U			NS	NS	1,740	N	NMED			

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HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID U22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	2,200	N	RSL			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	6.3	N	RSL			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			211	N	36	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			3.56	N	18.5	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	7.7	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			31.6	N	70.4	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	6.16	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	7.64	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			333	N	247	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			83.1	N	301	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	156	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			60.4	N	131	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			313	N	6.16	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	3,850	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			1,300	N	570	N	RSL			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.021	UJ			69.6	N	3.98	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.021	UJ			1.81	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.011	UJ			1.86	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.011	UJ			2.43	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.011	UJ			2.43	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.011	UJ			2.43	N	1.14	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.011	UJ			2.43	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (2)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg	0.0000000015	J	0.0000051	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.000000017		0.000058	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000011	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.00000013		0.000013	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000015	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.00000013	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000022	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.0000002	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.00000016	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000023	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.0000002	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.00000013	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.000000081	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.0000002	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000029	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000074	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.00000015				0.000049	N	0.0000506	N	NMED	3.04E-08	2.94E-03	

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HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID U22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	17,000				NS	NS	78,000	N	NMED		2.18E-01	Nervous
Antimony	7440-36-0	mg/kg	0.49				NS	NS	31.3	N	NMED		1.57E-02	
Arsenic	7440-38-2	mg/kg	1.5				7.07	N	13	N	NMED		1.15E-01	Heart/Endocrine
Barium	7440-39-3	mg/kg	250				NS	NS	15,600	N	NMED		1.60E-02	
Beryllium	7440-41-7	mg/kg	0.59	J			64,400	N	156	N	NMED		3.78E-03	
Cadmium	7440-43-9	mg/kg	1.8				85,900	N	70.5	N	NMED		2.55E-02	
Calcium	7440-70-2	mg/kg	5,000				NS	NS	13,000,000	N	NMED		3.85E-04	
Chromium (Total) (3)	7440-47-3	mg/kg	62	J			96.6	N	45,200	N	NMED		1.37E-03	
Cobalt	7440-48-4	mg/kg	5				17,200	N	23.4	N	NMED		2.14E-01	Endocrine
Copper	7440-50-8	mg/kg	410				NS	NS	3,130	N	NMED		1.31E-01	GI
Iron	7439-89-6	mg/kg	10,000				NS	NS	54,800	N	NMED		1.82E-01	GI
Lead	7439-92-1	mg/kg	16				NS	NS	200	N	RSL			
Magnesium	7439-95-4	mg/kg	6,200				NS	NS	15,600,000	N	NMED		3.97E-04	
Manganese	7439-96-5	mg/kg	370				NS	NS	10,500	N	NMED		3.52E-02	
Mercury (Elemental)	7439-97-6	mg/kg	0.023	J			NS	NS	23.8	N	NMED		9.66E-04	
Nickel	7440-02-0	mg/kg	16				595,000	N	1,560	N	NMED		1.03E-02	
Potassium	7440-09-7	mg/kg	1,500				NS	NS	15,600,000	N	NMED		9.62E-05	
Selenium	7782-49-2	mg/kg	0.84				NS	NS	391	N	NMED		2.15E-03	
Silver	7440-22-4	mg/kg	0.27				NS	NS	391	N	NMED		6.91E-04	
Sodium	7440-23-5	mg/kg	76				NS	NS	7,820,000	N	NMED		9.72E-06	
Thallium	7440-28-0	mg/kg	0.064	J			NS	NS	0.782	N	NMED		8.18E-02	
Vanadium	7440-62-2	mg/kg	12				NS	NS	394	N	NMED		3.05E-02	
Zinc	7440-66-6	mg/kg	47				NS	NS	23,500	N	NMED		2.00E-03	

TABLE D1-U22-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID U22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.34	U			NS	NS	11.2	N	NMED			
Nitrate	14797-55-8	mg/kg	58				NS	NS	125,000	N	NMED		4.64E-04	
Perchlorate	14797-73-0	mg/kg	0.021	U			NS	NS	54.8	N	NMED			
										Cumulative Risk/Hazard		**3E-08**	**1.1**	
										Exceeds Target Level		**N**	**Y**	

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service

J = Estimated

mg/kg = milligrams per kilogram

NS = No Standard

U = Nondetect

UJ = Estimated Nondetect

System	Hazard Quotient
Nervous	0.22
Endocrine	0.33
GI	0.31
Heart	0.12
All Others	0.54

TABLE D1-U22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID U22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0027	U			137	N	39,400	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0027	U			NS	NS	72,500	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0027	U			39	N	26,000	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0027	U			92	N	12	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0027	U			383	N	260,000	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0027	U			NS	NS	2,260	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0027	U			146	N	695	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0027	U			NS	NS	930	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0067	U			1	N	34	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0027	U			1,250	N	423	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0027	U			NS	NS	1,800	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0067	U			1	N	41	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0027	U			3	N	738	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0027	U			NS	NS	13,000	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0027	U			41	N	286	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0027	U			87	N	137	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0027	U			NS	NS	1,500	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0027	U			6,730	N	90,800	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0027	U			NS	NS	23,000	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0027	U			6,730	N	90,800	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0027	U			87	N	137	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.004	U			NS	NS	411,000	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0027	U			NS	NS	26,000	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0027	U			NS	NS	1,300	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0027	U			NS	NS	23,000	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0027	U			NS	NS	81,600	N	RSL		
Acetone	67-64-1	mg/kg	1.1	J			NS	NS	960,000	N	NMED		1.15E-06
Benzene	71-43-2	mg/kg	0.0027	U			87	N	729	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0027	U			NS	NS	1,800	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0027	U			NS	NS	630	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0027	U			30	N	26,000	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0027	U			1,760	N	18,300	N	NMED		
Bromomethane	74-83-9	mg/kg	0.013				NS	NS	95	N	NMED		1.38E-04
Carbon Disulfide	75-15-0	mg/kg	0.0027	U			NS	NS	8,540	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0027	U			53	N	1,020	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0027	U			NS	NS	2,160	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0027	U			NS	NS	89,500	N	NMED		
Chloroform	67-66-3	mg/kg	0.0027	U			29	N	2,000	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0067	U			201	N	1,260	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0027	U			NS	NS	2,600	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0027	U			146	N	695	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0027	U			67	N	18,300	N	NMED		

TABLE D1-U22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID U22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0027	U			NS	NS	288	N	NMED		
Dichlorodifluoromethane	75-71-8	mg/kg	0.0027	U			NS	NS	865	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0027	U			29,000	N	368	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0027	U			52	N	916	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0027	U			NS	NS	14,200	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0067	U			NS	NS	3,730	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0027	U			4,820	N	178,000	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.013	U			14,400	N	5,130	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0027	U			NS	NS	58,000	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0027	U			NS	NS	24,000	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0027	U			108	N	843	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0033	U			NS	NS	3,940	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0027	U			NS	NS	14,200	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0027	U			NS	NS	120,000	N	RSL		
Styrene	100-42-5	mg/kg	0.0027	U			NS	NS	51,300	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0027	U			NS	NS	120,000	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0027	U			1,650	N	629	N	NMED		
Toluene	108-88-3	mg/kg	0.0027	U			NS	NS	61,300	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0027	U			NS	NS	1,100	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0027	U			146	N	695	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0027	U			112	N	37	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0027	U			NS	NS	6,030	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0027	U			28	N	46	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.36	U			1,250	N	423	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.36	U			NS	NS	13,000	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.36	U			6,730	N	90,800	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.36	U			6,730	N	90,800	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.36	U			NS	NS	91,600	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.36	U			2,330	N	916	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.36	U			NS	NS	2,750	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.36	U			NS	NS	18,300	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.36	U			NS	NS	1,830	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.36	U			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.36	U			17	N	276	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.36	U			NS	NS	104,000	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.36	U			NS	NS	6,490	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.36	U			NS	NS	3,370	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.36	U			NS	NS	41,000	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.36	U			NS	NS	8,000	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.36	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.36	U			NS	NS	410	N	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.36	U			1,100	N	3,300	N	RSL[S]		

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CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID U22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.36	U			NS	NS	73	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.36	U			NS	NS	NS	NS	NS		
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.36	U			NS	NS	82,000	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.36	U			110	N	410	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.36	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.36	U			1,100	N	3,300	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.36	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.36	U			NS	NS	50,500	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.36	U			NS	NS	25,300	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.36	U			NS	NS	253,000	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.36	U			32	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.28	U			24	N	251	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.36	U			32	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.36	U			NS	NS	25,300	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.36	U			323	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.36	U			NS	NS	3,300,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.36	U			NS	NS	82,000	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.36	U			NS	NS	2,500	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.36	U			16	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.36	U			519	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.36	U			1,830	N	18,300	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.36	U			12,000	N	160,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.36	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.36	U			3,230	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.36	U			NS	NS	91,600	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.36	U			NS	NS	8,200	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.28	U			3	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.36	U			NS	NS	1,200	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.36	U			NS	NS	733,000	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.36	U			NS	NS	916,000	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.36	U			NS	NS	33,700	N	NMED		
Fluorene	86-73-7	mg/kg	0.36	U			NS	NS	33,700	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.36	U			16	N	733	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.36	U			52	N	916	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.36	U			641	N	641	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.36	U			32	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.36	U			27,000	N	183,000	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.36	U			3	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.022	UJ			1	N	7	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.36	U			5,240	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.36	U			108	N	843	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.36	U			293	N	1,540	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.36	U			45	N	3,180	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.36	U			NS	NS	27,500	N	NMED		
Phenol	108-95-2	mg/kg	0.36	U			NS	NS	275,000	N	NMED		
Pyrene	129-00-0	mg/kg	0.36	U			NS	NS	25,300	N	NMED		

TABLE D1-U22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID U22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			5,300	N	7,400	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.021	UJ			304	N	57	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.021	UJ			9	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.011	UJ			9	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.011	UJ			11	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.011	UJ			11	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.011	UJ			11	N	16	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.011	UJ			11	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg	0.0000000015	J	0.0000051	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.000000017		0.000058	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000011	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.00000013		0.000013	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000015	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.00000013	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000022	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.0000002	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.00000016	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000023	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.0000002	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.00000013	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.000000081	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.0000002	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000029	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000074	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.00000015				0.000238	N	0.000808	N	NMED	6.26E-09	1.84E-04

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FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	17,000				NS	NS	1,290,000	N	NMED		1.32E-02
Antimony	7440-36-0	mg/kg	0.49				NS	NS	519	N	NMED		9.44E-04
Arsenic	7440-38-2	mg/kg	1.5				36	N	208	N	NMED	4.18E-07	7.21E-03
Barium	7440-39-3	mg/kg	250				NS	NS	255,000	N	NMED		9.80E-04
Beryllium	7440-41-7	mg/kg	0.59	J			313,000	N	2,580	N	NMED	1.88E-11	2.29E-04
Cadmium	7440-43-9	mg/kg	1.8				417,000	N	1,110	N	NMED	4.32E-11	1.62E-03
Calcium	7440-70-2	mg/kg	5,000				NS	NS	32,400,000	N	NMED		1.54E-04
Chromium (Total) (3)	7440-47-3	mg/kg	62	J			505	N	314,000	N	NMED	1.23E-06	1.97E-04
Cobalt	7440-48-4	mg/kg	5				83,400	N	388	N	NMED	6.00E-10	1.29E-02
Copper	7440-50-8	mg/kg	410				NS	NS	51,900	N	NMED		7.90E-03
Iron	7439-89-6	mg/kg	10,000				NS	NS	908,000	N	NMED		1.10E-02
Lead	7439-92-1	mg/kg	16				NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	6,200				NS	NS	5,680,000	N	NMED		1.09E-03
Manganese	7439-96-5	mg/kg	370				NS	NS	160,000	N	NMED		2.31E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.023	J			NS	NS	112	N	NMED		2.05E-04
Nickel	7440-02-0	mg/kg	16				2,890,000	N	25,700	N	NMED	5.54E-11	6.23E-04
Potassium	7440-09-7	mg/kg	1,500				NS	NS	76,200,000	N	NMED		1.97E-05
Selenium	7782-49-2	mg/kg	0.84				NS	NS	6,490	N	NMED		1.29E-04
Silver	7440-22-4	mg/kg	0.27				NS	NS	6,490	N	NMED		4.16E-05
Sodium	7440-23-5	mg/kg	76				NS	NS	37,300,000	N	NMED		2.04E-06
Thallium	7440-28-0	mg/kg	0.064	J			NS	NS	13	N	NMED		4.92E-03
Vanadium	7440-62-2	mg/kg	12				NS	NS	6,530	N	NMED		1.84E-03
Zinc	7440-66-6	mg/kg	47				NS	NS	38,900	N	NMED		1.21E-03

TABLE D1-U22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID U22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.34	U			NS	NS	63	N	NMED		
Nitrate	14797-55-8	mg/kg	58				NS	NS	2,080,000	N	NMED		2.79E-05
Perchlorate	14797-73-0	mg/kg	0.021	U			NS	NS	908	N	NMED		
										Cumulative Risk/Hazard		**2E-06**	**0.07**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
IEUBK = Integrated Exposure Uptake Biokentic Model
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect

TABLE D1-U22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID U22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0027	U			659	N	10,600	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0027	U			NS	NS	13,600	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0027	U			197	N	7,080	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0027	U			4,300	N	2	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0027	U			1,820	N	70,800	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0027	U			NS	NS	424	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0027	U			781	N	130	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0027	U			NS	NS	283	N	NMED[C]			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0067	U			8	N	6	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0027	U			8,540	N	79	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0027	U			NS	NS	492	N	NMED[C]			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0067	U			6	N	8	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0027	U			16	N	140	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0027	U			NS	NS	2,500	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0027	U			195	N	54	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0027	U			415	N	25	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0027	U			NS	NS	422	N	NMED[C]			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0027	U			45,900	N	24,800	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0027	U			NS	NS	7,080	N	NMED[C]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0027	U			45,900	N	24,800	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0027	U			415	N	25	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.004	U			NS	NS	90,700	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0027	U			NS	NS	7,080	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.0027	U			NS	NS	599	N	NMED[C]			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0027	U			NS	NS	7,080	N	NMED[C]			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0027	U			NS	NS	20,400	N	NMED[C]			
Acetone	67-64-1	mg/kg	1.1	J			NS	NS	242,000	N	NMED		4.55E-06	
Benzene	71-43-2	mg/kg	0.0027	U			423	N	142	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.0027	U			NS	NS	538	N	NMED[C]			
Bromochloromethane	74-97-5	mg/kg	0.0027	U			NS	NS	296	N	NMED[C]			
Bromodichloromethane	75-27-4	mg/kg	0.0027	U			143	N	7,080	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0027	U			23,700	N	5,380	N	NMED			
Bromomethane	74-83-9	mg/kg	0.013				NS	NS	18	N	NMED		7.26E-04	
Carbon Disulfide	75-15-0	mg/kg	0.0027	U			NS	NS	1,620	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0027	U			252	N	202	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0027	U			NS	NS	412	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0027	U			NS	NS	16,600	N	NMED			
Chloroform	67-66-3	mg/kg	0.0027	U			134	N	391	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0067	U			956	N	235	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0027	U			NS	NS	708	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0027	U			781	N	130	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0027	U			340	N	5,380	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0027	U			NS	NS	54	N	NMED			

TABLE D1-U22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID U22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Dichlorodifluoromethane	75-71-8	mg/kg	0.0027	U			NS	NS	161	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.0027	U			1,770	N	5,800	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0027	U			2,400	N	269	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0027	U			NS	NS	2,740	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0067	U			NS	NS	696	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0027	U			24,200	N	33,100	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.013	U			89,600	N	1,210	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0027	U			NS	NS	17,700	N	NMED[C]			
n-Propylbenzene	103-65-1	mg/kg	0.0027	U			NS	NS	6,730	N	NMED[C]			
Naphthalene	91-20-3	mg/kg	0.0027	U			633	N	159	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0033	U			NS	NS	736	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.0027	U			NS	NS	2,740	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.0027	U			NS	NS	35,400	N	NMED[C]			
Styrene	100-42-5	mg/kg	0.0027	U			NS	NS	10,200	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0027	U			NS	NS	35,400	N	NMED[C]			
Tetrachloroethene	127-18-4	mg/kg	0.0027	U			7,910	N	120	N	NMED			
Toluene	108-88-3	mg/kg	0.0027	U			NS	NS	14,000	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0027	U			NS	NS	206	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0027	U			781	N	130	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0027	U			5,370	N	7	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0027	U			NS	NS	1,130	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0027	U			161	N	162	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.36	U			8,540	N	79	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.36	U			NS	NS	2,500	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.36	U			45,900	N	24,800	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.36	U			45,900	N	24,800	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.36	U			NS	NS	26,900	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.36	U			17,000	N	269	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.36	U			NS	NS	807	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.36	U			NS	NS	5,380	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.36	U			NS	NS	538	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.36	U			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.36	U			165	N	81	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.36	U			NS	NS	28,300	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.36	U			NS	NS	1,770	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.36	U			NS	NS	1,000	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.36	U			NS	NS	13,500	N	NMED[C]			
2-Nitroaniline	88-74-4	mg/kg	0.36	U			NS	NS	2,690	N	NMED[C]			
2-Nitrophenol	88-75-5	mg/kg	0.36	U			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.36	U			410	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.36	U			135	N	1,080	N	NMED[SC]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.36	U			NS	NS	22	N	NMED			

TABLE D1-U22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID U22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.36	U			NS	NS	NS	NS	NS			
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.36	U			NS	NS	26,900	N	NMED[C]			
4-Chloroaniline	106-47-8	mg/kg	0.36	U			14	N	135	N	NMED[C]			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.36	U			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.36	U			135	N	1,080	N	NMED[C]			
4-Nitrophenol	100-02-7	mg/kg	0.36	U			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.36	U			NS	NS	15,100	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.36	U			NS	NS	7,530	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.36	U			NS	NS	75,300	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.36	U			240	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.28	U			173	N	15	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.36	U			240	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.36	U			NS	NS	7,530	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.36	U			2,310	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.36	U			NS	NS	1,080,000	N	NMED[C]			
Benzyl Alcohol	100-51-6	mg/kg	0.36	U			NS	NS	26,900	N	NMED[C]			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.36	U			NS	NS	807	N	NMED[C]			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.36	U			2	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.36	U			3,540	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.36	U			13,400	N	5,380	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.36	U			1,420	N	53,800	N	NMED[C]			
Carbazole	86-74-8	mg/kg	0.36	U			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.36	U			23,100	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.36	U			NS	NS	26,900	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.36	U			NS	NS	2,690	N	NMED[C]			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.28	U			24	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.36	U			NS	NS	269	N	NMED[C]			
Diethylphthalate	84-66-2	mg/kg	0.36	U			NS	NS	215,000	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.36	U			NS	NS	269,000	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.36	U			NS	NS	10,000	N	NMED			
Fluorene	86-73-7	mg/kg	0.36	U			NS	NS	10,000	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.36	U			117	N	215	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.36	U			2,400	N	269	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.36	U			4,670	N	188	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.36	U			240	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.36	U			198,000	N	53,700	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.36	U			0.38	N	NA	N	NMED[C]			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.022	UJ			4	N	2	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.36	U			37,900	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.36	U			633	N	159	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.36	U			1,350	N	353	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.36	U			346	N	989	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.36	U			NS	NS	8,070	N	NMED			
Phenol	108-95-2	mg/kg	0.36	U			NS	NS	77,400	N	NMED			
Pyrene	129-00-0	mg/kg	0.36	U			NS	NS	7,530	N	NMED			

TABLE D1-U22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID U22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	8,070	N	NMED[C]			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	27	N	NMED[C]			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			626	N	2,420	N	NMED[C]			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.021	UJ			2,440	N	17	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.021	UJ			55	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.011	UJ			58	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.011	UJ			85	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.011	UJ			85	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.011	UJ			85	N	5	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.011	UJ			85	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (3)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg	0.0000000015	J	0.0000051	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.000000017		0.000058	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000011	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg	0.00000013		0.000013	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000015	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.00000013	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000022	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.0000002	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.00000016	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000023	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.0000002	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.00000013	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.000000081	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.0000002	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000029	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000074	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.00000015				0.00172	N	0.000226	N	NMED	8.66E-10	6.59E-04	

TABLE D1-U22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID U22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	17,000				NS	NS	41,400	N	NMED		4.11E-01	Nervous
Antimony	7440-36-0	mg/kg	0.49				NS	NS	142	N	NMED		3.45E-03	
Arsenic	7440-38-2	mg/kg	1.5				216	N	41	N	NMED		3.64E-02	
Barium	7440-39-3	mg/kg	250				NS	NS	4,390	N	NMED		5.69E-02	
Beryllium	7440-41-7	mg/kg	0.59	J			2,710	N	148	N	NMED		3.99E-03	
Cadmium	7440-43-9	mg/kg	1.8				3,610	N	72	N	NMED		2.50E-02	
Calcium	7440-70-2	mg/kg	5,000				NS	NS	8,850,000	N	NMED		5.65E-04	
Chromium (Total) (4)	7440-47-3	mg/kg	62	J			468	N	134	N	NMED		4.63E-01	GI, Blood
Cobalt	7440-48-4	mg/kg	5				722	N	37	N	NMED		1.36E-01	Endocrine
Copper	7440-50-8	mg/kg	410				NS	NS	14,200	N	NMED		2.89E-02	
Iron	7439-89-6	mg/kg	10,000				NS	NS	248,000	N	NMED		4.03E-02	
Lead	7439-92-1	mg/kg	16				NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	6,200				NS	NS	1,550,000	N	NMED		4.00E-03	
Manganese	7439-96-5	mg/kg	370				NS	NS	464	N	NMED		7.97E-01	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.023	J			NS	NS	21	N	NMED		1.11E-03	
Nickel	7440-02-0	mg/kg	16				20,500	N	753	N	NMED		2.12E-02	
Potassium	7440-09-7	mg/kg	1,500				NS	NS	20,800,000	N	NMED		7.21E-05	
Selenium	7782-49-2	mg/kg	0.84				NS	NS	1,750	N	NMED		4.80E-04	
Silver	7440-22-4	mg/kg	0.27				NS	NS	1,770	N	NMED		1.53E-04	
Sodium	7440-23-5	mg/kg	76				NS	NS	10,200,000	N	NMED		7.45E-06	
Thallium	7440-28-0	mg/kg	0.064	J			NS	NS	4	N	NMED		1.81E-02	
Vanadium	7440-62-2	mg/kg	12				NS	NS	614	N	NMED		1.95E-02	
Zinc	7440-66-6	mg/kg	47				NS	NS	106,000	N	NMED		4.43E-04	

TABLE D1-U22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID U22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.34	U			NS	NS	12	N	NMED			
Nitrate	14797-55-8	mg/kg	58				NS	NS	566,000	N	NMED		1.02E-04	
Perchlorate	14797-73-0	mg/kg	0.021	U			NS	NS	248	N	NMED			
										Cumulative Risk/Hazard		**9E-10**	**2.1**	
										Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	1.2
Endocrine	0.14
GI	0.46
Blood	0.46
All Others	0.26

Notes:

[s] = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update).

2) NMED[C] = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

3) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

4) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect

TABLE D1-V22-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID V22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0024	U			28.1	N	2,350	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0024	U			NS	NS	14,400	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0024	U			7.98	N	1,560	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0024	U			18.8	N	2.61	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0024	U			78.6	N	15,600	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0024	U			NS	NS	440	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0024	U			29.3	N	141	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0024	U			NS	NS	63	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0059	U			0.051	N	7.09	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0024	U			240	N	82.9	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0024	U			NS	NS	300	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0059	U			0.0858	N	5.88	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0024	U			0.672	N	135	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0024	U			NS	NS	2,150	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0024	U			8.32	N	55.6	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0024	U			17.8	N	29	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0024	U			NS	NS	270	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0024	U			1,290	N	5,480	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0024	U			NS	NS	1,600	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0024	U			1,290	N	5,480	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0024	U			17.8	N	29	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0035	U			NS	NS	37,400	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0024	U			NS	NS	1,560	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0024	U			NS	NS	200	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0024	U			NS	NS	1,600	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0024	U			NS	NS	5,810	N	RSL		
Acetone	67-64-1	mg/kg	0.12				NS	NS	66,300	N	NMED		1.81E-06
Benzene	71-43-2	mg/kg	0.0024	U			17.8	N	114	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0024	U			NS	NS	290	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0024	U			NS	NS	150	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0024	U			6.19	N	1,560	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0024	U			674	N	1,230	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0024	U			NS	NS	17.7	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0024	U			NS	NS	1,550	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0024	U			10.7	N	144	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0024	U			NS	NS	378	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0024	U			NS	NS	19,000	N	NMED		
Chloroform	67-66-3	mg/kg	0.0024	U			5.9	N	306	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0059	U			41.1	N	268	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0024	U			NS	NS	156	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0024	U			29.3	N	141	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0024	U			13.9	N	1,230	N	NMED		
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0024	U			NS	NS	57.9	N	NMED		

TABLE D1-V22-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID V22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dichlorodifluoromethane	75-71-8	mg/kg	0.0024	U			NS	NS	182	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0024	U			75.1	N	3,930	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0024	U			68.3	N	61.6	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0024	U			NS	NS	2,360	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0059	U			NS	NS	764	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0024	U			975	N	37,800	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.012	U			766	N	409	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0024	U			NS	NS	3,900	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0024	U			NS	NS	3,800	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0024	U			22.6	N	162	N	NMED		
o-Xylene	95-47-6	mg/kg	0.003	U			NS	NS	805	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0024	U			NS	NS	2,360	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0024	U			NS	NS	7,800	N	RSL		
Styrene	100-42-5	mg/kg	0.0024	U			NS	NS	7,260	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0024	U			NS	NS	7,800	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0024	U			337	N	111	N	NMED		
Toluene	108-88-3	mg/kg	0.0024	U			NS	NS	5,230	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0024	U			NS	NS	210	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0024	U			29.3	N	141	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0024	U			15.5	N	6.77	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0024	U			NS	NS	1,230	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0024	U			0.742	N	113	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.18	U			240	N	82.9	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.18	U			NS	NS	2,150	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.18	U			1,290	N	5,480	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.18	U			1,290	N	5,480	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.18	U			NS	NS	6,160	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.18	U			484	N	61.6	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.18	U			NS	NS	185	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.18	U			NS	NS	1,230	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.18	U			NS	NS	123	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.18	U			17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.18	U			3.56	N	18.5	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.18	U			NS	NS	6,260	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.18	U			NS	NS	391	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.18	U			NS	NS	232	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.18	U			NS	NS	3,200	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.18	U			NS	NS	630	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.18	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.18	U			11.8	N	NS	NS	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.18	U			270	N	250	N	RSL[S]		
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.18	U			NS	NS	4.93	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.18	U			NS	NS	NS	NS	NS		

TABLE D1-V22-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID V22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.18	U			NS	NS	6,300	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.18	U			27	N	32	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.18	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.18	U			270	N	250	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.18	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.18	U			NS	NS	3,480	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.18	U			NS	NS	1,740	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.18	U			NS	NS	17,400	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.18	U			1.53	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			1.12	N	17.4	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.18	U			1.53	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.18	U			NS	NS	1,740	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.18	U			15.3	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.18	U			NS	NS	250,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.18	U			NS	NS	6,300	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.18	U			NS	NS	190	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.18	U			3.11	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.18	U			99.3	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.18	U			380	N	1,230	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.18	U			2,900	N	13,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.18	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.18	U			153	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.18	U			NS	NS	6,160	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.18	U			NS	NS	630	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			0.153	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.18	U			NS	NS	78	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.18	U			NS	NS	49,300	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.18	U			NS	NS	61,600	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.18	U			NS	NS	2,320	N	NMED		
Fluorene	86-73-7	mg/kg	0.18	U			NS	NS	2,320	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.18	U			3.33	N	49.3	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.18	U			68.3	N	61.6	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.18	U			133	N	43.1	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.18	U			1.53	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.18	U			5,610	N	12,300	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.18	U			0.78	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	UJ			0.0234	N	0.493	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.18	U			1,090	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.18	U			22.6	N	162	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.18	U			60.4	N	131	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.18	U			9.85	N	234	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.18	U			NS	NS	1,740	N	NMED		
Phenol	108-95-2	mg/kg	0.18	U			NS	NS	18,500	N	NMED		
Pyrene	129-00-0	mg/kg	0.18	U			NS	NS	1,740	N	NMED		

TABLE D1-V22-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID V22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.17				NS	NS	7.64	N	NMED		2.23E-02
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U			83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U			NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U			60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U			313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			1,300	N	570	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.021	U			69.6	N	3.98	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.021	U			1.81	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.011	U			1.86	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.011	U			2.43	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.011	U			2.43	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.011	U			2.43	N	1.14	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.011	U			2.43	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000016	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg		U	0.0000054	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.0000003	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.0000011	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.000000095	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000077	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000078	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000071	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000071	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		UJ	0.000000094	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000013	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.000000078	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000056	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.000000044	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.000000081	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000017	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000035	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.0				0.000049	N	0.0000506	N	NMED		

TABLE D1-V22-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID V22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	15,000				NS	NS	78,000	N	NMED		1.92E-01
Antimony	7440-36-0	mg/kg	0.17	J			NS	NS	31.3	N	NMED		5.43E-03
Arsenic	7440-38-2	mg/kg	1.1				7.07	N	13	N	NMED	1.56E-06	8.46E-02
Barium	7440-39-3	mg/kg	410				NS	NS	15,600	N	NMED		2.63E-02
Beryllium	7440-41-7	mg/kg	1				64,400	N	156	N	NMED	1.55E-10	6.41E-03
Cadmium	7440-43-9	mg/kg	0.79				85,900	N	70.5	N	NMED	9.20E-11	1.12E-02
Calcium	7440-70-2	mg/kg	24,000				NS	NS	13,000,000	N	NMED		1.85E-03
Chromium (Total) (3)	7440-47-3	mg/kg	14				96.6	N	45,200	N	NMED	1.45E-06	3.10E-04
Cobalt	7440-48-4	mg/kg	4.4				17,200	N	23.4	N	NMED	2.56E-09	1.88E-01
Copper	7440-50-8	mg/kg	180				NS	NS	3,130	N	NMED		5.75E-02
Iron	7439-89-6	mg/kg	9,200				NS	NS	54,800	N	NMED		1.68E-01
Lead	7439-92-1	mg/kg	15				NS	NS	200	N	RSL		
Magnesium	7439-95-4	mg/kg	5,200				NS	NS	15,600,000	N	NMED		3.33E-04
Manganese	7439-96-5	mg/kg	490				NS	NS	10,500	N	NMED		4.67E-02
Mercury (Elemental)	7439-97-6	mg/kg	0.019	J			NS	NS	23.8	N	NMED		7.98E-04
Nickel	7440-02-0	mg/kg	13				595,000	N	1,560	N	NMED	2.18E-10	8.33E-03
Potassium	7440-09-7	mg/kg	1,700				NS	NS	15,600,000	N	NMED		1.09E-04
Selenium	7782-49-2	mg/kg	1.1				NS	NS	391	N	NMED		2.81E-03
Silver	7440-22-4	mg/kg	0.16				NS	NS	391	N	NMED		4.09E-04
Sodium	7440-23-5	mg/kg	50				NS	NS	7,820,000	N	NMED		6.39E-06
Thallium	7440-28-0	mg/kg	0.068	J			NS	NS	0.782	N	NMED		8.70E-02
Vanadium	7440-62-2	mg/kg	10				NS	NS	394	N	NMED		2.54E-02
Zinc	7440-66-6	mg/kg	28				NS	NS	23,500	N	NMED		1.19E-03

TABLE D1-V22-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID V22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.33	U			NS	NS	11.2	N	NMED		
Nitrate	14797-55-8	mg/kg	1.8	J			NS	NS	125,000	N	NMED		1.44E-05
Perchlorate	14797-73-0	mg/kg	0.002	U			NS	NS	54.8	N	NMED		
										Cumulative Risk/Hazard		**3E-06**	**0.9**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect

TABLE D1-V22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID V22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0024	U			137	N	39,400	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0024	U			NS	NS	72,500	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0024	U			39	N	26,000	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0024	U			92	N	12	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0024	U			383	N	260,000	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0024	U			NS	NS	2,260	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0024	U			146	N	695	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0024	U			NS	NS	930	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0059	U			1	N	34	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0024	U			1,250	N	423	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0024	U			NS	NS	1,800	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0059	U			1	N	41	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0024	U			3	N	738	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0024	U			NS	NS	13,000	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0024	U			41	N	286	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0024	U			87	N	137	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0024	U			NS	NS	1,500	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0024	U			6,730	N	90,800	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0024	U			NS	NS	23,000	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0024	U			6,730	N	90,800	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0024	U			87	N	137	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0035	U			NS	NS	411,000	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0024	U			NS	NS	26,000	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0024	U			NS	NS	1,300	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0024	U			NS	NS	23,000	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0024	U			NS	NS	81,600	N	RSL		
Acetone	67-64-1	mg/kg	0.12				NS	NS	960,000	N	NMED		1.25E-07
Benzene	71-43-2	mg/kg	0.0024	U			87	N	729	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0024	U			NS	NS	1,800	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0024	U			NS	NS	630	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0024	U			30	N	26,000	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0024	U			1,760	N	18,300	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0024	U			NS	NS	95	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0024	U			NS	NS	8,540	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0024	U			53	N	1,020	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0024	U			NS	NS	2,160	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0024	U			NS	NS	89,500	N	NMED		
Chloroform	67-66-3	mg/kg	0.0024	U			29	N	2,000	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0059	U			201	N	1,260	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0024	U			NS	NS	2,600	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0024	U			146	N	695	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0024	U			67	N	18,300	N	NMED		

TABLE D1-V22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID V22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0024	U			NS	NS	288	N	NMED		
Dichlorodifluoromethane	75-71-8	mg/kg	0.0024	U			NS	NS	865	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0024	U			29,000	N	368	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0024	U			52	N	916	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0024	U			NS	NS	14,200	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0059	U			NS	NS	3,730	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0024	U			4,820	N	178,000	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.012	U			14,400	N	5,130	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0024	U			NS	NS	58,000	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0024	U			NS	NS	24,000	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0024	U			108	N	843	N	NMED		
o-Xylene	95-47-6	mg/kg	0.003	U			NS	NS	3,940	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0024	U			NS	NS	14,200	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0024	U			NS	NS	120,000	N	RSL		
Styrene	100-42-5	mg/kg	0.0024	U			NS	NS	51,300	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0024	U			NS	NS	120,000	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0024	U			1,650	N	629	N	NMED		
Toluene	108-88-3	mg/kg	0.0024	U			NS	NS	61,300	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0024	U			NS	NS	1,100	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0024	U			146	N	695	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0024	U			112	N	37	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0024	U			NS	NS	6,030	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0024	U			28	N	46	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.18	U			1,250	N	423	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.18	U			NS	NS	13,000	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.18	U			6,730	N	90,800	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.18	U			6,730	N	90,800	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.18	U			NS	NS	91,600	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.18	U			2,330	N	916	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.18	U			NS	NS	2,750	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.18	U			NS	NS	18,300	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.18	U			NS	NS	1,830	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.18	U			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.18	U			17	N	276	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.18	U			NS	NS	104,000	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.18	U			NS	NS	6,490	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.18	U			NS	NS	3,370	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.18	U			NS	NS	41,000	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.18	U			NS	NS	8,000	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.18	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.18	U			NS	NS	410	N	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.18	U			1,100	N	3,300	N	RSL[S]		

TABLE D1-V22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID V22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
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	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.18	U			NS	NS	73	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.18	U			NS	NS	NS	NS	NS		
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.18	U			NS	NS	82,000	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.18	U			110	N	410	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.18	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.18	U			1,100	N	3,300	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.18	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.18	U			NS	NS	50,500	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.18	U			NS	NS	25,300	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.18	U			NS	NS	253,000	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.18	U			32	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			24	N	251	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.18	U			32	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.18	U			NS	NS	25,300	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.18	U			323	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.18	U			NS	NS	3,300,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.18	U			NS	NS	82,000	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.18	U			NS	NS	2,500	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.18	U			16	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.18	U			519	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.18	U			1,830	N	18,300	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.18	U			12,000	N	160,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.18	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.18	U			3,230	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.18	U			NS	NS	91,600	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.18	U			NS	NS	8,200	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			3	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.18	U			NS	NS	1,200	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.18	U			NS	NS	733,000	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.18	U			NS	NS	916,000	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.18	U			NS	NS	33,700	N	NMED		
Fluorene	86-73-7	mg/kg	0.18	U			NS	NS	33,700	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.18	U			16	N	733	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.18	U			52	N	916	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.18	U			641	N	641	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.18	U			32	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.18	U			27,000	N	183,000	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.18	U			3	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	UJ			1	N	7	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.18	U			5,240	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.18	U			108	N	843	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.18	U			293	N	1,540	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.18	U			45	N	3,180	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.18	U			NS	NS	27,500	N	NMED		
Phenol	108-95-2	mg/kg	0.18	U			NS	NS	275,000	N	NMED		
Pyrene	129-00-0	mg/kg	0.18	U			NS	NS	25,300	N	NMED		

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	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.17				NS	NS	125	N	NMED		1.36E-03
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U			428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U			NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U			293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U			1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			5,300	N	7,400	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.021	U			304	N	57	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.021	U			9	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.011	U			9	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.011	U			11	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.011	U			11	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.011	U			11	N	16	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.011	U			11	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000016	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg		U	0.0000054	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.0000003	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.0000011	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.000000095	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000077	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000078	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000071	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000071	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		UJ	0.000000094	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000013	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.000000078	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000056	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.000000044	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.000000081	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000017	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000035	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.0				0.000238	N	0.000808	N	NMED		

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METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	15,000				NS	NS	1,290,000	N	NMED		1.16E-02
Antimony	7440-36-0	mg/kg	0.17	J			NS	NS	519	N	NMED		3.28E-04
Arsenic	7440-38-2	mg/kg	1.1				36	N	208	N	NMED	3.06E-07	5.29E-03
Barium	7440-39-3	mg/kg	410				NS	NS	255,000	N	NMED		1.61E-03
Beryllium	7440-41-7	mg/kg	1				313,000	N	2,580	N	NMED	3.19E-11	3.88E-04
Cadmium	7440-43-9	mg/kg	0.79				417,000	N	1,110	N	NMED	1.89E-11	7.12E-04
Calcium	7440-70-2	mg/kg	24,000				NS	NS	32,400,000	N	NMED		7.41E-04
Chromium (Total) (3)	7440-47-3	mg/kg	14				505	N	314,000	N	NMED	2.77E-07	4.46E-05
Cobalt	7440-48-4	mg/kg	4.4				83,400	N	388	N	NMED	5.28E-10	1.13E-02
Copper	7440-50-8	mg/kg	180				NS	NS	51,900	N	NMED		3.47E-03
Iron	7439-89-6	mg/kg	9,200				NS	NS	908,000	N	NMED		1.01E-02
Lead	7439-92-1	mg/kg	15				NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	5,200				NS	NS	5,680,000	N	NMED		9.15E-04
Manganese	7439-96-5	mg/kg	490				NS	NS	160,000	N	NMED		3.06E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.019	J			NS	NS	112	N	NMED		1.70E-04
Nickel	7440-02-0	mg/kg	13				2,890,000	N	25,700	N	NMED	4.50E-11	5.06E-04
Potassium	7440-09-7	mg/kg	1,700				NS	NS	76,200,000	N	NMED		2.23E-05
Selenium	7782-49-2	mg/kg	1.1				NS	NS	6,490	N	NMED		1.69E-04
Silver	7440-22-4	mg/kg	0.16				NS	NS	6,490	N	NMED		2.47E-05
Sodium	7440-23-5	mg/kg	50				NS	NS	37,300,000	N	NMED		1.34E-06
Thallium	7440-28-0	mg/kg	0.068	J			NS	NS	13	N	NMED		5.23E-03
Vanadium	7440-62-2	mg/kg	10				NS	NS	6,530	N	NMED		1.53E-03
Zinc	7440-66-6	mg/kg	28				NS	NS	38,900	N	NMED		7.20E-04

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OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.33	U			NS	NS	63	N	NMED		
Nitrate	14797-55-8	mg/kg	1.8	J			NS	NS	2,080,000	N	NMED		8.65E-07
Perchlorate	14797-73-0	mg/kg	0.002	U			NS	NS	908	N	NMED		
										Cumulative Risk/Hazard		**6E-07**	**0.06**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service

IEUBK = Integrated Exposure Uptake Biokentic Model

J = Estimated

mg/kg = milligrams per kilogram

NS = No Standard

U = Nondetect

UJ = Estimated Nondetect

TABLE D1-V22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID V22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2,3)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0024	U			659	N	10,600	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0024	U			NS	NS	13,600	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0024	U			197	N	7,080	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0024	U			4,300	N	2	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0024	U			1,820	N	70,800	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0024	U			NS	NS	424	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0024	U			781	N	130	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0024	U			NS	NS	283	N	NMED[C]			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0059	U			8	N	6	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0024	U			8,540	N	79	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0024	U			NS	NS	492	N	NMED[C]			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0059	U			6	N	8	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0024	U			16	N	140	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0024	U			NS	NS	2,500	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0024	U			195	N	54	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0024	U			415	N	25	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0024	U			NS	NS	422	N	NMED[C]			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0024	U			45,900	N	24,800	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0024	U			NS	NS	7,080	N	NMED[C]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0024	U			45,900	N	24,800	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0024	U			415	N	25	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.0035	U			NS	NS	90,700	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0024	U			NS	NS	7,080	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.0024	U			NS	NS	599	N	NMED[C]			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0024	U			NS	NS	7,080	N	NMED[C]			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0024	U			NS	NS	20,400	N	NMED[C]			
Acetone	67-64-1	mg/kg	0.12				NS	NS	242,000	N	NMED		4.96E-07	
Benzene	71-43-2	mg/kg	0.0024	U			423	N	142	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.0024	U			NS	NS	538	N	NMED[C]			
Bromochloromethane	74-97-5	mg/kg	0.0024	U			NS	NS	296	N	NMED[C]			
Bromodichloromethane	75-27-4	mg/kg	0.0024	U			143	N	7,080	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0024	U			23,700	N	5,380	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0024	U			NS	NS	18	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.0024	U			NS	NS	1,620	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0024	U			252	N	202	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0024	U			NS	NS	412	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0024	U			NS	NS	16,600	N	NMED			
Chloroform	67-66-3	mg/kg	0.0024	U			134	N	391	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0059	U			956	N	235	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0024	U			NS	NS	708	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0024	U			781	N	130	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0024	U			340	N	5,380	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0024	U			NS	NS	54	N	NMED			

TABLE D1-V22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID V22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2,3)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Dichlorodifluoromethane	75-71-8	mg/kg	0.0024	U			NS	NS	161	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.0024	U			1,770	N	5,800	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0024	U			2,400	N	269	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0024	U			NS	NS	2,740	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0059	U			NS	NS	696	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0024	U			24,200	N	33,100	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.012	U			89,600	N	1,210	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0024	U			NS	NS	17,700	N	NMED[C]			
n-Propylbenzene	103-65-1	mg/kg	0.0024	U			NS	NS	6,730	N	NMED[C]			
Naphthalene	91-20-3	mg/kg	0.0024	U			633	N	159	N	NMED			
o-Xylene	95-47-6	mg/kg	0.003	U			NS	NS	736	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.0024	U			NS	NS	2,740	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.0024	U			NS	NS	35,400	N	NMED[C]			
Styrene	100-42-5	mg/kg	0.0024	U			NS	NS	10,200	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0024	U			NS	NS	35,400	N	NMED[C]			
Tetrachloroethene	127-18-4	mg/kg	0.0024	U			7,910	N	120	N	NMED			
Toluene	108-88-3	mg/kg	0.0024	U			NS	NS	14,000	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0024	U			NS	NS	206	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0024	U			781	N	130	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0024	U			5,370	N	7	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0024	U			NS	NS	1,130	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0024	U			161	N	162	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.18	U			8,540	N	79	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.18	U			NS	NS	2,500	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.18	U			45,900	N	24,800	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.18	U			45,900	N	24,800	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.18	U			NS	NS	26,900	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.18	U			17,000	N	269	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.18	U			NS	NS	807	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.18	U			NS	NS	5,380	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.18	U			NS	NS	538	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.18	U			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.18	U			165	N	81	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.18	U			NS	NS	28,300	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.18	U			NS	NS	1,770	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.18	U			NS	NS	1,000	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.18	U			NS	NS	13,500	N	NMED[C]			
2-Nitroaniline	88-74-4	mg/kg	0.18	U			NS	NS	2,690	N	NMED[C]			
2-Nitrophenol	88-75-5	mg/kg	0.18	U			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.18	U			410	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.18	U			135	N	1,080	N	NMED[SC]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.18	U			NS	NS	22	N	NMED			

TABLE D1-V22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID V22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2,3)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.18	U			NS	NS	NS	NS	NS			
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.18	U			NS	NS	26,900	N	NMED[C]			
4-Chloroaniline	106-47-8	mg/kg	0.18	U			14	N	135	N	NMED[C]			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.18	U			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.18	U			135	N	1,080	N	NMED[C]			
4-Nitrophenol	100-02-7	mg/kg	0.18	U			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.18	U			NS	NS	15,100	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.18	U			NS	NS	7,530	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.18	U			NS	NS	75,300	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.18	U			240	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			173	N	15	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.18	U			240	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.18	U			NS	NS	7,530	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.18	U			2,310	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.18	U			NS	NS	1,080,000	N	NMED[C]			
Benzyl Alcohol	100-51-6	mg/kg	0.18	U			NS	NS	26,900	N	NMED[C]			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.18	U			NS	NS	807	N	NMED[C]			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.18	U			2	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.18	U			3,540	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.18	U			13,400	N	5,380	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.18	U			1,420	N	53,800	N	NMED[C]			
Carbazole	86-74-8	mg/kg	0.18	U			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.18	U			23,100	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.18	U			NS	NS	26,900	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.18	U			NS	NS	2,690	N	NMED[C]			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			24	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.18	U			NS	NS	269	N	NMED[C]			
Diethylphthalate	84-66-2	mg/kg	0.18	U			NS	NS	215,000	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.18	U			NS	NS	269,000	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.18	U			NS	NS	10,000	N	NMED			
Fluorene	86-73-7	mg/kg	0.18	U			NS	NS	10,000	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.18	U			117	N	215	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.18	U			2,400	N	269	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.18	U			4,670	N	188	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.18	U			240	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.18	U			198,000	N	53,700	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.18	U			0.38	N	NA	N	NMED[C]			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	UJ			4	N	2	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.18	U			37,900	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.18	U			633	N	159	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.18	U			1,350	N	353	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.18	U			346	N	989	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.18	U			NS	NS	8,070	N	NMED			
Phenol	108-95-2	mg/kg	0.18	U			NS	NS	77,400	N	NMED			
Pyrene	129-00-0	mg/kg	0.18	U			NS	NS	7,530	N	NMED			

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CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID V22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2,3)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	8,070	N	NMED[C]			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	27	N	NMED[C]			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.17				NS	NS	17	N	NMED		9.83E-03	
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U			2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U			NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U			1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U			11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			626	N	2,420	N	NMED[C]			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.021	U			2,440	N	17	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.021	U			55	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.011	U			58	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.011	U			85	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.011	U			85	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.011	U			85	N	5	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.011	U			85	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (4)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.00000016	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg		U	0.0000054	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.0000003	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.0000011	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.000000095	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000077	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000078	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000071	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000071	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		UJ	0.000000094	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000013	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.000000078	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000056	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.000000044	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.000000081	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000017	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000035	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.0				0.00172	N	0.000226	N	NMED			

TABLE D1-V22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID V22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2,3)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	15,000				NS	NS	41,400	N	NMED		3.62E-01	Nervous
Antimony	7440-36-0	mg/kg	0.17	J			NS	NS	142	N	NMED		1.20E-03	
Arsenic	7440-38-2	mg/kg	1.1				216	N	41	N	NMED	5.09E-08	2.67E-02	
Barium	7440-39-3	mg/kg	410				NS	NS	4,390	N	NMED		9.34E-02	
Beryllium	7440-41-7	mg/kg	1				2,710	N	148	N	NMED	3.69E-09	6.76E-03	
Cadmium	7440-43-9	mg/kg	0.79				3,610	N	72	N	NMED	2.19E-09	1.10E-02	
Calcium	7440-70-2	mg/kg	24,000				NS	NS	8,850,000	N	NMED		2.71E-03	
Chromium (Total) (5)	7440-47-3	mg/kg	14				468	N	134	N	NMED	2.99E-07	1.04E-01	GI, Blood
Cobalt	7440-48-4	mg/kg	4.4				722	N	37	N	NMED	6.09E-08	1.20E-01	Endocrine
Copper	7440-50-8	mg/kg	180				NS	NS	14,200	N	NMED		1.27E-02	
Iron	7439-89-6	mg/kg	9,200				NS	NS	248,000	N	NMED		3.71E-02	
Lead	7439-92-1	mg/kg	15				NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	5,200				NS	NS	1,550,000	N	NMED		3.35E-03	
Manganese	7439-96-5	mg/kg	490				NS	NS	464	Y	NMED		1.06E+00	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.019	J			NS	NS	21	N	NMED		9.18E-04	
Nickel	7440-02-0	mg/kg	13				20,500	N	753	N	NMED	6.34E-09	1.73E-02	
Potassium	7440-09-7	mg/kg	1,700				NS	NS	20,800,000	N	NMED		8.17E-05	
Selenium	7782-49-2	mg/kg	1.1				NS	NS	1,750	N	NMED		6.29E-04	
Silver	7440-22-4	mg/kg	0.16				NS	NS	1,770	N	NMED		9.04E-05	
Sodium	7440-23-5	mg/kg	50				NS	NS	10,200,000	N	NMED		4.90E-06	
Thallium	7440-28-0	mg/kg	0.068	J			NS	NS	4	N	NMED		1.92E-02	
Vanadium	7440-62-2	mg/kg	10				NS	NS	614	N	NMED		1.63E-02	
Zinc	7440-66-6	mg/kg	28				NS	NS	106,000	N	NMED		2.64E-04	

TABLE D1-V22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID V22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2,3)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.33	U			NS	NS	12	N	NMED			
Nitrate	14797-55-8	mg/kg	1.8	J			NS	NS	566,000	N	NMED		3.18E-06	
Perchlorate	14797-73-0	mg/kg	0.002	U			NS	NS	248	N	NMED			
										Cumulative Risk/Hazard		**4E-07**	**1.9**	
										Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	1.4
Endocrine	0.12
GI	0.10
Blood	0.10
All Others	0.26

Notes:

[s] = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update).

2) NMED[C] = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

3) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

4) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect

TABLE D1-W22-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID W22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0022	U			28.1	N	2,350	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0022	U			NS	NS	14,400	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0022	U			7.98	N	1,560	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0022	U			18.8	N	2.61	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0022	U			78.6	N	15,600	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0022	U			NS	NS	440	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0022	U			29.3	N	141	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0022	U			NS	NS	63	N	RSL			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0054	U			0.051	N	7.09	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0022	U			240	N	82.9	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0022	U			NS	NS	300	N	RSL			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0054	U			0.0858	N	5.88	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0022	U			0.672	N	135	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0022	U			NS	NS	2,150	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0022	U			8.32	N	55.6	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0022	U			17.8	N	29	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0022	U			NS	NS	270	N	RSL			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0022	U			1,290	N	5,480	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0022	U			NS	NS	1,600	N	RSL			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0022	U			1,290	N	5,480	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0022	U			17.8	N	29	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.0032	U			NS	NS	37,400	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0022	U			NS	NS	1,560	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.0022	U			NS	NS	200	N	RSL			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0022	U			NS	NS	1,600	N	RSL			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0022	U			NS	NS	5,810	N	RSL			
Acetone	67-64-1	mg/kg	0.11				NS	NS	66,300	N	NMED		1.66E-06	
Benzene	71-43-2	mg/kg	0.0022	U			17.8	N	114	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.0022	U			NS	NS	290	N	RSL			
Bromochloromethane	74-97-5	mg/kg	0.0022	U			NS	NS	150	N	RSL			
Bromodichloromethane	75-27-4	mg/kg	0.0022	U			6.19	N	1,560	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0022	U			674	N	1,230	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0022	U			NS	NS	17.7	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.0022	U			NS	NS	1,550	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0022	U			10.7	N	144	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0022	U			NS	NS	378	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0022	U			NS	NS	19,000	N	NMED			
Chloroform	67-66-3	mg/kg	0.0022	U			5.9	N	306	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0054	U			41.1	N	268	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0022	U			NS	NS	156	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0022	U			29.3	N	141	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0022	U			13.9	N	1,230	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0022	U			NS	NS	57.9	N	NMED			

TABLE D1-W22-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID W22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Dichlorodifluoromethane	75-71-8	mg/kg	0.0022	U			NS	NS	182	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.0022	U			75.1	N	3,930	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0022	U			68.3	N	61.6	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0022	U			NS	NS	2,360	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0054	U			NS	NS	764	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0022	U			975	N	37,800	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.011	U			766	N	409	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0022	U			NS	NS	3,900	N	RSL			
n-Propylbenzene	103-65-1	mg/kg	0.0022	U			NS	NS	3,800	N	RSL			
Naphthalene	91-20-3	mg/kg	0.0022	U			22.6	N	162	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0027	U			NS	NS	805	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.0022	U			NS	NS	2,360	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.0022	U			NS	NS	7,800	N	RSL			
Styrene	100-42-5	mg/kg	0.0022	U			NS	NS	7,260	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0022	U			NS	NS	7,800	N	RSL			
Tetrachloroethene	127-18-4	mg/kg	0.0022	U			337	N	111	N	NMED			
Toluene	108-88-3	mg/kg	0.0022	U			NS	NS	5,230	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0022	U			NS	NS	210	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0022	U			29.3	N	141	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0022	U			15.5	N	6.77	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0022	U			NS	NS	1,230	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0022	U			0.742	N	113	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.2	U			240	N	82.9	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.2	U			NS	NS	2,150	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.2	U			1,290	N	5,480	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.2	U			1,290	N	5,480	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.2	U			NS	NS	6,160	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.2	U			484	N	61.6	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.2	U			NS	NS	185	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.2	U			NS	NS	1,230	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.2	U			NS	NS	123	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.2	U			17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.2	U			3.56	N	18.5	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.2	U			NS	NS	6,260	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.2	U			NS	NS	391	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.2	U			NS	NS	232	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.2	U			NS	NS	3,200	N	RSL			
2-Nitroaniline	88-74-4	mg/kg	0.2	U			NS	NS	630	N	RSL			
2-Nitrophenol	88-75-5	mg/kg	0.2	U			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.2	U			11.8	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.2	U			270	N	250	N	RSL[S]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.2	U			NS	NS	4.93	N	NMED			
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.2	U			NS	NS	NS	NS	NS			

TABLE D1-W22-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID W22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.2	U			NS	NS	6,300	N	RSL			
4-Chloroaniline	106-47-8	mg/kg	0.2	U			27	N	32	N	RSL			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.2	U			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.2	U			270	N	250	N	RSL			
4-Nitrophenol	100-02-7	mg/kg	0.2	U			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.2	U			NS	NS	3,480	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.2	U			NS	NS	1,740	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.2	U			NS	NS	17,400	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.2	U			1.53	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.16	U			1.12	N	17.4	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.2	U			1.53	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.2	U			NS	NS	1,740	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.2	U			15.3	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.2	U			NS	NS	250,000	N	RSL			
Benzyl Alcohol	100-51-6	mg/kg	0.2	U			NS	NS	6,300	N	RSL			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.2	U			NS	NS	190	N	RSL			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.2	U			3.11	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.2	U			99.3	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.2	U			380	N	1,230	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.2	U			2,900	N	13,000	N	RSL			
Carbazole	86-74-8	mg/kg	0.2	U			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.2	U			153	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.2	U			NS	NS	6,160	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.2	U			NS	NS	630	N	RSL			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.16	U			0.153	Y	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.2	U			NS	NS	78	N	RSL			
Diethylphthalate	84-66-2	mg/kg	0.2	U			NS	NS	49,300	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.2	U			NS	NS	61,600	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.2	U			NS	NS	2,320	N	NMED			
Fluorene	86-73-7	mg/kg	0.2	U			NS	NS	2,320	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.2	U			3.33	N	49.3	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.2	U			68.3	N	61.6	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.2	U			133	N	43.1	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.2	U			1.53	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.2	U			5,610	N	12,300	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.2	U			0.78	N	NS	NS	RSL			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.024	UJ			0.0234	Y	0.493	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.2	U			1,090	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.2	U			22.6	N	162	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.2	U			60.4	N	131	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.2	U			9.85	N	234	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.2	U			NS	NS	1,740	N	NMED			
Phenol	108-95-2	mg/kg	0.2	U			NS	NS	18,500	N	NMED			
Pyrene	129-00-0	mg/kg	0.2	U			NS	NS	1,740	N	NMED			

TABLE D1-W22-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID W22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	2,200	N	RSL			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	6.3	N	RSL			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			211	N	36	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			3.56	N	18.5	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	7.7	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			31.6	N	70.4	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	6.16	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.19				NS	NS	7.64	N	NMED		2.49E-02	
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			333	N	247	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U			83.1	N	301	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U			NS	NS	156	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U			60.4	N	131	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U			313	N	6.16	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NS	NS	3,850	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			1,300	N	570	N	RSL			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.024	U			69.6	N	3.98	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.024	U			1.81	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.012	U			1.86	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.012	U			2.43	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.012	U			2.43	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.012	U			2.43	N	1.14	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.012	U			2.43	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (2)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg	0.000000000057	J	0.00000019	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000015	J	0.0000049	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000007	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.00000054	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000009	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000036	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000051	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg	0.0000000033	J	0.000000033	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000036	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		UJ	0.000000051	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.000000038	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.000000089	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000023	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg	0.000000018	J	0.00000018	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg	0.000000063	J	0.00000021	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg	0.000000057	J	0.00000057	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000068	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.00000014				0.000049	N	0.0000506	N	NMED	2.91E-08	2.82E-03	

TABLE D1-W22-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID W22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	18,000				NS	NS	78,000	N	NMED		2.31E-01	Nervous
Antimony	7440-36-0	mg/kg	0.13	J			NS	NS	31.3	N	NMED		4.15E-03	
Arsenic	7440-38-2	mg/kg	1.2				7.07	N	13	N	NMED	1.70E-06	9.23E-02	
Barium	7440-39-3	mg/kg	470				NS	NS	15,600	N	NMED		3.01E-02	
Beryllium	7440-41-7	mg/kg	1				64,400	N	156	N	NMED	1.55E-10	6.41E-03	
Cadmium	7440-43-9	mg/kg	0.81				85,900	N	70.5	N	NMED	9.43E-11	1.15E-02	
Calcium	7440-70-2	mg/kg	37,000				NS	NS	13,000,000	N	NMED		2.85E-03	
Chromium (Total) (3)	7440-47-3	mg/kg	14				96.6	N	45,200	N	NMED	1.45E-06	3.10E-04	
Cobalt	7440-48-4	mg/kg	4.9				17,200	N	23.4	N	NMED	2.85E-09	2.09E-01	Endocrine
Copper	7440-50-8	mg/kg	130				NS	NS	3,130	N	NMED		4.15E-02	
Iron	7439-89-6	mg/kg	9,600				NS	NS	54,800	N	NMED		1.75E-01	GI
Lead	7439-92-1	mg/kg	15				NS	NS	200	N	RSL			
Magnesium	7439-95-4	mg/kg	5,600				NS	NS	15,600,000	N	NMED		3.59E-04	
Manganese	7439-96-5	mg/kg	670				NS	NS	10,500	N	NMED		6.38E-02	
Mercury (Elemental)	7439-97-6	mg/kg	0.025	J			NS	NS	23.8	N	NMED		1.05E-03	
Nickel	7440-02-0	mg/kg	13				595,000	N	1,560	N	NMED	2.18E-10	8.33E-03	
Potassium	7440-09-7	mg/kg	2,100				NS	NS	15,600,000	N	NMED		1.35E-04	
Selenium	7782-49-2	mg/kg	1.1				NS	NS	391	N	NMED		2.81E-03	
Silver	7440-22-4	mg/kg	0.13				NS	NS	391	N	NMED		3.32E-04	
Sodium	7440-23-5	mg/kg	54				NS	NS	7,820,000	N	NMED		6.91E-06	
Thallium	7440-28-0	mg/kg	0.07	J			NS	NS	0.782	N	NMED		8.95E-02	
Vanadium	7440-62-2	mg/kg	9.7				NS	NS	394	N	NMED		2.46E-02	
Zinc	7440-66-6	mg/kg	28				NS	NS	23,500	N	NMED		1.19E-03	

TABLE D1-W22-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID W22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.38	U			NS	NS	11.2	N	NMED			
Nitrate	14797-55-8	mg/kg	2.5	J			NS	NS	125,000	N	NMED		2.00E-05	
Perchlorate	14797-73-0	mg/kg	0.0023	U			NS	NS	54.8	N	NMED			
										Cumulative Risk/Hazard		**3E-06**	**1.0**	
										Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	0.23
Endocrine	0.21
GI	0.18
All Others	0.41

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect

TABLE D1-W22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID W22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0022	U			137	N	39,400	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0022	U			NS	NS	72,500	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0022	U			39	N	26,000	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0022	U			92	N	12	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0022	U			383	N	260,000	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0022	U			NS	NS	2,260	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0022	U			146	N	695	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0022	U			NS	NS	930	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0054	U			1	N	34	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0022	U			1,250	N	423	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0022	U			NS	NS	1,800	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0054	U			1	N	41	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0022	U			3	N	738	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0022	U			NS	NS	13,000	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0022	U			41	N	286	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0022	U			87	N	137	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0022	U			NS	NS	1,500	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0022	U			6,730	N	90,800	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0022	U			NS	NS	23,000	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0022	U			6,730	N	90,800	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0022	U			87	N	137	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0032	U			NS	NS	411,000	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0022	U			NS	NS	26,000	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0022	U			NS	NS	1,300	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0022	U			NS	NS	23,000	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0022	U			NS	NS	81,600	N	RSL		
Acetone	67-64-1	mg/kg	0.11				NS	NS	960,000	N	NMED		1.15E-07
Benzene	71-43-2	mg/kg	0.0022	U			87	N	729	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0022	U			NS	NS	1,800	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0022	U			NS	NS	630	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0022	U			30	N	26,000	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0022	U			1,760	N	18,300	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0022	U			NS	NS	95	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0022	U			NS	NS	8,540	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0022	U			53	N	1,020	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0022	U			NS	NS	2,160	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0022	U			NS	NS	89,500	N	NMED		
Chloroform	67-66-3	mg/kg	0.0022	U			29	N	2,000	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0054	U			201	N	1,260	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0022	U			NS	NS	2,600	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0022	U			146	N	695	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0022	U			67	N	18,300	N	NMED		

TABLE D1-W22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID W22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0022	U			NS	NS	288	N	NMED		
Dichlorodifluoromethane	75-71-8	mg/kg	0.0022	U			NS	NS	865	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0022	U			29,000	N	368	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0022	U			52	N	916	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0022	U			NS	NS	14,200	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0054	U			NS	NS	3,730	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0022	U			4,820	N	178,000	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.011	U			14,400	N	5,130	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0022	U			NS	NS	58,000	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0022	U			NS	NS	24,000	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0022	U			108	N	843	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0027	U			NS	NS	3,940	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0022	U			NS	NS	14,200	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0022	U			NS	NS	120,000	N	RSL		
Styrene	100-42-5	mg/kg	0.0022	U			NS	NS	51,300	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0022	U			NS	NS	120,000	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0022	U			1,650	N	629	N	NMED		
Toluene	108-88-3	mg/kg	0.0022	U			NS	NS	61,300	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0022	U			NS	NS	1,100	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0022	U			146	N	695	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0022	U			112	N	37	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0022	U			NS	NS	6,030	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0022	U			28	N	46	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.2	U			1,250	N	423	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.2	U			NS	NS	13,000	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.2	U			6,730	N	90,800	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.2	U			6,730	N	90,800	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.2	U			NS	NS	91,600	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.2	U			2,330	N	916	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.2	U			NS	NS	2,750	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.2	U			NS	NS	18,300	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.2	U			NS	NS	1,830	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.2	U			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.2	U			17	N	276	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.2	U			NS	NS	104,000	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.2	U			NS	NS	6,490	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.2	U			NS	NS	3,370	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.2	U			NS	NS	41,000	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.2	U			NS	NS	8,000	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.2	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.2	U			NS	NS	410	N	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.2	U			1,100	N	3,300	N	RSL[S]		

TABLE D1-W22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID W22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.2	U			NS	NS	73	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.2	U			NS	NS	NS	NS	NS		
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.2	U			NS	NS	82,000	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.2	U			110	N	410	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.2	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.2	U			1,100	N	3,300	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.2	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.2	U			NS	NS	50,500	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.2	U			NS	NS	25,300	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.2	U			NS	NS	253,000	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.2	U			32	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.16	U			24	N	251	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.2	U			32	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.2	U			NS	NS	25,300	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.2	U			323	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.2	U			NS	NS	3,300,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.2	U			NS	NS	82,000	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.2	U			NS	NS	2,500	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.2	U			16	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.2	U			519	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.2	U			1,830	N	18,300	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.2	U			12,000	N	160,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.2	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.2	U			3,230	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.2	U			NS	NS	91,600	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.2	U			NS	NS	8,200	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.16	U			3	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.2	U			NS	NS	1,200	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.2	U			NS	NS	733,000	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.2	U			NS	NS	916,000	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.2	U			NS	NS	33,700	N	NMED		
Fluorene	86-73-7	mg/kg	0.2	U			NS	NS	33,700	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.2	U			16	N	733	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.2	U			52	N	916	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.2	U			641	N	641	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.2	U			32	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.2	U			27,000	N	183,000	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.2	U			3	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.024	UJ			1	N	7	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.2	U			5,240	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.2	U			108	N	843	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.2	U			293	N	1,540	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.2	U			45	N	3,180	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.2	U			NS	NS	27,500	N	NMED		
Phenol	108-95-2	mg/kg	0.2	U			NS	NS	275,000	N	NMED		
Pyrene	129-00-0	mg/kg	0.2	U			NS	NS	25,300	N	NMED		

TABLE D1-W22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID W22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.19				NS	NS	125	N	NMED		1.52E-03
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U			428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U			NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U			293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U			1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			5,300	N	7,400	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.024	U			304	N	57	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.024	U			9	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.012	U			9	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.012	U			11	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.012	U			11	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.012	U			11	N	16	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.012	U			11	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg	0.000000000057	J	0.00000019	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000015	J	0.0000049	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000007	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.00000054	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000009	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000036	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000051	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg	0.0000000033	J	0.000000033	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000036	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		UJ	0.000000051	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.000000038	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.000000089	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000023	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg	0.000000018	J	0.00000018	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg	0.000000063	J	0.00000021	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg	0.000000057	J	0.00000057	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000068	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.00000014				0.000238	N	0.000808	N	NMED	6.00E-09	1.77E-04

TABLE D1-W22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID W22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	18,000				NS	NS	1,290,000	N	NMED		1.40E-02
Antimony	7440-36-0	mg/kg	0.13	J			NS	NS	519	N	NMED		2.50E-04
Arsenic	7440-38-2	mg/kg	1.2				36	N	208	N	NMED	3.34E-07	5.77E-03
Barium	7440-39-3	mg/kg	470				NS	NS	255,000	N	NMED		1.84E-03
Beryllium	7440-41-7	mg/kg	1				313,000	N	2,580	N	NMED	3.19E-11	3.88E-04
Cadmium	7440-43-9	mg/kg	0.81				417,000	N	1,110	N	NMED	1.94E-11	7.30E-04
Calcium	7440-70-2	mg/kg	37,000				NS	NS	32,400,000	N	NMED		1.14E-03
Chromium (Total) (3)	7440-47-3	mg/kg	14				505	N	314,000	N	NMED	2.77E-07	4.46E-05
Cobalt	7440-48-4	mg/kg	4.9				83,400	N	388	N	NMED	5.88E-10	1.26E-02
Copper	7440-50-8	mg/kg	130				NS	NS	51,900	N	NMED		2.50E-03
Iron	7439-89-6	mg/kg	9,600				NS	NS	908,000	N	NMED		1.06E-02
Lead	7439-92-1	mg/kg	15				NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	5,600				NS	NS	5,680,000	N	NMED		9.86E-04
Manganese	7439-96-5	mg/kg	670				NS	NS	160,000	N	NMED		4.19E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.025	J			NS	NS	112	N	NMED		2.23E-04
Nickel	7440-02-0	mg/kg	13				2,890,000	N	25,700	N	NMED	4.50E-11	5.06E-04
Potassium	7440-09-7	mg/kg	2,100				NS	NS	76,200,000	N	NMED		2.76E-05
Selenium	7782-49-2	mg/kg	1.1				NS	NS	6,490	N	NMED		1.69E-04
Silver	7440-22-4	mg/kg	0.13				NS	NS	6,490	N	NMED		2.00E-05
Sodium	7440-23-5	mg/kg	54				NS	NS	37,300,000	N	NMED		1.45E-06
Thallium	7440-28-0	mg/kg	0.07	J			NS	NS	13	N	NMED		5.38E-03
Vanadium	7440-62-2	mg/kg	9.7				NS	NS	6,530	N	NMED		1.49E-03
Zinc	7440-66-6	mg/kg	28				NS	NS	38,900	N	NMED		7.20E-04

TABLE D1-W22-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID W22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.38	U			NS	NS	63	N	NMED		
Nitrate	14797-55-8	mg/kg	2.5	J			NS	NS	2,080,000	N	NMED		1.20E-06
Perchlorate	14797-73-0	mg/kg	0.0023	U			NS	NS	908	N	NMED		
										Cumulative Risk/Hazard		**6E-07**	**0.07**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
IEUBK = Integrated Exposure Uptake Biokentic Model
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect

TABLE D1-W22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID W22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0022	U			659	N	10,600	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0022	U			NS	NS	13,600	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0022	U			197	N	7,080	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0022	U			4,300	N	2	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0022	U			1,820	N	70,800	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0022	U			NS	NS	424	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0022	U			781	N	130	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0022	U			NS	NS	283	N	NMED[C]			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0054	U			8	N	6	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0022	U			8,540	N	79	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0022	U			NS	NS	492	N	NMED[C]			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0054	U			6	N	8	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0022	U			16	N	140	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0022	U			NS	NS	2,500	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0022	U			195	N	54	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0022	U			415	N	25	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0022	U			NS	NS	422	N	NMED[C]			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0022	U			45,900	N	24,800	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0022	U			NS	NS	7,080	N	NMED[C]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0022	U			45,900	N	24,800	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0022	U			415	N	25	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.0032	U			NS	NS	90,700	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0022	U			NS	NS	7,080	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.0022	U			NS	NS	599	N	NMED[C]			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0022	U			NS	NS	7,080	N	NMED[C]			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0022	U			NS	NS	20,400	N	NMED[C]			
Acetone	67-64-1	mg/kg	0.11				NS	NS	242,000	N	NMED		4.55E-07	
Benzene	71-43-2	mg/kg	0.0022	U			423	N	142	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.0022	U			NS	NS	538	N	NMED[C]			
Bromochloromethane	74-97-5	mg/kg	0.0022	U			NS	NS	296	N	NMED[C]			
Bromodichloromethane	75-27-4	mg/kg	0.0022	U			143	N	7,080	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0022	U			23,700	N	5,380	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0022	U			NS	NS	18	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.0022	U			NS	NS	1,620	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0022	U			252	N	202	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0022	U			NS	NS	412	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0022	U			NS	NS	16,600	N	NMED			
Chloroform	67-66-3	mg/kg	0.0022	U			134	N	391	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0054	U			956	N	235	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0022	U			NS	NS	708	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0022	U			781	N	130	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0022	U			340	N	5,380	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0022	U			NS	NS	54	N	NMED			

TABLE D1-W22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID W22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Dichlorodifluoromethane	75-71-8	mg/kg	0.0022	U			NS	NS	161	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.0022	U			1,770	N	5,800	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0022	U			2,400	N	269	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0022	U			NS	NS	2,740	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0054	U			NS	NS	696	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0022	U			24,200	N	33,100	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.011	U			89,600	N	1,210	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0022	U			NS	NS	17,700	N	NMED[C]			
n-Propylbenzene	103-65-1	mg/kg	0.0022	U			NS	NS	6,730	N	NMED[C]			
Naphthalene	91-20-3	mg/kg	0.0022	U			633	N	159	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0027	U			NS	NS	736	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.0022	U			NS	NS	2,740	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.0022	U			NS	NS	35,400	N	NMED[C]			
Styrene	100-42-5	mg/kg	0.0022	U			NS	NS	10,200	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0022	U			NS	NS	35,400	N	NMED[C]			
Tetrachloroethene	127-18-4	mg/kg	0.0022	U			7,910	N	120	N	NMED			
Toluene	108-88-3	mg/kg	0.0022	U			NS	NS	14,000	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0022	U			NS	NS	206	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0022	U			781	N	130	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0022	U			5,370	N	7	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0022	U			NS	NS	1,130	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0022	U			161	N	162	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.2	U			8,540	N	79	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.2	U			NS	NS	2,500	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.2	U			45,900	N	24,800	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.2	U			45,900	N	24,800	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.2	U			NS	NS	26,900	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.2	U			17,000	N	269	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.2	U			NS	NS	807	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.2	U			NS	NS	5,380	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.2	U			NS	NS	538	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.2	U			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.2	U			165	N	81	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.2	U			NS	NS	28,300	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.2	U			NS	NS	1,770	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.2	U			NS	NS	1,000	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.2	U			NS	NS	13,500	N	NMED[C]			
2-Nitroaniline	88-74-4	mg/kg	0.2	U			NS	NS	2,690	N	NMED[C]			
2-Nitrophenol	88-75-5	mg/kg	0.2	U			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.2	U			410	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.2	U			135	N	1,080	N	NMED[SC]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.2	U			NS	NS	22	N	NMED			

TABLE D1-W22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID W22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.2	U			NS	NS	NS	NS	NS			
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.2	U			NS	NS	26,900	N	NMED[C]			
4-Chloroaniline	106-47-8	mg/kg	0.2	U			14	N	135	N	NMED[C]			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.2	U			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.2	U			135	N	1,080	N	NMED[C]			
4-Nitrophenol	100-02-7	mg/kg	0.2	U			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.2	U			NS	NS	15,100	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.2	U			NS	NS	7,530	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.2	U			NS	NS	75,300	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.2	U			240	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.16	U			173	N	15	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.2	U			240	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.2	U			NS	NS	7,530	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.2	U			2,310	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.2	U			NS	NS	1,080,000	N	NMED[C]			
Benzyl Alcohol	100-51-6	mg/kg	0.2	U			NS	NS	26,900	N	NMED[C]			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.2	U			NS	NS	807	N	NMED[C]			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.2	U			2	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.2	U			3,540	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.2	U			13,400	N	5,380	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.2	U			1,420	N	53,800	N	NMED[C]			
Carbazole	86-74-8	mg/kg	0.2	U			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.2	U			23,100	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.2	U			NS	NS	26,900	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.2	U			NS	NS	2,690	N	NMED[C]			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.16	U			24	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.2	U			NS	NS	269	N	NMED[C]			
Diethylphthalate	84-66-2	mg/kg	0.2	U			NS	NS	215,000	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.2	U			NS	NS	269,000	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.2	U			NS	NS	10,000	N	NMED			
Fluorene	86-73-7	mg/kg	0.2	U			NS	NS	10,000	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.2	U			117	N	215	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.2	U			2,400	N	269	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.2	U			4,670	N	188	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.2	U			240	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.2	U			198,000	N	53,700	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.2	U			0.38	N	NA	N	NMED[C]			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.024	UJ			4	N	2	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.2	U			37,900	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.2	U			633	N	159	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.2	U			1,350	N	353	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.2	U			346	N	989	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.2	U			NS	NS	8,070	N	NMED			
Phenol	108-95-2	mg/kg	0.2	U			NS	NS	77,400	N	NMED			
Pyrene	129-00-0	mg/kg	0.2	U			NS	NS	7,530	N	NMED			

TABLE D1-W22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID W22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NS	NS	8,070	N	NMED[C]			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NS	NS	27	N	NMED[C]			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	U			7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.19				NS	NS	17	N	NMED		1.10E-02	
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U			2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U			NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	U			1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	U			11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			626	N	2,420	N	NMED[C]			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.024	U			2,440	N	17	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.024	U			55	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.012	U			58	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.012	U			85	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.012	U			85	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.012	U			85	N	5	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.012	U			85	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (3)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg	0.000000000057	J	0.00000019	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.00000000147	J	0.0000049	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000007	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.00000054	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000009	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000036	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000051	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg	0.0000000033	J	0.000000033	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000036	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		UJ	0.000000051	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.000000038	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.000000089	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000023	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg	0.000000018	J	0.00000018	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg	0.000000063	J	0.00000021	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg	0.000000057	J	0.00000057	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000068	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.00000014				0.00172	N	0.000226	N	NMED	8.30E-10	6.32E-04	

TABLE D1-W22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID W22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	18,000				NS	NS	41,400	N	NMED		4.35E-01	Nervous
Antimony	7440-36-0	mg/kg	0.13	J			NS	NS	142	N	NMED		9.15E-04	
Arsenic	7440-38-2	mg/kg	1.2				216	N	41	N	NMED		2.91E-02	
Barium	7440-39-3	mg/kg	470				NS	NS	4,390	N	NMED		1.07E-01	Kidneys
Beryllium	7440-41-7	mg/kg	1				2,710	N	148	N	NMED		6.76E-03	
Cadmium	7440-43-9	mg/kg	0.81				3,610	N	72	N	NMED		1.12E-02	
Calcium	7440-70-2	mg/kg	37,000				NS	NS	8,850,000	N	NMED		4.18E-03	
Chromium (Total) (4)	7440-47-3	mg/kg	14				468	N	134	N	NMED		1.04E-01	GI, Blood
Cobalt	7440-48-4	mg/kg	4.9				722	N	37	N	NMED		1.34E-01	Endocrine
Copper	7440-50-8	mg/kg	130				NS	NS	14,200	N	NMED		9.15E-03	
Iron	7439-89-6	mg/kg	9,600				NS	NS	248,000	N	NMED		3.87E-02	
Lead	7439-92-1	mg/kg	15				NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	5,600				NS	NS	1,550,000	N	NMED		3.61E-03	
Manganese	7439-96-5	mg/kg	670				NS	NS	464	Y	NMED		1.44E+00	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.025	J			NS	NS	21	N	NMED		1.21E-03	
Nickel	7440-02-0	mg/kg	13				20,500	N	753	N	NMED		1.73E-02	
Potassium	7440-09-7	mg/kg	2,100				NS	NS	20,800,000	N	NMED		1.01E-04	
Selenium	7782-49-2	mg/kg	1.1				NS	NS	1,750	N	NMED		6.29E-04	
Silver	7440-22-4	mg/kg	0.13				NS	NS	1,770	N	NMED		7.34E-05	
Sodium	7440-23-5	mg/kg	54				NS	NS	10,200,000	N	NMED		5.29E-06	
Thallium	7440-28-0	mg/kg	0.07	J			NS	NS	4	N	NMED		1.98E-02	
Vanadium	7440-62-2	mg/kg	9.7				NS	NS	614	N	NMED		1.58E-02	
Zinc	7440-66-6	mg/kg	28				NS	NS	106,000	N	NMED		2.64E-04	

TABLE D1-W22-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID W22
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.38	U			NS	NS	12	N	NMED			
Nitrate	14797-55-8	mg/kg	2.5	J			NS	NS	566,000	N	NMED		4.42E-06	
Perchlorate	14797-73-0	mg/kg	0.0023	U			NS	NS	248	N	NMED			
										Cumulative Risk/Hazard		**8E-10**	**2.4**	
										Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	1.9
Endocrine	0.13
GI	0.10
Blood	0.10
Kidneys	0.11
All Others	0.17

Notes:

[s] = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update).

2) NMED[C] = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

3) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

4) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect

TABLE D1-W23-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID W23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0019	U			28.1	N	2,350	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0019	U			NS	NS	14,400	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0019	U			7.98	N	1,560	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0019	U			18.8	N	2.61	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0019	U			78.6	N	15,600	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0019	U			NS	NS	440	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0019	U			29.3	N	141	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0019	U			NS	NS	63	N	RSL			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0048	U			0.051	N	7.09	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0019	U			240	N	82.9	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0019	U			NS	NS	300	N	RSL			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0048	U			0.0858	N	5.88	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0019	U			0.672	N	135	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0019	U			NS	NS	2,150	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0019	U			8.32	N	55.6	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0019	U			17.8	N	29	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0019	U			NS	NS	270	N	RSL			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0019	U			1,290	N	5,480	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0019	U			NS	NS	1,600	N	RSL			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0019	U			1,290	N	5,480	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0019	U			17.8	N	29	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.0029	U			NS	NS	37,400	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0019	U			NS	NS	1,560	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.0019	U			NS	NS	200	N	RSL			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0019	U			NS	NS	1,600	N	RSL			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0019	U			NS	NS	5,810	N	RSL			
Acetone	67-64-1	mg/kg	0.26				NS	NS	66,300	N	NMED		3.92E-06	
Benzene	71-43-2	mg/kg	0.0019	U			17.8	N	114	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.0019	U			NS	NS	290	N	RSL			
Bromochloromethane	74-97-5	mg/kg	0.0019	U			NS	NS	150	N	RSL			
Bromodichloromethane	75-27-4	mg/kg	0.0019	U			6.19	N	1,560	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0019	U			674	N	1,230	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0019	U			NS	NS	17.7	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.0019	U			NS	NS	1,550	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0019	U			10.7	N	144	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0019	U			NS	NS	378	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0019	U			NS	NS	19,000	N	NMED			
Chloroform	67-66-3	mg/kg	0.0019	U			5.9	N	306	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0048	U			41.1	N	268	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0019	U			NS	NS	156	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0019	U			29.3	N	141	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0019	U			13.9	N	1,230	N	NMED			

TABLE D1-W23-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID W23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0019	U			NS	NS	57.9	N	NMED			
Dichlorodifluoromethane	75-71-8	mg/kg	0.0019	U			NS	NS	182	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.0019	U			75.1	N	3,930	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0019	U			68.3	N	61.6	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0019	U			NS	NS	2,360	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0048	U			NS	NS	764	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0019	U			975	N	37,800	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.0097	U			766	N	409	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0019	U			NS	NS	3,900	N	RSL			
n-Propylbenzene	103-65-1	mg/kg	0.0019	U			NS	NS	3,800	N	RSL			
Naphthalene	91-20-3	mg/kg	0.0019	U			22.6	N	162	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0024	U			NS	NS	805	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.0019	U			NS	NS	2,360	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.0019	U			NS	NS	7,800	N	RSL			
Styrene	100-42-5	mg/kg	0.0019	U			NS	NS	7,260	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0019	U			NS	NS	7,800	N	RSL			
Tetrachloroethene	127-18-4	mg/kg	0.0019	U			337	N	111	N	NMED			
Toluene	108-88-3	mg/kg	0.0019	U			NS	NS	5,230	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0019	U			NS	NS	210	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0019	U			29.3	N	141	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0019	U			15.5	N	6.77	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0019	U			NS	NS	1,230	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0019	U			0.742	N	113	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.18	U			240	N	82.9	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.18	U			NS	NS	2,150	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.18	U			1,290	N	5,480	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.18	U			1,290	N	5,480	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.18	U			NS	NS	6,160	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.18	U			484	N	61.6	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.18	U			NS	NS	185	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.18	U			NS	NS	1,230	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.18	U			NS	NS	123	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.18	U			17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.18	U			3.56	N	18.5	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.18	U			NS	NS	6,260	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.18	U			NS	NS	391	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.18	U			NS	NS	232	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.18	U			NS	NS	3,200	N	RSL			
2-Nitroaniline	88-74-4	mg/kg	0.18	U			NS	NS	630	N	RSL			
2-Nitrophenol	88-75-5	mg/kg	0.18	U			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.18	U			11.8	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.18	U			270	N	250	N	RSL[S]			

TABLE D1-W23-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID W23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.18	U			NS	NS	4.93	N	NMED			
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.18	U			NS	NS	NS	NS	NS			
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.18	U			NS	NS	6,300	N	RSL			
4-Chloroaniline	106-47-8	mg/kg	0.18	U			27	N	32	N	RSL			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.18	U			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.18	U			270	N	250	N	RSL			
4-Nitrophenol	100-02-7	mg/kg	0.18	U			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.18	U			NS	NS	3,480	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.18	U			NS	NS	1,740	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.18	U			NS	NS	17,400	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.18	U			1.53	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			1.12	N	17.4	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.18	U			1.53	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.18	U			NS	NS	1,740	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.18	U			15.3	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.18	U			NS	NS	250,000	N	RSL			
Benzyl Alcohol	100-51-6	mg/kg	0.18	U			NS	NS	6,300	N	RSL			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.18	U			NS	NS	190	N	RSL			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.18	U			3.11	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.18	U			99.3	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.18	U			380	N	1,230	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.18	U			2,900	N	13,000	N	RSL			
Carbazole	86-74-8	mg/kg	0.18	U			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.18	U			153	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.18	U			NS	NS	6,160	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.18	U			NS	NS	630	N	RSL			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			0.153	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.18	U			NS	NS	78	N	RSL			
Diethylphthalate	84-66-2	mg/kg	0.18	U			NS	NS	49,300	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.18	U			NS	NS	61,600	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.18	U			NS	NS	2,320	N	NMED			
Fluorene	86-73-7	mg/kg	0.18	U			NS	NS	2,320	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.18	U			3.33	N	49.3	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.18	U			68.3	N	61.6	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.18	U			133	N	43.1	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.18	U			1.53	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.18	U			5,610	N	12,300	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.18	U			0.78	N	NS	NS	RSL			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	UJ			0.0234	N	0.493	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.18	U			1,090	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.18	U			22.6	N	162	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.18	U			60.4	N	131	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.18	U			9.85	N	234	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.18	U			NS	NS	1,740	N	NMED			
Phenol	108-95-2	mg/kg	0.18	U			NS	NS	18,500	N	NMED			
Pyrene	129-00-0	mg/kg	0.18	U			NS	NS	1,740	N	NMED			

TABLE D1-W23-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID W23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	2,200	N	RSL			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	6.3	N	RSL			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			211	N	36	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			3.56	N	18.5	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	7.7	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			31.6	N	70.4	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	6.16	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	7.64	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			333	N	247	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			83.1	N	301	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	156	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			60.4	N	131	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			313	N	6.16	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	3,850	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			1,300	N	570	N	RSL			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.021	U			69.6	N	3.98	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.021	U			1.81	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.011	U			1.86	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.011	U			2.43	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.011	U			2.43	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.011	U			2.43	N	1.14	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.011	U			2.43	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (2)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg	0.000000000081	J	0.00000027	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000016	J	0.0000053	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg	0.000000004	J	0.0000004	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.00000088	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.000000057	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000065	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000055	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000061	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.00000005	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.00000008	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.0000001	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.000000096	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000087	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.000000067	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000013	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000017	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.00000006	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.0000000057				0.000049	N	0.0000506	N	NMED	1.16E-09	1.12E-04	

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HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID W23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	19,000				NS	NS	78,000	N	NMED		2.44E-01	Nervous
Antimony	7440-36-0	mg/kg	0.079	J			NS	NS	31.3	N	NMED		2.52E-03	
Arsenic	7440-38-2	mg/kg	1.1				7.07	N	13	N	NMED	1.56E-06	8.46E-02	
Barium	7440-39-3	mg/kg	430				NS	NS	15,600	N	NMED		2.76E-02	
Beryllium	7440-41-7	mg/kg	1	J			64,400	N	156	N	NMED	1.55E-10	6.41E-03	
Cadmium	7440-43-9	mg/kg	0.87				85,900	N	70.5	N	NMED	1.01E-10	1.23E-02	
Calcium	7440-70-2	mg/kg	27,000				NS	NS	13,000,000	N	NMED		2.08E-03	
Chromium (Total) (3)	7440-47-3	mg/kg	16				96.6	N	45,200	N	NMED	1.66E-06	3.54E-04	
Cobalt	7440-48-4	mg/kg	5				17,200	N	23.4	N	NMED	2.91E-09	2.14E-01	Endocrine
Copper	7440-50-8	mg/kg	180	J			NS	NS	3,130	N	NMED		5.75E-02	
Iron	7439-89-6	mg/kg	10,000				NS	NS	54,800	N	NMED		1.82E-01	GI
Lead	7439-92-1	mg/kg	14				NS	NS	200	N	RSL			
Magnesium	7439-95-4	mg/kg	6,300				NS	NS	15,600,000	N	NMED		4.04E-04	
Manganese	7439-96-5	mg/kg	630				NS	NS	10,500	N	NMED		6.00E-02	
Mercury (Elemental)	7439-97-6	mg/kg	0.042	U			NS	NS	23.8	N	NMED			
Nickel	7440-02-0	mg/kg	14				595,000	N	1,560	N	NMED	2.35E-10	8.97E-03	
Potassium	7440-09-7	mg/kg	2,100				NS	NS	15,600,000	N	NMED		1.35E-04	
Selenium	7782-49-2	mg/kg	1.7				NS	NS	391	N	NMED		4.35E-03	
Silver	7440-22-4	mg/kg	0.15	J			NS	NS	391	N	NMED		3.84E-04	
Sodium	7440-23-5	mg/kg	64				NS	NS	7,820,000	N	NMED		8.18E-06	
Thallium	7440-28-0	mg/kg	0.06	J			NS	NS	0.782	N	NMED		7.67E-02	
Vanadium	7440-62-2	mg/kg	11				NS	NS	394	N	NMED		2.79E-02	
Zinc	7440-66-6	mg/kg	32				NS	NS	23,500	N	NMED		1.36E-03	

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HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID W23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.32	U			NS	NS	11.2	N	NMED			
Nitrate	14797-55-8	mg/kg	3	J			NS	NS	125,000	N	NMED		2.40E-05	
Perchlorate	14797-73-0	mg/kg	0.0021	U			NS	NS	54.8	N	NMED			
										Cumulative Risk/Hazard		**3E-06**	**1.0**	
										Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	0.2
Endocrine	0.21
GI	0.18
All Others	0.37

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect

TABLE D1-W23-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID W23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0019	U			137	N	39,400	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0019	U			NS	NS	72,500	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0019	U			39	N	26,000	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0019	U			92	N	12	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0019	U			383	N	260,000	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0019	U			NS	NS	2,260	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0019	U			146	N	695	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0019	U			NS	NS	930	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0048	U			1	N	34	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0019	U			1,250	N	423	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0019	U			NS	NS	1,800	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0048	U			1	N	41	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0019	U			3	N	738	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0019	U			NS	NS	13,000	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0019	U			41	N	286	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0019	U			87	N	137	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0019	U			NS	NS	1,500	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0019	U			6,730	N	90,800	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0019	U			NS	NS	23,000	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0019	U			6,730	N	90,800	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0019	U			87	N	137	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0029	U			NS	NS	411,000	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0019	U			NS	NS	26,000	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0019	U			NS	NS	1,300	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0019	U			NS	NS	23,000	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0019	U			NS	NS	81,600	N	RSL		
Acetone	67-64-1	mg/kg	0.26				NS	NS	960,000	N	NMED		2.71E-07
Benzene	71-43-2	mg/kg	0.0019	U			87	N	729	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0019	U			NS	NS	1,800	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0019	U			NS	NS	630	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0019	U			30	N	26,000	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0019	U			1,760	N	18,300	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0019	U			NS	NS	95	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0019	U			NS	NS	8,540	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0019	U			53	N	1,020	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0019	U			NS	NS	2,160	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0019	U			NS	NS	89,500	N	NMED		
Chloroform	67-66-3	mg/kg	0.0019	U			29	N	2,000	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0048	U			201	N	1,260	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0019	U			NS	NS	2,600	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0019	U			146	N	695	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0019	U			67	N	18,300	N	NMED		
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0019	U			NS	NS	288	N	NMED		

TABLE D1-W23-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID W23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dichlorodifluoromethane	75-71-8	mg/kg	0.0019	U			NS	NS	865	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0019	U			29,000	N	368	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0019	U			52	N	916	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0019	U			NS	NS	14,200	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0048	U			NS	NS	3,730	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0019	U			4,820	N	178,000	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.0097	U			14,400	N	5,130	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0019	U			NS	NS	58,000	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0019	U			NS	NS	24,000	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0019	U			108	N	843	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0024	U			NS	NS	3,940	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0019	U			NS	NS	14,200	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0019	U			NS	NS	120,000	N	RSL		
Styrene	100-42-5	mg/kg	0.0019	U			NS	NS	51,300	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0019	U			NS	NS	120,000	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0019	U			1,650	N	629	N	NMED		
Toluene	108-88-3	mg/kg	0.0019	U			NS	NS	61,300	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0019	U			NS	NS	1,100	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0019	U			146	N	695	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0019	U			112	N	37	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0019	U			NS	NS	6,030	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0019	U			28	N	46	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.18	U			1,250	N	423	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.18	U			NS	NS	13,000	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.18	U			6,730	N	90,800	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.18	U			6,730	N	90,800	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.18	U			NS	NS	91,600	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.18	U			2,330	N	916	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.18	U			NS	NS	2,750	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.18	U			NS	NS	18,300	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.18	U			NS	NS	1,830	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.18	U			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.18	U			17	N	276	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.18	U			NS	NS	104,000	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.18	U			NS	NS	6,490	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.18	U			NS	NS	3,370	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.18	U			NS	NS	41,000	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.18	U			NS	NS	8,000	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.18	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.18	U			NS	NS	410	N	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.18	U			1,100	N	3,300	N	RSL[S]		
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.18	U			NS	NS	73	N	NMED		

TABLE D1-W23-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID W23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.18	U			NS	NS	NS	NS	NS		
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.18	U			NS	NS	82,000	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.18	U			110	N	410	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.18	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.18	U			1,100	N	3,300	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.18	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.18	U			NS	NS	50,500	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.18	U			NS	NS	25,300	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.18	U			NS	NS	253,000	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.18	U			32	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			24	N	251	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.18	U			32	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.18	U			NS	NS	25,300	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.18	U			323	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.18	U			NS	NS	3,300,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.18	U			NS	NS	82,000	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.18	U			NS	NS	2,500	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.18	U			16	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.18	U			519	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.18	U			1,830	N	18,300	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.18	U			12,000	N	160,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.18	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.18	U			3,230	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.18	U			NS	NS	91,600	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.18	U			NS	NS	8,200	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			3	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.18	U			NS	NS	1,200	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.18	U			NS	NS	733,000	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.18	U			NS	NS	916,000	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.18	U			NS	NS	33,700	N	NMED		
Fluorene	86-73-7	mg/kg	0.18	U			NS	NS	33,700	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.18	U			16	N	733	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.18	U			52	N	916	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.18	U			641	N	641	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.18	U			32	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.18	U			27,000	N	183,000	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.18	U			3	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	UJ			1	N	7	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.18	U			5,240	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.18	U			108	N	843	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.18	U			293	N	1,540	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.18	U			45	N	3,180	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.18	U			NS	NS	27,500	N	NMED		
Phenol	108-95-2	mg/kg	0.18	U			NS	NS	275,000	N	NMED		
Pyrene	129-00-0	mg/kg	0.18	U			NS	NS	25,300	N	NMED		

TABLE D1-W23-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID W23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			5,300	N	7,400	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.021	U			304	N	57	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.021	U			9	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.011	U			9	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.011	U			11	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.011	U			11	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.011	U			11	N	16	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.011	U			11	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg	0.000000000081	J	0.00000027	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000016	J	0.0000053	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg	0.000000004	J	0.0000004	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.00000088	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.000000057	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000065	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000055	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000061	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.00000005	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.00000008	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.0000001	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.000000096	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000087	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.000000067	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000013	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000017	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.00000006	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.0000000057				0.000238	N	0.000808	N	NMED	2.38E-10	7.02E-06

TABLE D1-W23-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID W23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	19,000				NS	NS	1,290,000	N	NMED		1.47E-02
Antimony	7440-36-0	mg/kg	0.079	J			NS	NS	519	N	NMED		1.52E-04
Arsenic	7440-38-2	mg/kg	1.1				36	N	208	N	NMED	3.06E-07	5.29E-03
Barium	7440-39-3	mg/kg	430				NS	NS	255,000	N	NMED		1.69E-03
Beryllium	7440-41-7	mg/kg	1	J			313,000	N	2,580	N	NMED	3.19E-11	3.88E-04
Cadmium	7440-43-9	mg/kg	0.87				417,000	N	1,110	N	NMED	2.09E-11	7.84E-04
Calcium	7440-70-2	mg/kg	27,000				NS	NS	32,400,000	N	NMED		8.33E-04
Chromium (Total) (3)	7440-47-3	mg/kg	16				505	N	314,000	N	NMED	3.17E-07	5.10E-05
Cobalt	7440-48-4	mg/kg	5				83,400	N	388	N	NMED	6.00E-10	1.29E-02
Copper	7440-50-8	mg/kg	180	J			NS	NS	51,900	N	NMED		3.47E-03
Iron	7439-89-6	mg/kg	10,000				NS	NS	908,000	N	NMED		1.10E-02
Lead	7439-92-1	mg/kg	14				NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	6,300				NS	NS	5,680,000	N	NMED		1.11E-03
Manganese	7439-96-5	mg/kg	630				NS	NS	160,000	N	NMED		3.94E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.042	U			NS	NS	112	N	NMED		
Nickel	7440-02-0	mg/kg	14				2,890,000	N	25,700	N	NMED	4.84E-11	5.45E-04
Potassium	7440-09-7	mg/kg	2,100				NS	NS	76,200,000	N	NMED		2.76E-05
Selenium	7782-49-2	mg/kg	1.7				NS	NS	6,490	N	NMED		2.62E-04
Silver	7440-22-4	mg/kg	0.15	J			NS	NS	6,490	N	NMED		2.31E-05
Sodium	7440-23-5	mg/kg	64				NS	NS	37,300,000	N	NMED		1.72E-06
Thallium	7440-28-0	mg/kg	0.06	J			NS	NS	13	N	NMED		4.62E-03
Vanadium	7440-62-2	mg/kg	11				NS	NS	6,530	N	NMED		1.68E-03
Zinc	7440-66-6	mg/kg	32				NS	NS	38,900	N	NMED		8.23E-04

TABLE D1-W23-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID W23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.32	U			NS	NS	63	N	NMED		
Nitrate	14797-55-8	mg/kg	3	J			NS	NS	2,080,000	N	NMED		1.44E-06
Perchlorate	14797-73-0	mg/kg	0.0021	U			NS	NS	908	N	NMED		
										Cumulative Risk/Hazard		**6E-07**	**0.06**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
IEUBK = Integrated Exposure Uptake Biokentic Model
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect

TABLE D1-W23-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID W23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0019	U			659	N	10,600	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0019	U			NS	NS	13,600	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0019	U			197	N	7,080	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0019	U			4,300	N	2	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0019	U			1,820	N	70,800	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0019	U			NS	NS	424	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0019	U			781	N	130	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0019	U			NS	NS	283	N	NMED[C]			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0048	U			8	N	6	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0019	U			8,540	N	79	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0019	U			NS	NS	492	N	NMED[C]			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0048	U			6	N	8	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0019	U			16	N	140	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0019	U			NS	NS	2,500	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0019	U			195	N	54	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0019	U			415	N	25	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0019	U			NS	NS	422	N	NMED[C]			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0019	U			45,900	N	24,800	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0019	U			NS	NS	7,080	N	NMED[C]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0019	U			45,900	N	24,800	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0019	U			415	N	25	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.0029	U			NS	NS	90,700	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0019	U			NS	NS	7,080	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.0019	U			NS	NS	599	N	NMED[C]			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0019	U			NS	NS	7,080	N	NMED[C]			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0019	U			NS	NS	20,400	N	NMED[C]			
Acetone	67-64-1	mg/kg	0.26				NS	NS	242,000	N	NMED		1.07E-06	
Benzene	71-43-2	mg/kg	0.0019	U			423	N	142	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.0019	U			NS	NS	538	N	NMED[C]			
Bromochloromethane	74-97-5	mg/kg	0.0019	U			NS	NS	296	N	NMED[C]			
Bromodichloromethane	75-27-4	mg/kg	0.0019	U			143	N	7,080	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0019	U			23,700	N	5,380	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0019	U			NS	NS	18	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.0019	U			NS	NS	1,620	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0019	U			252	N	202	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0019	U			NS	NS	412	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0019	U			NS	NS	16,600	N	NMED			
Chloroform	67-66-3	mg/kg	0.0019	U			134	N	391	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0048	U			956	N	235	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0019	U			NS	NS	708	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0019	U			781	N	130	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0019	U			340	N	5,380	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0019	U			NS	NS	54	N	NMED			

TABLE D1-W23-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID W23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Dichlorodifluoromethane	75-71-8	mg/kg	0.0019	U			NS	NS	161	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.0019	U			1,770	N	5,800	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0019	U			2,400	N	269	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0019	U			NS	NS	2,740	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0048	U			NS	NS	696	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0019	U			24,200	N	33,100	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.0097	U			89,600	N	1,210	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0019	U			NS	NS	17,700	N	NMED[C]			
n-Propylbenzene	103-65-1	mg/kg	0.0019	U			NS	NS	6,730	N	NMED[C]			
Naphthalene	91-20-3	mg/kg	0.0019	U			633	N	159	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0024	U			NS	NS	736	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.0019	U			NS	NS	2,740	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.0019	U			NS	NS	35,400	N	NMED[C]			
Styrene	100-42-5	mg/kg	0.0019	U			NS	NS	10,200	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0019	U			NS	NS	35,400	N	NMED[C]			
Tetrachloroethene	127-18-4	mg/kg	0.0019	U			7,910	N	120	N	NMED			
Toluene	108-88-3	mg/kg	0.0019	U			NS	NS	14,000	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0019	U			NS	NS	206	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0019	U			781	N	130	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0019	U			5,370	N	7	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0019	U			NS	NS	1,130	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0019	U			161	N	162	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.18	U			8,540	N	79	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.18	U			NS	NS	2,500	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.18	U			45,900	N	24,800	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.18	U			45,900	N	24,800	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.18	U			NS	NS	26,900	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.18	U			17,000	N	269	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.18	U			NS	NS	807	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.18	U			NS	NS	5,380	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.18	U			NS	NS	538	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.18	U			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.18	U			165	N	81	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.18	U			NS	NS	28,300	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.18	U			NS	NS	1,770	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.18	U			NS	NS	1,000	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.18	U			NS	NS	13,500	N	NMED[C]			
2-Nitroaniline	88-74-4	mg/kg	0.18	U			NS	NS	2,690	N	NMED[C]			
2-Nitrophenol	88-75-5	mg/kg	0.18	U			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.18	U			410	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.18	U			135	N	1,080	N	NMED[SC]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.18	U			NS	NS	22	N	NMED			

TABLE D1-W23-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID W23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.18	U			NS	NS	NS	NS	NS			
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.18	U			NS	NS	26,900	N	NMED[C]			
4-Chloroaniline	106-47-8	mg/kg	0.18	U			14	N	135	N	NMED[C]			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.18	U			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.18	U			135	N	1,080	N	NMED[C]			
4-Nitrophenol	100-02-7	mg/kg	0.18	U			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.18	U			NS	NS	15,100	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.18	U			NS	NS	7,530	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.18	U			NS	NS	75,300	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.18	U			240	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			173	N	15	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.18	U			240	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.18	U			NS	NS	7,530	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.18	U			2,310	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.18	U			NS	NS	1,080,000	N	NMED[C]			
Benzyl Alcohol	100-51-6	mg/kg	0.18	U			NS	NS	26,900	N	NMED[C]			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.18	U			NS	NS	807	N	NMED[C]			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.18	U			2	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.18	U			3,540	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.18	U			13,400	N	5,380	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.18	U			1,420	N	53,800	N	NMED[C]			
Carbazole	86-74-8	mg/kg	0.18	U			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.18	U			23,100	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.18	U			NS	NS	26,900	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.18	U			NS	NS	2,690	N	NMED[C]			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			24	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.18	U			NS	NS	269	N	NMED[C]			
Diethylphthalate	84-66-2	mg/kg	0.18	U			NS	NS	215,000	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.18	U			NS	NS	269,000	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.18	U			NS	NS	10,000	N	NMED			
Fluorene	86-73-7	mg/kg	0.18	U			NS	NS	10,000	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.18	U			117	N	215	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.18	U			2,400	N	269	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.18	U			4,670	N	188	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.18	U			240	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.18	U			198,000	N	53,700	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.18	U			0.38	N	NA	N	NMED[C]			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	UJ			4	N	2	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.18	U			37,900	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.18	U			633	N	159	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.18	U			1,350	N	353	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.18	U			346	N	989	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.18	U			NS	NS	8,070	N	NMED			
Phenol	108-95-2	mg/kg	0.18	U			NS	NS	77,400	N	NMED			
Pyrene	129-00-0	mg/kg	0.18	U			NS	NS	7,530	N	NMED			

TABLE D1-W23-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID W23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	8,070	N	NMED[C]			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	27	N	NMED[C]			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			626	N	2,420	N	NMED[C]			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.021	U			2,440	N	17	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.021	U			55	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.011	U			58	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.011	U			85	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.011	U			85	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.011	U			85	N	5	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.011	U			85	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (3)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg	0.000000000081	J	0.00000027	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000016	J	0.0000053	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg	0.000000004	J	0.0000004	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.00000088	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.000000057	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000065	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000055	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000061	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.00000005	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.00000008	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.0000001	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.000000096	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000087	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.000000067	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000013	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000017	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.00000006	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.0000000057				0.00172	N	0.000226	N	NMED	3.30E-11	2.51E-05	

TABLE D1-W23-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID W23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	19,000				NS	NS	41,400	N	NMED		4.59E-01	Nervous
Antimony	7440-36-0	mg/kg	0.079	J			NS	NS	142	N	NMED		5.56E-04	
Arsenic	7440-38-2	mg/kg	1.1				216	N	41	N	NMED		2.67E-02	
Barium	7440-39-3	mg/kg	430				NS	NS	4,390	N	NMED		9.79E-02	
Beryllium	7440-41-7	mg/kg	1	J			2,710	N	148	N	NMED		6.76E-03	
Cadmium	7440-43-9	mg/kg	0.87				3,610	N	72	N	NMED		1.21E-02	
Calcium	7440-70-2	mg/kg	27,000				NS	NS	8,850,000	N	NMED		3.05E-03	
Chromium (Total) (4)	7440-47-3	mg/kg	16				468	N	134	N	NMED		1.19E-01	GI, Blood
Cobalt	7440-48-4	mg/kg	5				722	N	37	N	NMED		1.36E-01	Endocrine
Copper	7440-50-8	mg/kg	180	J			NS	NS	14,200	N	NMED		1.27E-02	
Iron	7439-89-6	mg/kg	10,000				NS	NS	248,000	N	NMED		4.03E-02	
Lead	7439-92-1	mg/kg	14				NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	6,300				NS	NS	1,550,000	N	NMED		4.06E-03	
Manganese	7439-96-5	mg/kg	630				NS	NS	464	Y	NMED		1.36E+00	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.042	U			NS	NS	21	N	NMED			
Nickel	7440-02-0	mg/kg	14				20,500	N	753	N	NMED		1.86E-02	
Potassium	7440-09-7	mg/kg	2,100				NS	NS	20,800,000	N	NMED		1.01E-04	
Selenium	7782-49-2	mg/kg	1.7				NS	NS	1,750	N	NMED		9.71E-04	
Silver	7440-22-4	mg/kg	0.15	J			NS	NS	1,770	N	NMED		8.47E-05	
Sodium	7440-23-5	mg/kg	64				NS	NS	10,200,000	N	NMED		6.27E-06	
Thallium	7440-28-0	mg/kg	0.06	J			NS	NS	4	N	NMED		1.69E-02	
Vanadium	7440-62-2	mg/kg	11				NS	NS	614	N	NMED		1.79E-02	
Zinc	7440-66-6	mg/kg	32				NS	NS	106,000	N	NMED		3.02E-04	

TABLE D1-W23-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID W23
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.32	U			NS	NS	12	N	NMED			
Nitrate	14797-55-8	mg/kg	3	J			NS	NS	566,000	N	NMED		5.30E-06	
Perchlorate	14797-73-0	mg/kg	0.0021	U			NS	NS	248	N	NMED			
										Cumulative Risk/Hazard		**3E-11**	**2.3**	
										Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	1.8
Endocrine	0.14
GI	0.12
Blood	0.12
All Others	0.26

Notes:

[s] = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update).

2) NMED[C] = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

3) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

4) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect

TABLE D1-W24-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID W24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0022	U			28.1	N	2,350	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0022	U			NS	NS	14,400	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0022	U			7.98	N	1,560	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0022	U			18.8	N	2.61	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0022	U			78.6	N	15,600	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0022	U			NS	NS	440	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0022	U			29.3	N	141	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0022	U			NS	NS	63	N	RSL			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0056	U			0.051	N	7.09	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0022	U			240	N	82.9	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0022	U			NS	NS	300	N	RSL			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0056	U			0.0858	N	5.88	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0022	U			0.672	N	135	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0022	U			NS	NS	2,150	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0022	U			8.32	N	55.6	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0022	U			17.8	N	29	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0022	U			NS	NS	270	N	RSL			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0022	U			1,290	N	5,480	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0022	U			NS	NS	1,600	N	RSL			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0022	U			1,290	N	5,480	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0022	U			17.8	N	29	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.032	J			NS	NS	37,400	N	NMED		8.56E-07	
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0022	U			NS	NS	1,560	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.0022	U			NS	NS	200	N	RSL			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0022	U			NS	NS	1,600	N	RSL			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0022	U			NS	NS	5,810	N	RSL			
Acetone	67-64-1	mg/kg	0.54	J			NS	NS	66,300	N	NMED		8.14E-06	
Benzene	71-43-2	mg/kg	0.0022	U			17.8	N	114	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.0022	U			NS	NS	290	N	RSL			
Bromochloromethane	74-97-5	mg/kg	0.0022	U			NS	NS	150	N	RSL			
Bromodichloromethane	75-27-4	mg/kg	0.0022	U			6.19	N	1,560	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0022	U			674	N	1,230	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0022	U			NS	NS	17.7	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.0022	U			NS	NS	1,550	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0022	U			10.7	N	144	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0022	U			NS	NS	378	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0022	U			NS	NS	19,000	N	NMED			
Chloroform	67-66-3	mg/kg	0.0022	U			5.9	N	306	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0056	U			41.1	N	268	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0022	U			NS	NS	156	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0022	U			29.3	N	141	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0022	U			13.9	N	1,230	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0022	U			NS	NS	57.9	N	NMED			

TABLE D1-W24-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID W24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Dichlorodifluoromethane	75-71-8	mg/kg	0.0022	U			NS	NS	182	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.0022	U			75.1	N	3,930	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0022	U			68.3	N	61.6	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0022	U			NS	NS	2,360	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0056	U			NS	NS	764	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0022	U			975	N	37,800	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.011	U			766	N	409	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0022	U			NS	NS	3,900	N	RSL			
n-Propylbenzene	103-65-1	mg/kg	0.0022	U			NS	NS	3,800	N	RSL			
Naphthalene	91-20-3	mg/kg	0.0022	U			22.6	N	162	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0028	U			NS	NS	805	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.0022	U			NS	NS	2,360	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.0022	U			NS	NS	7,800	N	RSL			
Styrene	100-42-5	mg/kg	0.0022	U			NS	NS	7,260	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0022	U			NS	NS	7,800	N	RSL			
Tetrachloroethene	127-18-4	mg/kg	0.0022	U			337	N	111	N	NMED			
Toluene	108-88-3	mg/kg	0.0022	U			NS	NS	5,230	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0022	U			NS	NS	210	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0022	U			29.3	N	141	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0022	U			15.5	N	6.77	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0022	U			NS	NS	1,230	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0022	U			0.742	N	113	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	U			240	N	82.9	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	U			NS	NS	2,150	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	U			1,290	N	5,480	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	U			1,290	N	5,480	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	U			NS	NS	6,160	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	U			484	N	61.6	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	U			NS	NS	185	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	U			NS	NS	1,230	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	U			NS	NS	123	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	U			17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	U			3.56	N	18.5	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	U			NS	NS	6,260	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.17	U			NS	NS	391	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.17	U			NS	NS	232	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	U			NS	NS	3,200	N	RSL			
2-Nitroaniline	88-74-4	mg/kg	0.17	U			NS	NS	630	N	RSL			
2-Nitrophenol	88-75-5	mg/kg	0.17	U			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	U			11.8	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.17	U			270	N	250	N	RSL[S]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	U			NS	NS	4.93	N	NMED			
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	U			NS	NS	NS	NS	NS			

TABLE D1-W24-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID W24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	U			NS	NS	6,300	N	RSL			
4-Chloroaniline	106-47-8	mg/kg	0.17	U			27	N	32	N	RSL			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	U			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.17	U			270	N	250	N	RSL			
4-Nitrophenol	100-02-7	mg/kg	0.17	U			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.17	U			NS	NS	3,480	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.17	U			NS	NS	1,740	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.17	U			NS	NS	17,400	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.17	U			1.53	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.13	U			1.12	N	17.4	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	U			1.53	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	U			NS	NS	1,740	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	U			15.3	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.17	U			NS	NS	250,000	N	RSL			
Benzyl Alcohol	100-51-6	mg/kg	0.17	U			NS	NS	6,300	N	RSL			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	U			NS	NS	190	N	RSL			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	U			3.11	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	U			99.3	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	U			380	N	1,230	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.17	U			2,900	N	13,000	N	RSL			
Carbazole	86-74-8	mg/kg	0.17	U			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.17	U			153	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.17	U			NS	NS	6,160	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.17	U			NS	NS	630	N	RSL			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	U			0.153	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.17	U			NS	NS	78	N	RSL			
Diethylphthalate	84-66-2	mg/kg	0.17	U			NS	NS	49,300	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.17	U			NS	NS	61,600	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.17	U			NS	NS	2,320	N	NMED			
Fluorene	86-73-7	mg/kg	0.17	U			NS	NS	2,320	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.17	U			3.33	N	49.3	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	U			68.3	N	61.6	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.17	U			133	N	43.1	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	U			1.53	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.17	U			5,610	N	12,300	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	U			0.78	N	NS	NS	RSL			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	UJ			0.0234	N	0.493	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	U			1,090	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.17	U			22.6	N	162	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.17	U			60.4	N	131	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.17	U			9.85	N	234	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.17	U			NS	NS	1,740	N	NMED			
Phenol	108-95-2	mg/kg	0.17	U			NS	NS	18,500	N	NMED			
Pyrene	129-00-0	mg/kg	0.17	U			NS	NS	1,740	N	NMED			

TABLE D1-W24-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID W24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.15	UJ			NS	NS	2,200	N	RSL			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.15	UJ			NS	NS	6.3	N	RSL			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.15	UJ			211	N	36	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.15	UJ			17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.15	UJ			3.56	N	18.5	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.15	UJ			NS	NS	7.7	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.15	UJ			31.6	N	70.4	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.15	UJ			NS	NS	6.16	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.15	UJ			NS	NS	7.64	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.15	UJ			333	N	247	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.15	UJ			83.1	N	301	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.15	UJ			NS	NS	156	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.15	UJ			60.4	N	131	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.3	UJ			313	N	6.16	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.15	UJ			NS	NS	3,850	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.5	UJ			1,300	N	570	N	RSL			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.021	UJ			69.6	N	3.98	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.021	UJ			1.81	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.01	UJ			1.86	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.01	UJ			2.43	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.01	UJ			2.43	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.01	UJ			2.43	N	1.14	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.01	UJ			2.43	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (2)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg	0.0000000006	J	0.000002	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000054	J	0.000018	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg	0.000000035	J	0.0000035	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.0000027	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.0000001	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.00000013	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000018	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg	0.000000012	J	0.00000012	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg	0.000000025	J	0.00000025	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		UJ	0.00000016	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000016	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.00000011	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.000000057	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000016	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000023	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000085	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.000000078				0.000049	N	0.0000506	N	NMED	1.59E-08	1.54E-03	

TABLE D1-W24-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID W24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	17,000				NS	NS	78,000	N	NMED		2.18E-01	Nervous
Antimony	7440-36-0	mg/kg	0.28				NS	NS	31.3	N	NMED		8.95E-03	
Arsenic	7440-38-2	mg/kg	1.5				7.07	N	13	N	NMED	2.12E-06	1.15E-01	Heart/Endocrine
Barium	7440-39-3	mg/kg	390				NS	NS	15,600	N	NMED		2.50E-02	
Beryllium	7440-41-7	mg/kg	0.86	J			64,400	N	156	N	NMED	1.34E-10	5.51E-03	
Cadmium	7440-43-9	mg/kg	1.7	J			85,900	N	70.5	N	NMED	1.98E-10	2.41E-02	
Calcium	7440-70-2	mg/kg	35,000				NS	NS	13,000,000	N	NMED		2.69E-03	
Chromium (Total) (3)	7440-47-3	mg/kg	19				96.6	N	45,200	N	NMED	1.97E-06	4.20E-04	
Cobalt	7440-48-4	mg/kg	4.5	J			17,200	N	23.4	N	NMED	2.62E-09	1.92E-01	Endocrine
Copper	7440-50-8	mg/kg	350				NS	NS	3,130	N	NMED		1.12E-01	GI
Iron	7439-89-6	mg/kg	8,500				NS	NS	54,800	N	NMED		1.55E-01	GI
Lead	7439-92-1	mg/kg	22				NS	NS	200	N	RSL			
Magnesium	7439-95-4	mg/kg	6,400				NS	NS	15,600,000	N	NMED		4.10E-04	
Manganese	7439-96-5	mg/kg	550				NS	NS	10,500	N	NMED		5.24E-02	
Mercury (Elemental)	7439-97-6	mg/kg	0.14				NS	NS	23.8	N	NMED		5.88E-03	
Nickel	7440-02-0	mg/kg	13				595,000	N	1,560	N	NMED	2.18E-10	8.33E-03	
Potassium	7440-09-7	mg/kg	1,700				NS	NS	15,600,000	N	NMED		1.09E-04	
Selenium	7782-49-2	mg/kg	1.2				NS	NS	391	N	NMED		3.07E-03	
Silver	7440-22-4	mg/kg	0.28				NS	NS	391	N	NMED		7.16E-04	
Sodium	7440-23-5	mg/kg	45				NS	NS	7,820,000	N	NMED		5.75E-06	
Thallium	7440-28-0	mg/kg	0.061	J			NS	NS	0.782	N	NMED		7.80E-02	
Vanadium	7440-62-2	mg/kg	10				NS	NS	394	N	NMED		2.54E-02	
Zinc	7440-66-6	mg/kg	55				NS	NS	23,500	N	NMED		2.34E-03	

TABLE D1-W24-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID W24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.33	U			NS	NS	11.2	N	NMED			
Nitrate	14797-55-8	mg/kg	24				NS	NS	125,000	N	NMED		1.92E-04	
Perchlorate	14797-73-0	mg/kg	0.002	U			NS	NS	54.8	N	NMED			
										Cumulative Risk/Hazard		**4E-06**	**1.0**	
										Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	0.22
Endocrine	0.31
GI	0.27
Heart	0.12
All Others	0.25

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect

TABLE D1-W24-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID W24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0022	U			137	N	39,400	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0022	U			NS	NS	72,500	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0022	U			39	N	26,000	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0022	U			92	N	12	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0022	U			383	N	260,000	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0022	U			NS	NS	2,260	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0022	U			146	N	695	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0022	U			NS	NS	930	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0056	U			1	N	34	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0022	U			1,250	N	423	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0022	U			NS	NS	1,800	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0056	U			1	N	41	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0022	U			3	N	738	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0022	U			NS	NS	13,000	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0022	U			41	N	286	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0022	U			87	N	137	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0022	U			NS	NS	1,500	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0022	U			6,730	N	90,800	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0022	U			NS	NS	23,000	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0022	U			6,730	N	90,800	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0022	U			87	N	137	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.032	J			NS	NS	411,000	N	NMED		7.79E-08
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0022	U			NS	NS	26,000	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0022	U			NS	NS	1,300	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0022	U			NS	NS	23,000	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0022	U			NS	NS	81,600	N	RSL		
Acetone	67-64-1	mg/kg	0.54	J			NS	NS	960,000	N	NMED		5.63E-07
Benzene	71-43-2	mg/kg	0.0022	U			87	N	729	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0022	U			NS	NS	1,800	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0022	U			NS	NS	630	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0022	U			30	N	26,000	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0022	U			1,760	N	18,300	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0022	U			NS	NS	95	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0022	U			NS	NS	8,540	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0022	U			53	N	1,020	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0022	U			NS	NS	2,160	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0022	U			NS	NS	89,500	N	NMED		
Chloroform	67-66-3	mg/kg	0.0022	U			29	N	2,000	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0056	U			201	N	1,260	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0022	U			NS	NS	2,600	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0022	U			146	N	695	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0022	U			67	N	18,300	N	NMED		

TABLE D1-W24-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID W24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0022	U			NS	NS	288	N	NMED		
Dichlorodifluoromethane	75-71-8	mg/kg	0.0022	U			NS	NS	865	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0022	U			29,000	N	368	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0022	U			52	N	916	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0022	U			NS	NS	14,200	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0056	U			NS	NS	3,730	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0022	U			4,820	N	178,000	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.011	U			14,400	N	5,130	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0022	U			NS	NS	58,000	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0022	U			NS	NS	24,000	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0022	U			108	N	843	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0028	U			NS	NS	3,940	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0022	U			NS	NS	14,200	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0022	U			NS	NS	120,000	N	RSL		
Styrene	100-42-5	mg/kg	0.0022	U			NS	NS	51,300	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0022	U			NS	NS	120,000	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0022	U			1,650	N	629	N	NMED		
Toluene	108-88-3	mg/kg	0.0022	U			NS	NS	61,300	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0022	U			NS	NS	1,100	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0022	U			146	N	695	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0022	U			112	N	37	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0022	U			NS	NS	6,030	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0022	U			28	N	46	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	U			1,250	N	423	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	U			NS	NS	13,000	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	U			6,730	N	90,800	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	U			6,730	N	90,800	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	U			NS	NS	91,600	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	U			2,330	N	916	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	U			NS	NS	2,750	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	U			NS	NS	18,300	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	U			NS	NS	1,830	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	U			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	U			17	N	276	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	U			NS	NS	104,000	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.17	U			NS	NS	6,490	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.17	U			NS	NS	3,370	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	U			NS	NS	41,000	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.17	U			NS	NS	8,000	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.17	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	U			NS	NS	410	N	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.17	U			1,100	N	3,300	N	RSL[S]		

TABLE D1-W24-2
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FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	U			NS	NS	73	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	U			NS	NS	NS	NS	NS		
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	U			NS	NS	82,000	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.17	U			110	N	410	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.17	U			1,100	N	3,300	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.17	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.17	U			NS	NS	50,500	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.17	U			NS	NS	25,300	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.17	U			NS	NS	253,000	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.17	U			32	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.13	U			24	N	251	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	U			32	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	U			NS	NS	25,300	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	U			323	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.17	U			NS	NS	3,300,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.17	U			NS	NS	82,000	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	U			NS	NS	2,500	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	U			16	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	U			519	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	U			1,830	N	18,300	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.17	U			12,000	N	160,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.17	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.17	U			3,230	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.17	U			NS	NS	91,600	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.17	U			NS	NS	8,200	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	U			3	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.17	U			NS	NS	1,200	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.17	U			NS	NS	733,000	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.17	U			NS	NS	916,000	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.17	U			NS	NS	33,700	N	NMED		
Fluorene	86-73-7	mg/kg	0.17	U			NS	NS	33,700	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.17	U			16	N	733	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	U			52	N	916	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.17	U			641	N	641	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	U			32	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.17	U			27,000	N	183,000	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	U			3	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	UJ			1	N	7	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	U			5,240	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.17	U			108	N	843	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.17	U			293	N	1,540	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.17	U			45	N	3,180	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.17	U			NS	NS	27,500	N	NMED		
Phenol	108-95-2	mg/kg	0.17	U			NS	NS	275,000	N	NMED		
Pyrene	129-00-0	mg/kg	0.17	U			NS	NS	25,300	N	NMED		

TABLE D1-W24-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID W24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.15	UJ			NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.15	UJ			NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.15	UJ			1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.15	UJ			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.15	UJ			17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.15	UJ			NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.15	UJ			165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.15	UJ			NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.15	UJ			NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.15	UJ			1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.15	UJ			428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.15	UJ			NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.15	UJ			293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.3	UJ			1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.15	UJ			NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.5	UJ			5,300	N	7,400	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.021	UJ			304	N	57	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.021	UJ			9	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.01	UJ			9	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.01	UJ			11	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.01	UJ			11	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.01	UJ			11	N	16	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.01	UJ			11	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg	0.0000000006	J	0.000002	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000054	J	0.000018	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg	0.000000035	J	0.0000035	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.0000027	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.0000001	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.00000013	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000018	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg	0.000000012	J	0.00000012	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg	0.000000025	J	0.00000025	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		UJ	0.00000016	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000016	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.00000011	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.000000057	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000016	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000023	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000085	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.000000078				0.000238	N	0.000808	N	NMED	3.28E-09	9.65E-05

TABLE D1-W24-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID W24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	17,000				NS	NS	1,290,000	N	NMED		1.32E-02
Antimony	7440-36-0	mg/kg	0.28				NS	NS	519	N	NMED		5.39E-04
Arsenic	7440-38-2	mg/kg	1.5				36	N	208	N	NMED	4.18E-07	7.21E-03
Barium	7440-39-3	mg/kg	390				NS	NS	255,000	N	NMED		1.53E-03
Beryllium	7440-41-7	mg/kg	0.86	J			313,000	N	2,580	N	NMED	2.75E-11	3.33E-04
Cadmium	7440-43-9	mg/kg	1.7	J			417,000	N	1,110	N	NMED	4.08E-11	1.53E-03
Calcium	7440-70-2	mg/kg	35,000				NS	NS	32,400,000	N	NMED		1.08E-03
Chromium (Total) (3)	7440-47-3	mg/kg	19				505	N	314,000	N	NMED	3.76E-07	6.05E-05
Cobalt	7440-48-4	mg/kg	4.5	J			83,400	N	388	N	NMED	5.40E-10	1.16E-02
Copper	7440-50-8	mg/kg	350				NS	NS	51,900	N	NMED		6.74E-03
Iron	7439-89-6	mg/kg	8,500				NS	NS	908,000	N	NMED		9.36E-03
Lead	7439-92-1	mg/kg	22				NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	6,400				NS	NS	5,680,000	N	NMED		1.13E-03
Manganese	7439-96-5	mg/kg	550				NS	NS	160,000	N	NMED		3.44E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.14				NS	NS	112	N	NMED		1.25E-03
Nickel	7440-02-0	mg/kg	13				2,890,000	N	25,700	N	NMED	4.50E-11	5.06E-04
Potassium	7440-09-7	mg/kg	1,700				NS	NS	76,200,000	N	NMED		2.23E-05
Selenium	7782-49-2	mg/kg	1.2				NS	NS	6,490	N	NMED		1.85E-04
Silver	7440-22-4	mg/kg	0.28				NS	NS	6,490	N	NMED		4.31E-05
Sodium	7440-23-5	mg/kg	45				NS	NS	37,300,000	N	NMED		1.21E-06
Thallium	7440-28-0	mg/kg	0.061	J			NS	NS	13	N	NMED		4.69E-03
Vanadium	7440-62-2	mg/kg	10				NS	NS	6,530	N	NMED		1.53E-03
Zinc	7440-66-6	mg/kg	55				NS	NS	38,900	N	NMED		1.41E-03

TABLE D1-W24-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID W24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.33	U			NS	NS	63	N	NMED		
Nitrate	14797-55-8	mg/kg	24				NS	NS	2,080,000	N	NMED		1.15E-05
Perchlorate	14797-73-0	mg/kg	0.002	U			NS	NS	908	N	NMED		
										Cumulative Risk/Hazard		**8E-07**	**0.07**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
IEUBK = Integrated Exposure Uptake Biokentic Model
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect

TABLE D1-W24-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID W24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0022	U			659	N	10,600	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0022	U			NS	NS	13,600	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0022	U			197	N	7,080	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0022	U			4,300	N	2	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0022	U			1,820	N	70,800	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0022	U			NS	NS	424	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0022	U			781	N	130	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0022	U			NS	NS	283	N	NMED[C]			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0056	U			8	N	6	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0022	U			8,540	N	79	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0022	U			NS	NS	492	N	NMED[C]			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0056	U			6	N	8	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0022	U			16	N	140	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0022	U			NS	NS	2,500	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0022	U			195	N	54	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0022	U			415	N	25	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0022	U			NS	NS	422	N	NMED[C]			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0022	U			45,900	N	24,800	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0022	U			NS	NS	7,080	N	NMED[C]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0022	U			45,900	N	24,800	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0022	U			415	N	25	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.032	J			NS	NS	90,700	N	NMED		3.53E-07	
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0022	U			NS	NS	7,080	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.0022	U			NS	NS	599	N	NMED[C]			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0022	U			NS	NS	7,080	N	NMED[C]			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0022	U			NS	NS	20,400	N	NMED[C]			
Acetone	67-64-1	mg/kg	0.54	J			NS	NS	242,000	N	NMED		2.23E-06	
Benzene	71-43-2	mg/kg	0.0022	U			423	N	142	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.0022	U			NS	NS	538	N	NMED[C]			
Bromochloromethane	74-97-5	mg/kg	0.0022	U			NS	NS	296	N	NMED[C]			
Bromodichloromethane	75-27-4	mg/kg	0.0022	U			143	N	7,080	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0022	U			23,700	N	5,380	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0022	U			NS	NS	18	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.0022	U			NS	NS	1,620	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0022	U			252	N	202	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0022	U			NS	NS	412	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0022	U			NS	NS	16,600	N	NMED			
Chloroform	67-66-3	mg/kg	0.0022	U			134	N	391	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0056	U			956	N	235	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0022	U			NS	NS	708	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0022	U			781	N	130	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0022	U			340	N	5,380	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0022	U			NS	NS	54	N	NMED			

TABLE D1-W24-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID W24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Dichlorodifluoromethane	75-71-8	mg/kg	0.0022	U			NS	NS	161	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.0022	U			1,770	N	5,800	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0022	U			2,400	N	269	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0022	U			NS	NS	2,740	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0056	U			NS	NS	696	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0022	U			24,200	N	33,100	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.011	U			89,600	N	1,210	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0022	U			NS	NS	17,700	N	NMED[C]			
n-Propylbenzene	103-65-1	mg/kg	0.0022	U			NS	NS	6,730	N	NMED[C]			
Naphthalene	91-20-3	mg/kg	0.0022	U			633	N	159	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0028	U			NS	NS	736	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.0022	U			NS	NS	2,740	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.0022	U			NS	NS	35,400	N	NMED[C]			
Styrene	100-42-5	mg/kg	0.0022	U			NS	NS	10,200	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0022	U			NS	NS	35,400	N	NMED[C]			
Tetrachloroethene	127-18-4	mg/kg	0.0022	U			7,910	N	120	N	NMED			
Toluene	108-88-3	mg/kg	0.0022	U			NS	NS	14,000	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0022	U			NS	NS	206	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0022	U			781	N	130	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0022	U			5,370	N	7	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0022	U			NS	NS	1,130	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0022	U			161	N	162	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	U			8,540	N	79	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	U			NS	NS	2,500	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	U			45,900	N	24,800	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	U			45,900	N	24,800	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	U			NS	NS	26,900	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	U			17,000	N	269	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	U			NS	NS	807	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	U			NS	NS	5,380	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	U			NS	NS	538	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	U			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	U			165	N	81	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	U			NS	NS	28,300	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.17	U			NS	NS	1,770	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.17	U			NS	NS	1,000	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	U			NS	NS	13,500	N	NMED[C]			
2-Nitroaniline	88-74-4	mg/kg	0.17	U			NS	NS	2,690	N	NMED[C]			
2-Nitrophenol	88-75-5	mg/kg	0.17	U			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	U			410	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.17	U			135	N	1,080	N	NMED[SC]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	U			NS	NS	22	N	NMED			

TABLE D1-W24-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID W24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	U			NS	NS	NS	NS	NS			
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	U			NS	NS	26,900	N	NMED[C]			
4-Chloroaniline	106-47-8	mg/kg	0.17	U			14	N	135	N	NMED[C]			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	U			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.17	U			135	N	1,080	N	NMED[C]			
4-Nitrophenol	100-02-7	mg/kg	0.17	U			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.17	U			NS	NS	15,100	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.17	U			NS	NS	7,530	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.17	U			NS	NS	75,300	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.17	U			240	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.13	U			173	N	15	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	U			240	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	U			NS	NS	7,530	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	U			2,310	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.17	U			NS	NS	1,080,000	N	NMED[C]			
Benzyl Alcohol	100-51-6	mg/kg	0.17	U			NS	NS	26,900	N	NMED[C]			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	U			NS	NS	807	N	NMED[C]			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	U			2	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	U			3,540	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	U			13,400	N	5,380	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.17	U			1,420	N	53,800	N	NMED[C]			
Carbazole	86-74-8	mg/kg	0.17	U			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.17	U			23,100	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.17	U			NS	NS	26,900	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.17	U			NS	NS	2,690	N	NMED[C]			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	U			24	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.17	U			NS	NS	269	N	NMED[C]			
Diethylphthalate	84-66-2	mg/kg	0.17	U			NS	NS	215,000	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.17	U			NS	NS	269,000	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.17	U			NS	NS	10,000	N	NMED			
Fluorene	86-73-7	mg/kg	0.17	U			NS	NS	10,000	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.17	U			117	N	215	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	U			2,400	N	269	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.17	U			4,670	N	188	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	U			240	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.17	U			198,000	N	53,700	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	U			0.38	N	NA	N	NMED[C]			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	UJ			4	N	2	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	U			37,900	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.17	U			633	N	159	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.17	U			1,350	N	353	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.17	U			346	N	989	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.17	U			NS	NS	8,070	N	NMED			
Phenol	108-95-2	mg/kg	0.17	U			NS	NS	77,400	N	NMED			
Pyrene	129-00-0	mg/kg	0.17	U			NS	NS	7,530	N	NMED			

TABLE D1-W24-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID W24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.15	UJ			NS	NS	8,070	N	NMED[C]			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.15	UJ			NS	NS	27	N	NMED[C]			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.15	UJ			7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.15	UJ			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.15	UJ			165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.15	UJ			NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.15	UJ			1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.15	UJ			NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.15	UJ			NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.15	UJ			11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.15	UJ			2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.15	UJ			NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.15	UJ			1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.3	UJ			11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.15	UJ			NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.5	UJ			626	N	2,420	N	NMED[C]			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.021	UJ			2,440	N	17	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.021	UJ			55	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.01	UJ			58	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.01	UJ			85	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.01	UJ			85	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.01	UJ			85	N	5	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.01	UJ			85	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (3)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg	0.0000000006	J	0.000002	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000054	J	0.000018	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg	0.000000035	J	0.0000035	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.0000027	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.0000001	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.00000013	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000018	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg	0.000000012	J	0.00000012	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg	0.000000025	J	0.00000025	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		UJ	0.00000016	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.00000012	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000016	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.00000011	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.000000057	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000016	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000023	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000085	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.000000078				0.00172	N	0.000226	N	NMED	4.53E-10	3.45E-04	

TABLE D1-W24-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID W24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	17,000				NS	NS	41,400	N	NMED		4.11E-01	Nervous
Antimony	7440-36-0	mg/kg	0.28				NS	NS	142	N	NMED		1.97E-03	
Arsenic	7440-38-2	mg/kg	1.5				216	N	41	N	NMED	6.94E-08	3.64E-02	
Barium	7440-39-3	mg/kg	390				NS	NS	4,390	N	NMED		8.88E-02	
Beryllium	7440-41-7	mg/kg	0.86	J			2,710	N	148	N	NMED	3.17E-09	5.81E-03	
Cadmium	7440-43-9	mg/kg	1.7	J			3,610	N	72	N	NMED	4.71E-09	2.36E-02	
Calcium	7440-70-2	mg/kg	35,000				NS	NS	8,850,000	N	NMED		3.95E-03	
Chromium (Total) (4)	7440-47-3	mg/kg	19				468	N	134	N	NMED	4.06E-07	1.42E-01	GI, Blood
Cobalt	7440-48-4	mg/kg	4.5	J			722	N	37	N	NMED	6.23E-08	1.23E-01	Endocrine
Copper	7440-50-8	mg/kg	350				NS	NS	14,200	N	NMED		2.46E-02	
Iron	7439-89-6	mg/kg	8,500				NS	NS	248,000	N	NMED		3.43E-02	
Lead	7439-92-1	mg/kg	22				NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	6,400				NS	NS	1,550,000	N	NMED		4.13E-03	
Manganese	7439-96-5	mg/kg	550				NS	NS	464	Y	NMED		1.19E+00	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.14				NS	NS	21	N	NMED		6.76E-03	
Nickel	7440-02-0	mg/kg	13				20,500	N	753	N	NMED	6.34E-09	1.73E-02	
Potassium	7440-09-7	mg/kg	1,700				NS	NS	20,800,000	N	NMED		8.17E-05	
Selenium	7782-49-2	mg/kg	1.2				NS	NS	1,750	N	NMED		6.86E-04	
Silver	7440-22-4	mg/kg	0.28				NS	NS	1,770	N	NMED		1.58E-04	
Sodium	7440-23-5	mg/kg	45				NS	NS	10,200,000	N	NMED		4.41E-06	
Thallium	7440-28-0	mg/kg	0.061	J			NS	NS	4	N	NMED		1.72E-02	
Vanadium	7440-62-2	mg/kg	10				NS	NS	614	N	NMED		1.63E-02	
Zinc	7440-66-6	mg/kg	55				NS	NS	106,000	N	NMED		5.19E-04	

TABLE D1-W24-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID W24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.33	U			NS	NS	12	N	NMED			
Nitrate	14797-55-8	mg/kg	24				NS	NS	566,000	N	NMED		4.24E-05	
Perchlorate	14797-73-0	mg/kg	0.002	U			NS	NS	248	N	NMED			
										Cumulative Risk/Hazard		**6E-07**	**2.1**	
										Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	1.6
Endocrine	0.12
GI	0.14
Blood	0.14
All Others	0.28

Notes:

[s] = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update).

2) NMED[C] = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

3) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

4) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect

TABLE D1-X24-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID X24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0022	U			28.1	N	2,350	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0022	U			NS	NS	14,400	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0022	U			7.98	N	1,560	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0022	U			18.8	N	2.61	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0022	U			78.6	N	15,600	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0022	U			NS	NS	440	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0022	U			29.3	N	141	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0022	U			NS	NS	63	N	RSL			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0054	U			0.051	N	7.09	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0022	U			240	N	82.9	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0022	U			NS	NS	300	N	RSL			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0054	U			0.0858	N	5.88	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0022	U			0.672	N	135	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0022	U			NS	NS	2,150	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0022	U			8.32	N	55.6	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0022	U			17.8	N	29	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0022	U			NS	NS	270	N	RSL			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0022	U			1,290	N	5,480	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0022	U			NS	NS	1,600	N	RSL			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0022	U			1,290	N	5,480	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0022	U			17.8	N	29	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.0032	U			NS	NS	37,400	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0022	U			NS	NS	1,560	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.0022	U			NS	NS	200	N	RSL			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0022	U			NS	NS	1,600	N	RSL			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0022	U			NS	NS	5,810	N	RSL			
Acetone	67-64-1	mg/kg	0.27				NS	NS	66,300	N	NMED		4.07E-06	
Benzene	71-43-2	mg/kg	0.0022	U			17.8	N	114	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.0022	U			NS	NS	290	N	RSL			
Bromochloromethane	74-97-5	mg/kg	0.0022	U			NS	NS	150	N	RSL			
Bromodichloromethane	75-27-4	mg/kg	0.0022	U			6.19	N	1,560	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0022	U			674	N	1,230	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0022	U			NS	NS	17.7	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.0022	U			NS	NS	1,550	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0022	U			10.7	N	144	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0022	U			NS	NS	378	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0022	U			NS	NS	19,000	N	NMED			
Chloroform	67-66-3	mg/kg	0.0022	U			5.9	N	306	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0054	U			41.1	N	268	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0022	U			NS	NS	156	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0022	U			29.3	N	141	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0022	U			13.9	N	1,230	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0022	U			NS	NS	57.9	N	NMED			

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FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Dichlorodifluoromethane	75-71-8	mg/kg	0.0022	U			NS	NS	182	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.0022	U			75.1	N	3,930	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0022	U			68.3	N	61.6	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0022	U			NS	NS	2,360	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0054	U			NS	NS	764	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0022	U			975	N	37,800	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.011	U			766	N	409	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0022	U			NS	NS	3,900	N	RSL			
n-Propylbenzene	103-65-1	mg/kg	0.0022	U			NS	NS	3,800	N	RSL			
Naphthalene	91-20-3	mg/kg	0.0022	U			22.6	N	162	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0027	U			NS	NS	805	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.0022	U			NS	NS	2,360	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.0022	U			NS	NS	7,800	N	RSL			
Styrene	100-42-5	mg/kg	0.0022	U			NS	NS	7,260	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0022	U			NS	NS	7,800	N	RSL			
Tetrachloroethene	127-18-4	mg/kg	0.0022	U			337	N	111	N	NMED			
Toluene	108-88-3	mg/kg	0.0022	U			NS	NS	5,230	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0022	U			NS	NS	210	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0022	U			29.3	N	141	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0022	U			15.5	N	6.77	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0022	U			NS	NS	1,230	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0022	U			0.742	N	113	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.18	U			240	N	82.9	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.18	U			NS	NS	2,150	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.18	U			1,290	N	5,480	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.18	U			1,290	N	5,480	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.18	U			NS	NS	6,160	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.18	U			484	N	61.6	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.18	U			NS	NS	185	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.18	U			NS	NS	1,230	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.18	U			NS	NS	123	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.18	U			17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.18	U			3.56	N	18.5	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.18	U			NS	NS	6,260	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.18	U			NS	NS	391	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.18	U			NS	NS	232	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.18	U			NS	NS	3,200	N	RSL			
2-Nitroaniline	88-74-4	mg/kg	0.18	U			NS	NS	630	N	RSL			
2-Nitrophenol	88-75-5	mg/kg	0.18	U			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.18	U			11.8	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.18	U			270	N	250	N	RSL[S]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.18	U			NS	NS	4.93	N	NMED			
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.18	U			NS	NS	NS	NS	NS			

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HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID X24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.18	U			NS	NS	6,300	N	RSL			
4-Chloroaniline	106-47-8	mg/kg	0.18	U			27	N	32	N	RSL			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.18	U			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.18	U			270	N	250	N	RSL			
4-Nitrophenol	100-02-7	mg/kg	0.18	U			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.18	U			NS	NS	3,480	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.18	U			NS	NS	1,740	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.18	U			NS	NS	17,400	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.18	U			1.53	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			1.12	N	17.4	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.18	U			1.53	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.18	U			NS	NS	1,740	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.18	U			15.3	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.18	U			NS	NS	250,000	N	RSL			
Benzyl Alcohol	100-51-6	mg/kg	0.18	U			NS	NS	6,300	N	RSL			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.18	U			NS	NS	190	N	RSL			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.18	U			3.11	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.18	U			99.3	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.18	U			380	N	1,230	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.18	U			2,900	N	13,000	N	RSL			
Carbazole	86-74-8	mg/kg	0.18	U			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.18	U			153	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.18	U			NS	NS	6,160	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.18	U			NS	NS	630	N	RSL			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			0.153	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.18	U			NS	NS	78	N	RSL			
Diethylphthalate	84-66-2	mg/kg	0.18	U			NS	NS	49,300	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.18	U			NS	NS	61,600	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.18	U			NS	NS	2,320	N	NMED			
Fluorene	86-73-7	mg/kg	0.18	U			NS	NS	2,320	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.18	U			3.33	N	49.3	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.18	U			68.3	N	61.6	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.18	U			133	N	43.1	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.18	U			1.53	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.18	U			5,610	N	12,300	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.18	U			0.78	N	NS	NS	RSL			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	UJ			0.0234	N	0.493	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.18	U			1,090	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.18	U			22.6	N	162	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.18	U			60.4	N	131	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.18	U			9.85	N	234	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.18	U			NS	NS	1,740	N	NMED			
Phenol	108-95-2	mg/kg	0.18	U			NS	NS	18,500	N	NMED			
Pyrene	129-00-0	mg/kg	0.18	U			NS	NS	1,740	N	NMED			

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	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	2,200	N	RSL			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	6.3	N	RSL			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			211	N	36	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			3.56	N	18.5	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	7.7	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			31.6	N	70.4	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	6.16	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	7.64	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			333	N	247	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			83.1	N	301	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	156	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			60.4	N	131	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			313	N	6.16	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	3,850	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			1,300	N	570	N	RSL			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.021	U			69.6	N	3.98	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.021	U			1.81	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.011	U			1.86	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.011	U			2.43	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.011	U			2.43	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.011	U			2.43	N	1.14	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.011	U			2.43	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (2)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg	0.00000000016	J	0.00000052	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000019	J	0.0000064	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000028	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.00000096	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.000000091	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000084	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000072	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000061	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000065	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.000000081	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.000000069	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000011	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000063	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg	0.0000000045	J	0.000000045	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg	0.000000054	J	0.00000018	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000017	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000044	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.000000061				0.000049	N	0.0000506	N	NMED	1.24E-08	1.20E-03	

TABLE D1-X24-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID X24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	21,000				NS	NS	78,000	N	NMED		2.69E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	J			NS	NS	31.3	N	NMED		4.79E-03	
Arsenic	7440-38-2	mg/kg	1.2				7.07	N	13	N	NMED	1.70E-06	9.23E-02	
Barium	7440-39-3	mg/kg	540				NS	NS	15,600	N	NMED		3.46E-02	
Beryllium	7440-41-7	mg/kg	1.3	J			64,400	N	156	N	NMED	2.02E-10	8.33E-03	
Cadmium	7440-43-9	mg/kg	0.89				85,900	N	70.5	N	NMED	1.04E-10	1.26E-02	
Calcium	7440-70-2	mg/kg	34,000				NS	NS	13,000,000	N	NMED		2.62E-03	
Chromium (Total) (3)	7440-47-3	mg/kg	16				96.6	N	45,200	N	NMED	1.66E-06	3.54E-04	
Cobalt	7440-48-4	mg/kg	5.6				17,200	N	23.4	N	NMED	3.26E-09	2.39E-01	Endocrine
Copper	7440-50-8	mg/kg	170				NS	NS	3,130	N	NMED		5.43E-02	
Iron	7439-89-6	mg/kg	11,000				NS	NS	54,800	N	NMED		2.01E-01	GI
Lead	7439-92-1	mg/kg	16				NS	NS	200	N	RSL			
Magnesium	7439-95-4	mg/kg	6,100				NS	NS	15,600,000	N	NMED		3.91E-04	
Manganese	7439-96-5	mg/kg	690				NS	NS	10,500	N	NMED		6.57E-02	
Mercury (Elemental)	7439-97-6	mg/kg	0.042	U			NS	NS	23.8	N	NMED			
Nickel	7440-02-0	mg/kg	16				595,000	N	1,560	N	NMED	2.69E-10	1.03E-02	
Potassium	7440-09-7	mg/kg	2,800				NS	NS	15,600,000	N	NMED		1.79E-04	
Selenium	7782-49-2	mg/kg	1.9				NS	NS	391	N	NMED		4.86E-03	
Silver	7440-22-4	mg/kg	0.16	J			NS	NS	391	N	NMED		4.09E-04	
Sodium	7440-23-5	mg/kg	55				NS	NS	7,820,000	N	NMED		7.03E-06	
Thallium	7440-28-0	mg/kg	0.093	J			NS	NS	0.782	N	NMED		1.19E-01	Hair/Coat/Eyes
Vanadium	7440-62-2	mg/kg	14				NS	NS	394	N	NMED		3.55E-02	
Zinc	7440-66-6	mg/kg	32				NS	NS	23,500	N	NMED		1.36E-03	

TABLE D1-X24-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID X24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.32	U			NS	NS	11.2	N	NMED			
Nitrate	14797-55-8	mg/kg	7.6	J			NS	NS	125,000	N	NMED		6.08E-05	
Perchlorate	14797-73-0	mg/kg	0.0021	U			NS	NS	54.8	N	NMED			
										Cumulative Risk/Hazard		**3E-06**	**1.2**	
										Exceeds Target Level		**N**	**Y**	

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect

System	Hazard Quotient
Nervous	0.27
Endocrine	0.24
GI	0.20
Hair/Coat	0.12
Eyes	0.12
All Others	0.33

TABLE D1-X24-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID X24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0022	U			137	N	39,400	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0022	U			NS	NS	72,500	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0022	U			39	N	26,000	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0022	U			92	N	12	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0022	U			383	N	260,000	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0022	U			NS	NS	2,260	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0022	U			146	N	695	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0022	U			NS	NS	930	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0054	U			1	N	34	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0022	U			1,250	N	423	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0022	U			NS	NS	1,800	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0054	U			1	N	41	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0022	U			3	N	738	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0022	U			NS	NS	13,000	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0022	U			41	N	286	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0022	U			87	N	137	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0022	U			NS	NS	1,500	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0022	U			6,730	N	90,800	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0022	U			NS	NS	23,000	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0022	U			6,730	N	90,800	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0022	U			87	N	137	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0032	U			NS	NS	411,000	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0022	U			NS	NS	26,000	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0022	U			NS	NS	1,300	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0022	U			NS	NS	23,000	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0022	U			NS	NS	81,600	N	RSL		
Acetone	67-64-1	mg/kg	0.27				NS	NS	960,000	N	NMED		2.81E-07
Benzene	71-43-2	mg/kg	0.0022	U			87	N	729	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0022	U			NS	NS	1,800	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0022	U			NS	NS	630	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0022	U			30	N	26,000	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0022	U			1,760	N	18,300	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0022	U			NS	NS	95	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0022	U			NS	NS	8,540	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0022	U			53	N	1,020	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0022	U			NS	NS	2,160	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0022	U			NS	NS	89,500	N	NMED		
Chloroform	67-66-3	mg/kg	0.0022	U			29	N	2,000	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0054	U			201	N	1,260	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0022	U			NS	NS	2,600	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0022	U			146	N	695	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0022	U			67	N	18,300	N	NMED		

TABLE D1-X24-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID X24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0022	U			NS	NS	288	N	NMED		
Dichlorodifluoromethane	75-71-8	mg/kg	0.0022	U			NS	NS	865	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0022	U			29,000	N	368	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0022	U			52	N	916	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0022	U			NS	NS	14,200	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0054	U			NS	NS	3,730	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0022	U			4,820	N	178,000	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.011	U			14,400	N	5,130	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0022	U			NS	NS	58,000	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0022	U			NS	NS	24,000	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0022	U			108	N	843	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0027	U			NS	NS	3,940	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0022	U			NS	NS	14,200	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0022	U			NS	NS	120,000	N	RSL		
Styrene	100-42-5	mg/kg	0.0022	U			NS	NS	51,300	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0022	U			NS	NS	120,000	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0022	U			1,650	N	629	N	NMED		
Toluene	108-88-3	mg/kg	0.0022	U			NS	NS	61,300	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0022	U			NS	NS	1,100	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0022	U			146	N	695	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0022	U			112	N	37	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0022	U			NS	NS	6,030	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0022	U			28	N	46	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.18	U			1,250	N	423	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.18	U			NS	NS	13,000	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.18	U			6,730	N	90,800	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.18	U			6,730	N	90,800	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.18	U			NS	NS	91,600	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.18	U			2,330	N	916	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.18	U			NS	NS	2,750	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.18	U			NS	NS	18,300	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.18	U			NS	NS	1,830	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.18	U			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.18	U			17	N	276	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.18	U			NS	NS	104,000	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.18	U			NS	NS	6,490	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.18	U			NS	NS	3,370	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.18	U			NS	NS	41,000	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.18	U			NS	NS	8,000	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.18	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.18	U			NS	NS	410	N	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.18	U			1,100	N	3,300	N	RSL[S]		

TABLE D1-X24-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID X24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.18	U			NS	NS	73	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.18	U			NS	NS	NS	NS	NS		
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.18	U			NS	NS	82,000	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.18	U			110	N	410	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.18	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.18	U			1,100	N	3,300	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.18	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.18	U			NS	NS	50,500	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.18	U			NS	NS	25,300	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.18	U			NS	NS	253,000	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.18	U			32	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			24	N	251	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.18	U			32	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.18	U			NS	NS	25,300	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.18	U			323	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.18	U			NS	NS	3,300,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.18	U			NS	NS	82,000	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.18	U			NS	NS	2,500	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.18	U			16	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.18	U			519	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.18	U			1,830	N	18,300	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.18	U			12,000	N	160,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.18	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.18	U			3,230	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.18	U			NS	NS	91,600	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.18	U			NS	NS	8,200	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			3	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.18	U			NS	NS	1,200	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.18	U			NS	NS	733,000	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.18	U			NS	NS	916,000	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.18	U			NS	NS	33,700	N	NMED		
Fluorene	86-73-7	mg/kg	0.18	U			NS	NS	33,700	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.18	U			16	N	733	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.18	U			52	N	916	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.18	U			641	N	641	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.18	U			32	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.18	U			27,000	N	183,000	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.18	U			3	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	UJ			1	N	7	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.18	U			5,240	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.18	U			108	N	843	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.18	U			293	N	1,540	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.18	U			45	N	3,180	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.18	U			NS	NS	27,500	N	NMED		
Phenol	108-95-2	mg/kg	0.18	U			NS	NS	275,000	N	NMED		
Pyrene	129-00-0	mg/kg	0.18	U			NS	NS	25,300	N	NMED		

TABLE D1-X24-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID X24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			5,300	N	7,400	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.021	U			304	N	57	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.021	U			9	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.011	U			9	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.011	U			11	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.011	U			11	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.011	U			11	N	16	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.011	U			11	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg	0.00000000016	J	0.00000052	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000019	J	0.0000064	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000028	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.00000096	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.000000091	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000084	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000072	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000061	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000065	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.000000081	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.000000069	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000011	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000063	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg	0.0000000045	J	0.000000045	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg	0.000000054	J	0.00000018	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000017	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000044	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.000000061				0.000238	N	0.000808	N	NMED	2.55E-09	7.50E-05

TABLE D1-X24-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID X24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	21,000				NS	NS	1,290,000	N	NMED		1.63E-02
Antimony	7440-36-0	mg/kg	0.15	J			NS	NS	519	N	NMED		2.89E-04
Arsenic	7440-38-2	mg/kg	1.2				36	N	208	N	NMED	3.34E-07	5.77E-03
Barium	7440-39-3	mg/kg	540				NS	NS	255,000	N	NMED		2.12E-03
Beryllium	7440-41-7	mg/kg	1.3	J			313,000	N	2,580	N	NMED	4.15E-11	5.04E-04
Cadmium	7440-43-9	mg/kg	0.89				417,000	N	1,110	N	NMED	2.13E-11	8.02E-04
Calcium	7440-70-2	mg/kg	34,000				NS	NS	32,400,000	N	NMED		1.05E-03
Chromium (Total) (3)	7440-47-3	mg/kg	16				505	N	314,000	N	NMED	3.17E-07	5.10E-05
Cobalt	7440-48-4	mg/kg	5.6				83,400	N	388	N	NMED	6.71E-10	1.44E-02
Copper	7440-50-8	mg/kg	170				NS	NS	51,900	N	NMED		3.28E-03
Iron	7439-89-6	mg/kg	11,000				NS	NS	908,000	N	NMED		1.21E-02
Lead	7439-92-1	mg/kg	16				NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	6,100				NS	NS	5,680,000	N	NMED		1.07E-03
Manganese	7439-96-5	mg/kg	690				NS	NS	160,000	N	NMED		4.31E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.042	U			NS	NS	112	N	NMED		
Nickel	7440-02-0	mg/kg	16				2,890,000	N	25,700	N	NMED	5.54E-11	6.23E-04
Potassium	7440-09-7	mg/kg	2,800				NS	NS	76,200,000	N	NMED		3.67E-05
Selenium	7782-49-2	mg/kg	1.9				NS	NS	6,490	N	NMED		2.93E-04
Silver	7440-22-4	mg/kg	0.16	J			NS	NS	6,490	N	NMED		2.47E-05
Sodium	7440-23-5	mg/kg	55				NS	NS	37,300,000	N	NMED		1.47E-06
Thallium	7440-28-0	mg/kg	0.093	J			NS	NS	13	N	NMED		7.15E-03
Vanadium	7440-62-2	mg/kg	14				NS	NS	6,530	N	NMED		2.14E-03
Zinc	7440-66-6	mg/kg	32				NS	NS	38,900	N	NMED		8.23E-04

TABLE D1-X24-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID X24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.32	U			NS	NS	63	N	NMED		
Nitrate	14797-55-8	mg/kg	7.6	J			NS	NS	2,080,000	N	NMED		3.65E-06
Perchlorate	14797-73-0	mg/kg	0.0021	U			NS	NS	908	N	NMED		
										Cumulative Risk/Hazard		**7E-07**	**0.07**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
IEUBK = Integrated Exposure Uptake Biokentic Model
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect

TABLE D1-X24-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID X24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0022	U			659	N	10,600	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0022	U			NS	NS	13,600	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0022	U			197	N	7,080	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0022	U			4,300	N	2	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0022	U			1,820	N	70,800	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0022	U			NS	NS	424	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0022	U			781	N	130	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0022	U			NS	NS	283	N	NMED[C]			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0054	U			8	N	6	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0022	U			8,540	N	79	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0022	U			NS	NS	492	N	NMED[C]			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0054	U			6	N	8	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0022	U			16	N	140	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0022	U			NS	NS	2,500	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0022	U			195	N	54	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0022	U			415	N	25	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0022	U			NS	NS	422	N	NMED[C]			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0022	U			45,900	N	24,800	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0022	U			NS	NS	7,080	N	NMED[C]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0022	U			45,900	N	24,800	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0022	U			415	N	25	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.0032	U			NS	NS	90,700	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0022	U			NS	NS	7,080	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.0022	U			NS	NS	599	N	NMED[C]			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0022	U			NS	NS	7,080	N	NMED[C]			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0022	U			NS	NS	20,400	N	NMED[C]			
Acetone	67-64-1	mg/kg	0.27				NS	NS	242,000	N	NMED		1.12E-06	
Benzene	71-43-2	mg/kg	0.0022	U			423	N	142	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.0022	U			NS	NS	538	N	NMED[C]			
Bromochloromethane	74-97-5	mg/kg	0.0022	U			NS	NS	296	N	NMED[C]			
Bromodichloromethane	75-27-4	mg/kg	0.0022	U			143	N	7,080	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0022	U			23,700	N	5,380	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0022	U			NS	NS	18	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.0022	U			NS	NS	1,620	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0022	U			252	N	202	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0022	U			NS	NS	412	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0022	U			NS	NS	16,600	N	NMED			
Chloroform	67-66-3	mg/kg	0.0022	U			134	N	391	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0054	U			956	N	235	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0022	U			NS	NS	708	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0022	U			781	N	130	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0022	U			340	N	5,380	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0022	U			NS	NS	54	N	NMED			

TABLE D1-X24-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID X24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Dichlorodifluoromethane	75-71-8	mg/kg	0.0022	U			NS	NS	161	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.0022	U			1,770	N	5,800	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0022	U			2,400	N	269	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0022	U			NS	NS	2,740	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0054	U			NS	NS	696	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0022	U			24,200	N	33,100	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.011	U			89,600	N	1,210	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0022	U			NS	NS	17,700	N	NMED[C]			
n-Propylbenzene	103-65-1	mg/kg	0.0022	U			NS	NS	6,730	N	NMED[C]			
Naphthalene	91-20-3	mg/kg	0.0022	U			633	N	159	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0027	U			NS	NS	736	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.0022	U			NS	NS	2,740	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.0022	U			NS	NS	35,400	N	NMED[C]			
Styrene	100-42-5	mg/kg	0.0022	U			NS	NS	10,200	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0022	U			NS	NS	35,400	N	NMED[C]			
Tetrachloroethene	127-18-4	mg/kg	0.0022	U			7,910	N	120	N	NMED			
Toluene	108-88-3	mg/kg	0.0022	U			NS	NS	14,000	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0022	U			NS	NS	206	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0022	U			781	N	130	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0022	U			5,370	N	7	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0022	U			NS	NS	1,130	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0022	U			161	N	162	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.18	U			8,540	N	79	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.18	U			NS	NS	2,500	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.18	U			45,900	N	24,800	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.18	U			45,900	N	24,800	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.18	U			NS	NS	26,900	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.18	U			17,000	N	269	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.18	U			NS	NS	807	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.18	U			NS	NS	5,380	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.18	U			NS	NS	538	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.18	U			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.18	U			165	N	81	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.18	U			NS	NS	28,300	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.18	U			NS	NS	1,770	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.18	U			NS	NS	1,000	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.18	U			NS	NS	13,500	N	NMED[C]			
2-Nitroaniline	88-74-4	mg/kg	0.18	U			NS	NS	2,690	N	NMED[C]			
2-Nitrophenol	88-75-5	mg/kg	0.18	U			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.18	U			410	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.18	U			135	N	1,080	N	NMED[SC]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.18	U			NS	NS	22	N	NMED			

TABLE D1-X24-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID X24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.18	U			NS	NS	NS	NS	NS			
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.18	U			NS	NS	26,900	N	NMED[C]			
4-Chloroaniline	106-47-8	mg/kg	0.18	U			14	N	135	N	NMED[C]			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.18	U			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.18	U			135	N	1,080	N	NMED[C]			
4-Nitrophenol	100-02-7	mg/kg	0.18	U			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.18	U			NS	NS	15,100	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.18	U			NS	NS	7,530	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.18	U			NS	NS	75,300	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.18	U			240	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.14	U			173	N	15	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.18	U			240	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.18	U			NS	NS	7,530	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.18	U			2,310	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.18	U			NS	NS	1,080,000	N	NMED[C]			
Benzyl Alcohol	100-51-6	mg/kg	0.18	U			NS	NS	26,900	N	NMED[C]			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.18	U			NS	NS	807	N	NMED[C]			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.18	U			2	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.18	U			3,540	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.18	U			13,400	N	5,380	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.18	U			1,420	N	53,800	N	NMED[C]			
Carbazole	86-74-8	mg/kg	0.18	U			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.18	U			23,100	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.18	U			NS	NS	26,900	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.18	U			NS	NS	2,690	N	NMED[C]			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.14	U			24	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.18	U			NS	NS	269	N	NMED[C]			
Diethylphthalate	84-66-2	mg/kg	0.18	U			NS	NS	215,000	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.18	U			NS	NS	269,000	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.18	U			NS	NS	10,000	N	NMED			
Fluorene	86-73-7	mg/kg	0.18	U			NS	NS	10,000	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.18	U			117	N	215	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.18	U			2,400	N	269	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.18	U			4,670	N	188	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.18	U			240	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.18	U			198,000	N	53,700	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.18	U			0.38	N	NA	N	NMED[C]			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.021	UJ			4	N	2	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.18	U			37,900	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.18	U			633	N	159	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.18	U			1,350	N	353	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.18	U			346	N	989	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.18	U			NS	NS	8,070	N	NMED			
Phenol	108-95-2	mg/kg	0.18	U			NS	NS	77,400	N	NMED			
Pyrene	129-00-0	mg/kg	0.18	U			NS	NS	7,530	N	NMED			

TABLE D1-X24-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID X24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	UJ			NS	NS	8,070	N	NMED[C]			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	UJ			NS	NS	27	N	NMED[C]			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.075	UJ			7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	UJ			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	UJ			165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	UJ			NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	UJ			1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	UJ			NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	UJ			NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	UJ			11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	UJ			2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	UJ			NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.075	UJ			1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.15	UJ			11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	UJ			NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	UJ			626	N	2,420	N	NMED[C]			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.021	U			2,440	N	17	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.021	U			55	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.011	U			58	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.011	U			85	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.011	U			85	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.011	U			85	N	5	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.011	U			85	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (3)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg	0.00000000016	J	0.00000052	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.00000000192	J	0.0000064	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000028	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.00000096	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.000000091	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000084	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.000000072	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000061	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000065	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.000000081	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.000000069	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000011	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000063	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg	0.0000000045	J	0.000000045	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg	0.000000054	J	0.00000018	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000017	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000044	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.000000061				0.00172	N	0.000226	N	NMED	3.52E-10	2.68E-04	

TABLE D1-X24-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID X24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	21,000				NS	NS	41,400	N	NMED		5.07E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	J			NS	NS	142	N	NMED		1.06E-03	
Arsenic	7440-38-2	mg/kg	1.2				216	N	41	N	NMED		2.91E-02	
Barium	7440-39-3	mg/kg	540				NS	NS	4,390	N	NMED		1.23E-01	Kidneys
Beryllium	7440-41-7	mg/kg	1.3	J			2,710	N	148	N	NMED		8.78E-03	
Cadmium	7440-43-9	mg/kg	0.89				3,610	N	72	N	NMED		1.23E-02	
Calcium	7440-70-2	mg/kg	34,000				NS	NS	8,850,000	N	NMED		3.84E-03	
Chromium (Total) (4)	7440-47-3	mg/kg	16				468	N	134	N	NMED		1.19E-01	GI, Blood
Cobalt	7440-48-4	mg/kg	5.6				722	N	37	N	NMED		1.53E-01	Endocrine
Copper	7440-50-8	mg/kg	170				NS	NS	14,200	N	NMED		1.20E-02	
Iron	7439-89-6	mg/kg	11,000				NS	NS	248,000	N	NMED		4.44E-02	
Lead	7439-92-1	mg/kg	16				NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	6,100				NS	NS	1,550,000	N	NMED		3.94E-03	
Manganese	7439-96-5	mg/kg	690				NS	NS	464	Y	NMED		1.49E+00	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.042	U			NS	NS	21	N	NMED			
Nickel	7440-02-0	mg/kg	16				20,500	N	753	N	NMED		2.12E-02	
Potassium	7440-09-7	mg/kg	2,800				NS	NS	20,800,000	N	NMED		1.35E-04	
Selenium	7782-49-2	mg/kg	1.9				NS	NS	1,750	N	NMED		1.09E-03	
Silver	7440-22-4	mg/kg	0.16	J			NS	NS	1,770	N	NMED		9.04E-05	
Sodium	7440-23-5	mg/kg	55				NS	NS	10,200,000	N	NMED		5.39E-06	
Thallium	7440-28-0	mg/kg	0.093	J			NS	NS	4	N	NMED		2.63E-02	
Vanadium	7440-62-2	mg/kg	14				NS	NS	614	N	NMED		2.28E-02	
Zinc	7440-66-6	mg/kg	32				NS	NS	106,000	N	NMED		3.02E-04	

TABLE D1-X24-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID X24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.32	U			NS	NS	12	N	NMED			
Nitrate	14797-55-8	mg/kg	7.6	J			NS	NS	566,000	N	NMED		1.34E-05	
Perchlorate	14797-73-0	mg/kg	0.0021	U			NS	NS	248	N	NMED			
										Cumulative Risk/Hazard		**4E-10**	**2.6**	
										Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	2.0
Endocrine	0.15
GI	0.12
Blood	0.12
Kidneys	0.12
All Others	0.19

Notes:

[s] = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update).

2) NMED[C] = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

3) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

4) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect

TABLE D1-Y24-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID Y24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0023	U			28.1	N	2,350	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0023	U			NS	NS	14,400	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0023	U			7.98	N	1,560	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0023	U			18.8	N	2.61	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0023	U			78.6	N	15,600	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0023	U			NS	NS	440	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0023	U			29.3	N	141	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0023	U			NS	NS	63	N	RSL			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0057	U			0.051	N	7.09	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0023	U			240	N	82.9	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0023	U			NS	NS	300	N	RSL			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0057	U			0.0858	N	5.88	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0023	U			0.672	N	135	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0023	U			NS	NS	2,150	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0023	U			8.32	N	55.6	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0023	U			17.8	N	29	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0023	U			NS	NS	270	N	RSL			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0023	U			1,290	N	5,480	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0023	U			NS	NS	1,600	N	RSL			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0023	U			1,290	N	5,480	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0023	U			17.8	N	29	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.0034	U			NS	NS	37,400	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0023	U			NS	NS	1,560	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.0023	U			NS	NS	200	N	RSL			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0023	U			NS	NS	1,600	N	RSL			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0023	U			NS	NS	5,810	N	RSL			
Acetone	67-64-1	mg/kg	0.21				NS	NS	66,300	N	NMED		3.17E-06	
Benzene	71-43-2	mg/kg	0.0023	U			17.8	N	114	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.0023	U			NS	NS	290	N	RSL			
Bromochloromethane	74-97-5	mg/kg	0.0023	U			NS	NS	150	N	RSL			
Bromodichloromethane	75-27-4	mg/kg	0.0023	U			6.19	N	1,560	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0023	U			674	N	1,230	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0023	U			NS	NS	17.7	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.0023	U			NS	NS	1,550	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0023	U			10.7	N	144	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0023	U			NS	NS	378	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0023	U			NS	NS	19,000	N	NMED			
Chloroform	67-66-3	mg/kg	0.0023	U			5.9	N	306	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0057	U			41.1	N	268	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0023	U			NS	NS	156	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0023	U			29.3	N	141	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0023	U			13.9	N	1,230	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0023	U			NS	NS	57.9	N	NMED			

TABLE D1-Y24-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID Y24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Dichlorodifluoromethane	75-71-8	mg/kg	0.0023	U			NS	NS	182	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.0023	U			75.1	N	3,930	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0023	U			68.3	N	61.6	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0023	U			NS	NS	2,360	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0057	U			NS	NS	764	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0023	U			975	N	37,800	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.011	U			766	N	409	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0023	U			NS	NS	3,900	N	RSL			
n-Propylbenzene	103-65-1	mg/kg	0.0023	U			NS	NS	3,800	N	RSL			
Naphthalene	91-20-3	mg/kg	0.0023	U			22.6	N	162	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0029	U			NS	NS	805	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.0023	U			NS	NS	2,360	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.0023	U			NS	NS	7,800	N	RSL			
Styrene	100-42-5	mg/kg	0.0023	U			NS	NS	7,260	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0023	U			NS	NS	7,800	N	RSL			
Tetrachloroethene	127-18-4	mg/kg	0.0023	U			337	N	111	N	NMED			
Toluene	108-88-3	mg/kg	0.0023	U			NS	NS	5,230	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0023	U			NS	NS	210	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0023	U			29.3	N	141	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0023	U			15.5	N	6.77	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0023	U			NS	NS	1,230	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0023	U			0.742	N	113	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.21	U			240	N	82.9	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.21	U			NS	NS	2,150	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.21	U			1,290	N	5,480	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.21	U			1,290	N	5,480	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.21	U			NS	NS	6,160	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.21	U			484	N	61.6	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.21	U			NS	NS	185	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.21	U			NS	NS	1,230	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.21	U			NS	NS	123	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.21	U			17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.21	U			3.56	N	18.5	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.21	U			NS	NS	6,260	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.21	U			NS	NS	391	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.21	U			NS	NS	232	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.21	U			NS	NS	3,200	N	RSL			
2-Nitroaniline	88-74-4	mg/kg	0.21	U			NS	NS	630	N	RSL			
2-Nitrophenol	88-75-5	mg/kg	0.21	U			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.21	U			11.8	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.21	U			270	N	250	N	RSL[S]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.21	U			NS	NS	4.93	N	NMED			
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.21	U			NS	NS	NS	NS	NS			

TABLE D1-Y24-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID Y24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.21	U			NS	NS	6,300	N	RSL			
4-Chloroaniline	106-47-8	mg/kg	0.21	U			27	N	32	N	RSL			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.21	U			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.21	U			270	N	250	N	RSL			
4-Nitrophenol	100-02-7	mg/kg	0.21	U			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.21	U			NS	NS	3,480	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.21	U			NS	NS	1,740	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.21	U			NS	NS	17,400	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.21	U			1.53	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.16	U			1.12	N	17.4	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.21	U			1.53	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.21	U			NS	NS	1,740	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.21	U			15.3	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.21	U			NS	NS	250,000	N	RSL			
Benzyl Alcohol	100-51-6	mg/kg	0.21	U			NS	NS	6,300	N	RSL			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.21	U			NS	NS	190	N	RSL			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.21	U			3.11	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.21	U			99.3	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.21	U			380	N	1,230	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.21	U			2,900	N	13,000	N	RSL			
Carbazole	86-74-8	mg/kg	0.21	U			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.21	U			153	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.21	U			NS	NS	6,160	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.21	U			NS	NS	630	N	RSL			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.16	U			0.153	Y	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.21	U			NS	NS	78	N	RSL			
Diethylphthalate	84-66-2	mg/kg	0.21	U			NS	NS	49,300	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.21	U			NS	NS	61,600	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.21	U			NS	NS	2,320	N	NMED			
Fluorene	86-73-7	mg/kg	0.21	U			NS	NS	2,320	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.21	U			3.33	N	49.3	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.21	U			68.3	N	61.6	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.21	U			133	N	43.1	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.21	U			1.53	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.21	U			5,610	N	12,300	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.21	U			0.78	N	NS	NS	RSL			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.025	UJ			0.0234	Y	0.493	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.21	U			1,090	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.21	U			22.6	N	162	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.21	U			60.4	N	131	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.21	U			9.85	N	234	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.21	U			NS	NS	1,740	N	NMED			
Phenol	108-95-2	mg/kg	0.21	U			NS	NS	18,500	N	NMED			
Pyrene	129-00-0	mg/kg	0.21	U			NS	NS	1,740	N	NMED			

TABLE D1-Y24-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID Y24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.15	UJ			NS	NS	2,200	N	RSL			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.15	UJ			NS	NS	6.3	N	RSL			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.15	UJ			211	N	36	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.15	UJ			17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.15	UJ			3.56	N	18.5	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.15	UJ			NS	NS	7.7	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.15	UJ			31.6	N	70.4	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.15	UJ			NS	NS	6.16	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.15	UJ			NS	NS	7.64	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.15	UJ			333	N	247	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.15	UJ			83.1	N	301	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.15	UJ			NS	NS	156	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.15	UJ			60.4	N	131	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.3	UJ			313	N	6.16	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.15	UJ			NS	NS	3,850	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.5	UJ			1,300	N	570	N	RSL			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.024	U			69.6	N	3.98	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.024	U			1.81	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.012	U			1.86	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.012	U			2.43	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.012	U			2.43	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.012	U			2.43	N	1.14	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.012	U			2.43	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (2)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.000000031	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg		U	0.0000024	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.000000038	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.00000031	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.000000048	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000037	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000024	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000034	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.00000022	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.000000045	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.0000003	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000012	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000058	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.000000051	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000012	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000017	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000074	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.0				0.000049	N	0.0000506	N	NMED			

TABLE D1-Y24-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID Y24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	19,000				NS	NS	78,000	N	NMED		2.44E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	U			NS	NS	31.3	N	NMED			
Arsenic	7440-38-2	mg/kg	1.5				7.07	N	13	N	NMED	2.12E-06	1.15E-01	Heart/Endocrine
Barium	7440-39-3	mg/kg	820				NS	NS	15,600	N	NMED		5.26E-02	
Beryllium	7440-41-7	mg/kg	1.2	J			64,400	N	156	N	NMED	1.86E-10	7.69E-03	
Cadmium	7440-43-9	mg/kg	0.51				85,900	N	70.5	N	NMED	5.94E-11	7.23E-03	
Calcium	7440-70-2	mg/kg	41,000				NS	NS	13,000,000	N	NMED		3.15E-03	
Chromium (Total) (3)	7440-47-3	mg/kg	13				96.6	N	45,200	N	NMED	1.35E-06	2.88E-04	
Cobalt	7440-48-4	mg/kg	6.1				17,200	N	23.4	N	NMED	3.55E-09	2.61E-01	Endocrine
Copper	7440-50-8	mg/kg	93				NS	NS	3,130	N	NMED		2.97E-02	
Iron	7439-89-6	mg/kg	13,000				NS	NS	54,800	N	NMED		2.37E-01	GI
Lead	7439-92-1	mg/kg	15				NS	NS	200	N	RSL			
Magnesium	7439-95-4	mg/kg	6,400				NS	NS	15,600,000	N	NMED		4.10E-04	
Manganese	7439-96-5	mg/kg	760				NS	NS	10,500	N	NMED		7.24E-02	
Mercury (Elemental)	7439-97-6	mg/kg	1.7	J			NS	NS	23.8	N	NMED		7.14E-02	
Nickel	7440-02-0	mg/kg	15				595,000	N	1,560	N	NMED	2.52E-10	9.62E-03	
Potassium	7440-09-7	mg/kg	1,900				NS	NS	15,600,000	N	NMED		1.22E-04	
Selenium	7782-49-2	mg/kg	2.3				NS	NS	391	N	NMED		5.88E-03	
Silver	7440-22-4	mg/kg	0.11	J			NS	NS	391	N	NMED		2.81E-04	
Sodium	7440-23-5	mg/kg	53				NS	NS	7,820,000	N	NMED		6.78E-06	
Thallium	7440-28-0	mg/kg	0.074	J			NS	NS	0.782	N	NMED		9.46E-02	
Vanadium	7440-62-2	mg/kg	13				NS	NS	394	N	NMED		3.30E-02	
Zinc	7440-66-6	mg/kg	27				NS	NS	23,500	N	NMED		1.15E-03	

TABLE D1-Y24-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID Y24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.39	U			NS	NS	11.2	N	NMED			
Nitrate	14797-55-8	mg/kg	6	J			NS	NS	125,000	N	NMED		4.80E-05	
Perchlorate	14797-73-0	mg/kg	0.0025	U			NS	NS	54.8	N	NMED			
										Cumulative Risk/Hazard		**3E-06**	**1.2**	
										Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	0.24
Endocrine	0.38
GI	0.24
Heart	0.12
All Others	0.39

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect

TABLE D1-Y24-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID Y24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0023	U			137	N	39,400	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0023	U			NS	NS	72,500	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0023	U			39	N	26,000	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0023	U			92	N	12	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0023	U			383	N	260,000	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0023	U			NS	NS	2,260	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0023	U			146	N	695	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0023	U			NS	NS	930	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0057	U			1	N	34	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0023	U			1,250	N	423	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0023	U			NS	NS	1,800	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0057	U			1	N	41	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0023	U			3	N	738	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0023	U			NS	NS	13,000	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0023	U			41	N	286	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0023	U			87	N	137	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0023	U			NS	NS	1,500	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0023	U			6,730	N	90,800	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0023	U			NS	NS	23,000	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0023	U			6,730	N	90,800	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0023	U			87	N	137	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0034	U			NS	NS	411,000	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0023	U			NS	NS	26,000	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0023	U			NS	NS	1,300	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0023	U			NS	NS	23,000	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0023	U			NS	NS	81,600	N	RSL		
Acetone	67-64-1	mg/kg	0.21				NS	NS	960,000	N	NMED		2.19E-07
Benzene	71-43-2	mg/kg	0.0023	U			87	N	729	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0023	U			NS	NS	1,800	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0023	U			NS	NS	630	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0023	U			30	N	26,000	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0023	U			1,760	N	18,300	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0023	U			NS	NS	95	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0023	U			NS	NS	8,540	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0023	U			53	N	1,020	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0023	U			NS	NS	2,160	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0023	U			NS	NS	89,500	N	NMED		
Chloroform	67-66-3	mg/kg	0.0023	U			29	N	2,000	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0057	U			201	N	1,260	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0023	U			NS	NS	2,600	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0023	U			146	N	695	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0023	U			67	N	18,300	N	NMED		

TABLE D1-Y24-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID Y24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0023	U			NS	NS	288	N	NMED		
Dichlorodifluoromethane	75-71-8	mg/kg	0.0023	U			NS	NS	865	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0023	U			29,000	N	368	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0023	U			52	N	916	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0023	U			NS	NS	14,200	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0057	U			NS	NS	3,730	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0023	U			4,820	N	178,000	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.011	U			14,400	N	5,130	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0023	U			NS	NS	58,000	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0023	U			NS	NS	24,000	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0023	U			108	N	843	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0029	U			NS	NS	3,940	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0023	U			NS	NS	14,200	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0023	U			NS	NS	120,000	N	RSL		
Styrene	100-42-5	mg/kg	0.0023	U			NS	NS	51,300	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0023	U			NS	NS	120,000	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0023	U			1,650	N	629	N	NMED		
Toluene	108-88-3	mg/kg	0.0023	U			NS	NS	61,300	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0023	U			NS	NS	1,100	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0023	U			146	N	695	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0023	U			112	N	37	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0023	U			NS	NS	6,030	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0023	U			28	N	46	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.21	U			1,250	N	423	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.21	U			NS	NS	13,000	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.21	U			6,730	N	90,800	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.21	U			6,730	N	90,800	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.21	U			NS	NS	91,600	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.21	U			2,330	N	916	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.21	U			NS	NS	2,750	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.21	U			NS	NS	18,300	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.21	U			NS	NS	1,830	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.21	U			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.21	U			17	N	276	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.21	U			NS	NS	104,000	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.21	U			NS	NS	6,490	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.21	U			NS	NS	3,370	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.21	U			NS	NS	41,000	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.21	U			NS	NS	8,000	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.21	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.21	U			NS	NS	410	N	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.21	U			1,100	N	3,300	N	RSL[S]		

TABLE D1-Y24-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID Y24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.21	U			NS	NS	73	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.21	U			NS	NS	NS	NS	NS		
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.21	U			NS	NS	82,000	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.21	U			110	N	410	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.21	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.21	U			1,100	N	3,300	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.21	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.21	U			NS	NS	50,500	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.21	U			NS	NS	25,300	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.21	U			NS	NS	253,000	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.21	U			32	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.16	U			24	N	251	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.21	U			32	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.21	U			NS	NS	25,300	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.21	U			323	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.21	U			NS	NS	3,300,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.21	U			NS	NS	82,000	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.21	U			NS	NS	2,500	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.21	U			16	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.21	U			519	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.21	U			1,830	N	18,300	N	NMED		
Butylbenzylphthalate	85-68-7	mg/kg	0.21	U			12,000	N	160,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.21	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.21	U			3,230	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.21	U			NS	NS	91,600	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.21	U			NS	NS	8,200	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.16	U			3	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.21	U			NS	NS	1,200	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.21	U			NS	NS	733,000	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.21	U			NS	NS	916,000	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.21	U			NS	NS	33,700	N	NMED		
Fluorene	86-73-7	mg/kg	0.21	U			NS	NS	33,700	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.21	U			16	N	733	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.21	U			52	N	916	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.21	U			641	N	641	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.21	U			32	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.21	U			27,000	N	183,000	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.21	U			3	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.025	UJ			1	N	7	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.21	U			5,240	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.21	U			108	N	843	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.21	U			293	N	1,540	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.21	U			45	N	3,180	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.21	U			NS	NS	27,500	N	NMED		
Phenol	108-95-2	mg/kg	0.21	U			NS	NS	275,000	N	NMED		
Pyrene	129-00-0	mg/kg	0.21	U			NS	NS	25,300	N	NMED		

TABLE D1-Y24-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID Y24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.15	UJ			NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.15	UJ			NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.15	UJ			1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.15	UJ			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.15	UJ			17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.15	UJ			NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.15	UJ			165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.15	UJ			NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.15	UJ			NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.15	UJ			1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.15	UJ			428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.15	UJ			NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.15	UJ			293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.3	UJ			1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.15	UJ			NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.5	UJ			5,300	N	7,400	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg	0.024	U			304	N	57	N	NMED		
Aroclor 1221	11104-28-2	mg/kg	0.024	U			9	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg	0.012	U			9	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg	0.012	U			11	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg	0.012	U			11	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg	0.012	U			11	N	16	N	NMED		
Aroclor 1260	11096-82-5	mg/kg	0.012	U			11	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.000000031	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg		U	0.0000024	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.000000038	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.00000031	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.000000048	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000037	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000024	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000034	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.00000022	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.000000045	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.0000003	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000012	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000058	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.000000051	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000012	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000017	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000074	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.0				0.000238	N	0.000808	N	NMED		

TABLE D1-Y24-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID Y24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	19,000				NS	NS	1,290,000	N	NMED		1.47E-02
Antimony	7440-36-0	mg/kg	0.15	U			NS	NS	519	N	NMED		
Arsenic	7440-38-2	mg/kg	1.5				36	N	208	N	NMED	4.18E-07	7.21E-03
Barium	7440-39-3	mg/kg	820				NS	NS	255,000	N	NMED		3.22E-03
Beryllium	7440-41-7	mg/kg	1.2	J			313,000	N	2,580	N	NMED	3.83E-11	4.65E-04
Cadmium	7440-43-9	mg/kg	0.51				417,000	N	1,110	N	NMED	1.22E-11	4.59E-04
Calcium	7440-70-2	mg/kg	41,000				NS	NS	32,400,000	N	NMED		1.27E-03
Chromium (Total) (3)	7440-47-3	mg/kg	13				505	N	314,000	N	NMED	2.57E-07	4.14E-05
Cobalt	7440-48-4	mg/kg	6.1				83,400	N	388	N	NMED	7.31E-10	1.57E-02
Copper	7440-50-8	mg/kg	93				NS	NS	51,900	N	NMED		1.79E-03
Iron	7439-89-6	mg/kg	13,000				NS	NS	908,000	N	NMED		1.43E-02
Lead	7439-92-1	mg/kg	15				NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	6,400				NS	NS	5,680,000	N	NMED		1.13E-03
Manganese	7439-96-5	mg/kg	760				NS	NS	160,000	N	NMED		4.75E-03
Mercury (Elemental)	7439-97-6	mg/kg	1.7	J			NS	NS	112	N	NMED		1.52E-02
Nickel	7440-02-0	mg/kg	15				2,890,000	N	25,700	N	NMED	5.19E-11	5.84E-04
Potassium	7440-09-7	mg/kg	1,900				NS	NS	76,200,000	N	NMED		2.49E-05
Selenium	7782-49-2	mg/kg	2.3				NS	NS	6,490	N	NMED		3.54E-04
Silver	7440-22-4	mg/kg	0.11	J			NS	NS	6,490	N	NMED		1.69E-05
Sodium	7440-23-5	mg/kg	53				NS	NS	37,300,000	N	NMED		1.42E-06
Thallium	7440-28-0	mg/kg	0.074	J			NS	NS	13	N	NMED		5.69E-03
Vanadium	7440-62-2	mg/kg	13				NS	NS	6,530	N	NMED		1.99E-03
Zinc	7440-66-6	mg/kg	27				NS	NS	38,900	N	NMED		6.94E-04

TABLE D1-Y24-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID Y24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.39	U			NS	NS	63	N	NMED		
Nitrate	14797-55-8	mg/kg	6	J			NS	NS	2,080,000	N	NMED		2.88E-06
Perchlorate	14797-73-0	mg/kg	0.0025	U			NS	NS	908	N	NMED		
										Cumulative Risk/Hazard		**7E-07**	**0.09**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
IEUBK = Integrated Exposure Uptake Biokentic Model
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect

TABLE D1-Y24-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID Y24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0023	U			659	N	10,600	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0023	U			NS	NS	13,600	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0023	U			197	N	7,080	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0023	U			4,300	N	2	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0023	U			1,820	N	70,800	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0023	U			NS	NS	424	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0023	U			781	N	130	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0023	U			NS	NS	283	N	NMED[C]			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0057	U			8	N	6	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0023	U			8,540	N	79	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0023	U			NS	NS	492	N	NMED[C]			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0057	U			6	N	8	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0023	U			16	N	140	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0023	U			NS	NS	2,500	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0023	U			195	N	54	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0023	U			415	N	25	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0023	U			NS	NS	422	N	NMED[C]			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0023	U			45,900	N	24,800	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0023	U			NS	NS	7,080	N	NMED[C]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0023	U			45,900	N	24,800	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0023	U			415	N	25	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.0034	U			NS	NS	90,700	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0023	U			NS	NS	7,080	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.0023	U			NS	NS	599	N	NMED[C]			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0023	U			NS	NS	7,080	N	NMED[C]			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0023	U			NS	NS	20,400	N	NMED[C]			
Acetone	67-64-1	mg/kg	0.21				NS	NS	242,000	N	NMED		8.68E-07	
Benzene	71-43-2	mg/kg	0.0023	U			423	N	142	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.0023	U			NS	NS	538	N	NMED[C]			
Bromochloromethane	74-97-5	mg/kg	0.0023	U			NS	NS	296	N	NMED[C]			
Bromodichloromethane	75-27-4	mg/kg	0.0023	U			143	N	7,080	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0023	U			23,700	N	5,380	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0023	U			NS	NS	18	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.0023	U			NS	NS	1,620	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0023	U			252	N	202	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0023	U			NS	NS	412	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0023	U			NS	NS	16,600	N	NMED			
Chloroform	67-66-3	mg/kg	0.0023	U			134	N	391	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0057	U			956	N	235	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0023	U			NS	NS	708	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0023	U			781	N	130	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0023	U			340	N	5,380	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0023	U			NS	NS	54	N	NMED			

TABLE D1-Y24-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID Y24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Dichlorodifluoromethane	75-71-8	mg/kg	0.0023	U			NS	NS	161	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.0023	U			1,770	N	5,800	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0023	U			2,400	N	269	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0023	U			NS	NS	2,740	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0057	U			NS	NS	696	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0023	U			24,200	N	33,100	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.011	U			89,600	N	1,210	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0023	U			NS	NS	17,700	N	NMED[C]			
n-Propylbenzene	103-65-1	mg/kg	0.0023	U			NS	NS	6,730	N	NMED[C]			
Naphthalene	91-20-3	mg/kg	0.0023	U			633	N	159	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0029	U			NS	NS	736	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.0023	U			NS	NS	2,740	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.0023	U			NS	NS	35,400	N	NMED[C]			
Styrene	100-42-5	mg/kg	0.0023	U			NS	NS	10,200	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0023	U			NS	NS	35,400	N	NMED[C]			
Tetrachloroethene	127-18-4	mg/kg	0.0023	U			7,910	N	120	N	NMED			
Toluene	108-88-3	mg/kg	0.0023	U			NS	NS	14,000	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0023	U			NS	NS	206	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0023	U			781	N	130	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0023	U			5,370	N	7	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0023	U			NS	NS	1,130	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0023	U			161	N	162	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.21	U			8,540	N	79	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.21	U			NS	NS	2,500	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.21	U			45,900	N	24,800	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.21	U			45,900	N	24,800	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.21	U			NS	NS	26,900	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.21	U			17,000	N	269	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.21	U			NS	NS	807	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.21	U			NS	NS	5,380	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.21	U			NS	NS	538	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.21	U			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.21	U			165	N	81	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.21	U			NS	NS	28,300	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.21	U			NS	NS	1,770	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.21	U			NS	NS	1,000	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.21	U			NS	NS	13,500	N	NMED[C]			
2-Nitroaniline	88-74-4	mg/kg	0.21	U			NS	NS	2,690	N	NMED[C]			
2-Nitrophenol	88-75-5	mg/kg	0.21	U			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.21	U			410	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.21	U			135	N	1,080	N	NMED[SC]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.21	U			NS	NS	22	N	NMED			

TABLE D1-Y24-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID Y24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.21	U			NS	NS	NS	NS	NS			
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.21	U			NS	NS	26,900	N	NMED[C]			
4-Chloroaniline	106-47-8	mg/kg	0.21	U			14	N	135	N	NMED[C]			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.21	U			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.21	U			135	N	1,080	N	NMED[C]			
4-Nitrophenol	100-02-7	mg/kg	0.21	U			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.21	U			NS	NS	15,100	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.21	U			NS	NS	7,530	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.21	U			NS	NS	75,300	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.21	U			240	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.16	U			173	N	15	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.21	U			240	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.21	U			NS	NS	7,530	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.21	U			2,310	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.21	U			NS	NS	1,080,000	N	NMED[C]			
Benzyl Alcohol	100-51-6	mg/kg	0.21	U			NS	NS	26,900	N	NMED[C]			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.21	U			NS	NS	807	N	NMED[C]			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.21	U			2	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.21	U			3,540	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.21	U			13,400	N	5,380	N	NMED			
Butylbenzylphthalate	85-68-7	mg/kg	0.21	U			1,420	N	53,800	N	NMED[C]			
Carbazole	86-74-8	mg/kg	0.21	U			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.21	U			23,100	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.21	U			NS	NS	26,900	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.21	U			NS	NS	2,690	N	NMED[C]			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.16	U			24	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.21	U			NS	NS	269	N	NMED[C]			
Diethylphthalate	84-66-2	mg/kg	0.21	U			NS	NS	215,000	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.21	U			NS	NS	269,000	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.21	U			NS	NS	10,000	N	NMED			
Fluorene	86-73-7	mg/kg	0.21	U			NS	NS	10,000	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.21	U			117	N	215	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.21	U			2,400	N	269	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.21	U			4,670	N	188	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.21	U			240	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.21	U			198,000	N	53,700	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.21	U			0.38	N	NA	N	NMED[C]			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.025	UJ			4	N	2	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.21	U			37,900	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.21	U			633	N	159	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.21	U			1,350	N	353	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.21	U			346	N	989	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.21	U			NS	NS	8,070	N	NMED			
Phenol	108-95-2	mg/kg	0.21	U			NS	NS	77,400	N	NMED			
Pyrene	129-00-0	mg/kg	0.21	U			NS	NS	7,530	N	NMED			

TABLE D1-Y24-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID Y24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.15	UJ			NS	NS	8,070	N	NMED[C]			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.15	UJ			NS	NS	27	N	NMED[C]			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.15	UJ			7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.15	UJ			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.15	UJ			165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.15	UJ			NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.15	UJ			1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.15	UJ			NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.15	UJ			NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.15	UJ			11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.15	UJ			2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.15	UJ			NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.15	UJ			1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.3	UJ			11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.15	UJ			NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.5	UJ			626	N	2,420	N	NMED[C]			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg	0.024	U			2,440	N	17	N	NMED			
Aroclor 1221	11104-28-2	mg/kg	0.024	U			55	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg	0.012	U			58	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg	0.012	U			85	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg	0.012	U			85	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg	0.012	U			85	N	5	N	NMED			
Aroclor 1260	11096-82-5	mg/kg	0.012	U			85	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (3)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.000000031	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg		U	0.0000024	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.000000038	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.00000031	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.000000048	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000037	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000024	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.000000034	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.00000022	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.000000045	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg		U	0.0000003	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.00000012	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000058	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.000000051	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.00000012	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		U	0.00000017	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000074	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.0				0.00172	N	0.000226	N	NMED			

TABLE D1-Y24-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID Y24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	19,000				NS	NS	41,400	N	NMED		4.59E-01	Nervous
Antimony	7440-36-0	mg/kg	0.15	U			NS	NS	142	N	NMED			
Arsenic	7440-38-2	mg/kg	1.5				216	N	41	N	NMED	6.94E-08	3.64E-02	
Barium	7440-39-3	mg/kg	820				NS	NS	4,390	N	NMED		1.87E-01	Kidneys
Beryllium	7440-41-7	mg/kg	1.2	J			2,710	N	148	N	NMED	4.43E-09	8.11E-03	
Cadmium	7440-43-9	mg/kg	0.51				3,610	N	72	N	NMED	1.41E-09	7.07E-03	
Calcium	7440-70-2	mg/kg	41,000				NS	NS	8,850,000	N	NMED		4.63E-03	
Chromium (Total) (4)	7440-47-3	mg/kg	13				468	N	134	N	NMED	2.78E-07	9.70E-02	
Cobalt	7440-48-4	mg/kg	6.1				722	N	37	N	NMED	8.45E-08	1.66E-01	Endocrine
Copper	7440-50-8	mg/kg	93				NS	NS	14,200	N	NMED		6.55E-03	
Iron	7439-89-6	mg/kg	13,000				NS	NS	248,000	N	NMED		5.24E-02	
Lead	7439-92-1	mg/kg	15				NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	6,400				NS	NS	1,550,000	N	NMED		4.13E-03	
Manganese	7439-96-5	mg/kg	760				NS	NS	464	Y	NMED		1.64E+00	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	1.7	J			NS	NS	21	N	NMED		8.21E-02	
Nickel	7440-02-0	mg/kg	15				20,500	N	753	N	NMED	7.32E-09	1.99E-02	
Potassium	7440-09-7	mg/kg	1,900				NS	NS	20,800,000	N	NMED		9.13E-05	
Selenium	7782-49-2	mg/kg	2.3				NS	NS	1,750	N	NMED		1.31E-03	
Silver	7440-22-4	mg/kg	0.11	J			NS	NS	1,770	N	NMED		6.21E-05	
Sodium	7440-23-5	mg/kg	53				NS	NS	10,200,000	N	NMED		5.20E-06	
Thallium	7440-28-0	mg/kg	0.074	J			NS	NS	4	N	NMED		2.09E-02	
Vanadium	7440-62-2	mg/kg	13				NS	NS	614	N	NMED		2.12E-02	
Zinc	7440-66-6	mg/kg	27				NS	NS	106,000	N	NMED		2.55E-04	

TABLE D1-Y24-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID Y24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.39	U			NS	NS	12	N	NMED			
Nitrate	14797-55-8	mg/kg	6	J			NS	NS	566,000	N	NMED		1.06E-05	
Perchlorate	14797-73-0	mg/kg	0.0025	U			NS	NS	248	N	NMED			
										Cumulative Risk/Hazard		**4E-07**	**2.8**	
										Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	2.1
Endocrine	0.17
Kidneys	0.19
All Others	0.36

Notes:

[s] = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update).

2) NMED[C] = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

3) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

4) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect

TABLE D1-Z24-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID Z24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0018	U			28.1	N	2,350	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0018	U			NS	NS	14,400	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0018	U			7.98	N	1,560	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0018	U			18.8	N	2.61	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0018	U			78.6	N	15,600	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0018	U			NS	NS	440	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0018	U			29.3	N	141	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0018	U			NS	NS	63	N	RSL			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0046	U			0.051	N	7.09	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0018	U			240	N	82.9	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0018	U			NS	NS	300	N	RSL			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0046	U			0.0858	N	5.88	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0018	U			0.672	N	135	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0018	U			NS	NS	2,150	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0018	U			8.32	N	55.6	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0018	U			17.8	N	29	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0018	U			NS	NS	270	N	RSL			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0018	U			1,290	N	5,480	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0018	U			NS	NS	1,600	N	RSL			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0018	U			1,290	N	5,480	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0018	U			17.8	N	29	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.0028	U			NS	NS	37,400	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0018	U			NS	NS	1,560	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.0018	U			NS	NS	200	N	RSL			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0018	U			NS	NS	1,600	N	RSL			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0018	U			NS	NS	5,810	N	RSL			
Acetone	67-64-1	mg/kg	0.35	J			NS	NS	66,300	N	NMED		5.28E-06	
Benzene	71-43-2	mg/kg	0.0018	U			17.8	N	114	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.0018	U			NS	NS	290	N	RSL			
Bromochloromethane	74-97-5	mg/kg	0.0018	U			NS	NS	150	N	RSL			
Bromodichloromethane	75-27-4	mg/kg	0.0018	U			6.19	N	1,560	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0018	U			674	N	1,230	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0018	U			NS	NS	17.7	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.0018	U			NS	NS	1,550	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0018	U			10.7	N	144	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0018	U			NS	NS	378	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0018	U			NS	NS	19,000	N	NMED			
Chloroform	67-66-3	mg/kg	0.0018	U			5.9	N	306	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0046	U			41.1	N	268	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0018	U			NS	NS	156	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0018	U			29.3	N	141	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0018	U			13.9	N	1,230	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0018	U			NS	NS	57.9	N	NMED			

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HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID Z24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Dichlorodifluoromethane	75-71-8	mg/kg	0.0018	U			NS	NS	182	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.0018	U			75.1	N	3,930	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0018	U			68.3	N	61.6	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0018	U			NS	NS	2,360	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0046	U			NS	NS	764	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0018	U			975	N	37,800	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.0092	U			766	N	409	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0018	U			NS	NS	3,900	N	RSL			
n-Propylbenzene	103-65-1	mg/kg	0.0018	U			NS	NS	3,800	N	RSL			
Naphthalene	91-20-3	mg/kg	0.0018	U			22.6	N	162	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0023	U			NS	NS	805	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.0018	U			NS	NS	2,360	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.0018	U			NS	NS	7,800	N	RSL			
Styrene	100-42-5	mg/kg	0.0018	U			NS	NS	7,260	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0018	U			NS	NS	7,800	N	RSL			
Tetrachloroethene	127-18-4	mg/kg	0.0018	U			337	N	111	N	NMED			
Toluene	108-88-3	mg/kg	0.0018	U			NS	NS	5,230	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0018	U			NS	NS	210	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0018	U			29.3	N	141	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0018	U			15.5	N	6.77	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0018	U			NS	NS	1,230	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0018	U			0.742	N	113	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	U			240	N	82.9	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	U			NS	NS	2,150	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	U			1,290	N	5,480	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	U			1,290	N	5,480	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	U			NS	NS	6,160	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	U			484	N	61.6	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	U			NS	NS	185	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	U			NS	NS	1,230	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	U			NS	NS	123	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	U			17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	U			3.56	N	18.5	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	U			NS	NS	6,260	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.17	U			NS	NS	391	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.17	U			NS	NS	232	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	U			NS	NS	3,200	N	RSL			
2-Nitroaniline	88-74-4	mg/kg	0.17	U			NS	NS	630	N	RSL			
2-Nitrophenol	88-75-5	mg/kg	0.17	U			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	U			11.8	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.17	U			270	N	250	N	RSL[S]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	U			NS	NS	4.93	N	NMED			
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	U			NS	NS	NS	NS	NS			

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FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	U			NS	NS	6,300	N	RSL			
4-Chloroaniline	106-47-8	mg/kg	0.17	U			27	N	32	N	RSL			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	U			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.17	U			270	N	250	N	RSL			
4-Nitrophenol	100-02-7	mg/kg	0.17	U			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.17	U			NS	NS	3,480	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.17	U			NS	NS	1,740	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.17	U			NS	NS	17,400	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.17	U			1.53	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.13	U			1.12	N	17.4	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	U			1.53	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	U			NS	NS	1,740	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	U			15.3	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.17	U			NS	NS	250,000	N	RSL			
Benzyl Alcohol	100-51-6	mg/kg	0.17	U			NS	NS	6,300	N	RSL			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	U			NS	NS	190	N	RSL			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	U			3.11	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	U			99.3	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	J			380	N	1,230	N	NMED	4.47E-09	1.38E-04	
Butylbenzylphthalate	85-68-7	mg/kg	0.17	U			2,900	N	13,000	N	RSL			
Carbazole	86-74-8	mg/kg	0.17	U			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.17	U			153	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.17	U			NS	NS	6,160	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.17	U			NS	NS	630	N	RSL			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	U			0.153	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.17	U			NS	NS	78	N	RSL			
Diethylphthalate	84-66-2	mg/kg	0.17	U			NS	NS	49,300	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.17	U			NS	NS	61,600	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.17	U			NS	NS	2,320	N	NMED			
Fluorene	86-73-7	mg/kg	0.17	U			NS	NS	2,320	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.17	U			3.33	N	49.3	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	U			68.3	N	61.6	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.17	U			133	N	43.1	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	U			1.53	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.17	U			5,610	N	12,300	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	U			0.78	N	NS	NS	RSL			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.02	UJ			0.0234	N	0.493	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	U			1,090	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.17	U			22.6	N	162	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.17	U			60.4	N	131	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.17	U			9.85	N	234	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.17	U			NS	NS	1,740	N	NMED			
Phenol	108-95-2	mg/kg	0.17	U			NS	NS	18,500	N	NMED			
Pyrene	129-00-0	mg/kg	0.17	U			NS	NS	1,740	N	NMED			

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FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.15	UJ			NS	NS	2,200	N	RSL			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.15	UJ			NS	NS	6.3	N	RSL			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.15	UJ			211	N	36	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.15	UJ			17.1	N	123	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.15	UJ			3.56	N	18.5	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.15	UJ			NS	NS	7.7	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.15	UJ			31.6	N	70.4	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.15	UJ			NS	NS	6.16	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.15	UJ			NS	NS	7.64	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.15	UJ			333	N	247	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.15	UJ			83.1	N	301	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.15	UJ			NS	NS	156	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.15	UJ			60.4	N	131	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.3	UJ			313	N	6.16	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.15	UJ			NS	NS	3,850	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.5	UJ			1,300	N	570	N	RSL			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg		R			69.6	N	3.98	N	NMED			
Aroclor 1221	11104-28-2	mg/kg		R			1.81	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg		R			1.86	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg		R			2.43	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg		R			2.43	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg		R			2.43	N	1.14	N	NMED			
Aroclor 1260	11096-82-5	mg/kg		R			2.43	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (2)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.0000011	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000039	J	0.000013	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000054	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.0000021	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000012	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000075	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000025	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.00000007	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000084	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.000000092	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg	0.000000014	J	0.00000014	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.0000002	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000037	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.000000038	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.0000002	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		UJ	0.000005	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000069	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.000000018				0.000049	N	0.0000506	N	NMED	3.65E-09	3.54E-04	

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MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	17,000				NS	NS	78,000	N	NMED		2.18E-01	Nervous
Antimony	7440-36-0	mg/kg	0.2				NS	NS	31.3	N	NMED		6.39E-03	
Arsenic	7440-38-2	mg/kg	1.8				7.07	N	13	N	NMED	2.55E-06	1.38E-01	Heart/Endocrine
Barium	7440-39-3	mg/kg	410				NS	NS	15,600	N	NMED		2.63E-02	
Beryllium	7440-41-7	mg/kg	0.9	J			64,400	N	156	N	NMED	1.40E-10	5.77E-03	
Cadmium	7440-43-9	mg/kg	1.1				85,900	N	70.5	N	NMED	1.28E-10	1.56E-02	
Calcium	7440-70-2	mg/kg	8,600				NS	NS	13,000,000	N	NMED		6.62E-04	
Chromium (Total) (3)	7440-47-3	mg/kg	17				96.6	N	45,200	N	NMED	1.76E-06	3.76E-04	
Cobalt	7440-48-4	mg/kg	5.4				17,200	N	23.4	N	NMED	3.14E-09	2.31E-01	Endocrine
Copper	7440-50-8	mg/kg	240				NS	NS	3,130	N	NMED		7.67E-02	
Iron	7439-89-6	mg/kg	9,900				NS	NS	54,800	N	NMED		1.81E-01	GI
Lead	7439-92-1	mg/kg	18				NS	NS	200	N	RSL			
Magnesium	7439-95-4	mg/kg	5,700				NS	NS	15,600,000	N	NMED		3.65E-04	
Manganese	7439-96-5	mg/kg	790				NS	NS	10,500	N	NMED		7.52E-02	
Mercury (Elemental)	7439-97-6	mg/kg	0.19				NS	NS	23.8	N	NMED		7.98E-03	
Nickel	7440-02-0	mg/kg	13				595,000	N	1,560	N	NMED	2.18E-10	8.33E-03	
Potassium	7440-09-7	mg/kg	1,400				NS	NS	15,600,000	N	NMED		8.97E-05	
Selenium	7782-49-2	mg/kg	1.7				NS	NS	391	N	NMED		4.35E-03	
Silver	7440-22-4	mg/kg	0.21	J			NS	NS	391	N	NMED		5.37E-04	
Sodium	7440-23-5	mg/kg	55				NS	NS	7,820,000	N	NMED		7.03E-06	
Thallium	7440-28-0	mg/kg	0.16				NS	NS	0.782	N	NMED		2.05E-01	Hair/Coat/Eyes
Vanadium	7440-62-2	mg/kg	18				NS	NS	394	N	NMED		4.57E-02	
Zinc	7440-66-6	mg/kg	40				NS	NS	23,500	N	NMED		1.70E-03	

TABLE D1-Z24-1
HUMAN HEALTH RISK SCREEN AND CALCULATION OF RESIDENTIAL RISKS FOR BUFFER AREA GRID Z24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.32	U			NS	NS	11.2	N	NMED			
Nitrate	14797-55-8	mg/kg	21				NS	NS	125,000	N	NMED		1.68E-04	
Perchlorate	14797-73-0	mg/kg	0.002	U			NS	NS	54.8	N	NMED			
										Cumulative Risk/Hazard		**4E-06**	**1.2**	
										Exceeds Target Level		**N**	**Y**	

System	Hazard Quotient
Nervous	0.22
Endocrine	0.37
GI	0.18
Heart	0.14
Hair/Coat	0.20
Eyes	0.20
All Others	0.28

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect

TABLE D1-Z24-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID Z24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0018	U			137	N	39,400	N	NMED		
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0018	U			NS	NS	72,500	N	NMED		
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0018	U			39	N	26,000	N	NMED		
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0018	U			92	N	12	N	NMED		
1,1-Dichloroethane	75-34-3	mg/kg	0.0018	U			383	N	260,000	N	NMED		
1,1-Dichloroethene	75-35-4	mg/kg	0.0018	U			NS	NS	2,260	N	NMED		
1,1-Dichloropropene	563-58-6	mg/kg	0.0018	U			146	N	695	N	NMED[S]		
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0018	U			NS	NS	930	N	RSL		
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0046	U			1	N	34	N	NMED		
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0018	U			1,250	N	423	N	NMED		
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0018	U			NS	NS	1,800	N	RSL		
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0046	U			1	N	41	N	NMED		
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0018	U			3	N	738	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0018	U			NS	NS	13,000	N	NMED		
1,2-Dichloroethane	107-06-2	mg/kg	0.0018	U			41	N	286	N	NMED		
1,2-Dichloropropane	78-87-5	mg/kg	0.0018	U			87	N	137	N	NMED		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0018	U			NS	NS	1,500	N	RSL		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0018	U			6,730	N	90,800	N	NMED[S]		
1,3-Dichloropropane	142-28-9	mg/kg	0.0018	U			NS	NS	23,000	N	RSL		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0018	U			6,730	N	90,800	N	NMED		
2,2-Dichloropropane	594-20-7	mg/kg	0.0018	U			87	N	137	N	NMED[S]		
2-Butanone	78-93-3	mg/kg	0.0028	U			NS	NS	411,000	N	NMED		
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0018	U			NS	NS	26,000	N	NMED		
2-Hexanone	591-78-6	mg/kg	0.0018	U			NS	NS	1,300	N	RSL		
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0018	U			NS	NS	23,000	N	RSL		
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0018	U			NS	NS	81,600	N	RSL		
Acetone	67-64-1	mg/kg	0.35	J			NS	NS	960,000	N	NMED		3.65E-07
Benzene	71-43-2	mg/kg	0.0018	U			87	N	729	N	NMED		
Bromobenzene	108-86-1	mg/kg	0.0018	U			NS	NS	1,800	N	RSL		
Bromochloromethane	74-97-5	mg/kg	0.0018	U			NS	NS	630	N	RSL		
Bromodichloromethane	75-27-4	mg/kg	0.0018	U			30	N	26,000	N	NMED		
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0018	U			1,760	N	18,300	N	NMED		
Bromomethane	74-83-9	mg/kg	0.0018	U			NS	NS	95	N	NMED		
Carbon Disulfide	75-15-0	mg/kg	0.0018	U			NS	NS	8,540	N	NMED		
Carbon Tetrachloride	56-23-5	mg/kg	0.0018	U			53	N	1,020	N	NMED		
Chlorobenzene	108-90-7	mg/kg	0.0018	U			NS	NS	2,160	N	NMED		
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0018	U			NS	NS	89,500	N	NMED		
Chloroform	67-66-3	mg/kg	0.0018	U			29	N	2,000	N	NMED		
Chloromethane	74-87-3	mg/kg	0.0046	U			201	N	1,260	N	NMED		
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0018	U			NS	NS	2,600	N	NMED		
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0018	U			146	N	695	N	NMED[S]		
Dibromochloromethane	124-48-1	mg/kg	0.0018	U			67	N	18,300	N	NMED		

TABLE D1-Z24-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID Z24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0018	U			NS	NS	288	N	NMED		
Dichlorodifluoromethane	75-71-8	mg/kg	0.0018	U			NS	NS	865	N	NMED		
Ethylbenzene	100-41-4	mg/kg	0.0018	U			29,000	N	368	N	NMED		
Hexachlorobutadiene	87-68-3	mg/kg	0.0018	U			52	N	916	N	NMED		
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0018	U			NS	NS	14,200	N	NMED		
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0046	U			NS	NS	3,730	N	NMED[S]		
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0018	U			4,820	N	178,000	N	NMED		
Methylene Chloride	75-09-2	mg/kg	0.0092	U			14,400	N	5,130	N	NMED		
n-Butylbenzene	104-51-8	mg/kg	0.0018	U			NS	NS	58,000	N	RSL		
n-Propylbenzene	103-65-1	mg/kg	0.0018	U			NS	NS	24,000	N	RSL		
Naphthalene	91-20-3	mg/kg	0.0018	U			108	N	843	N	NMED		
o-Xylene	95-47-6	mg/kg	0.0023	U			NS	NS	3,940	N	NMED		
p-Isopropyltoluene	99-87-6	mg/kg	0.0018	U			NS	NS	14,200	N	NMED[S]		
sec-Butylbenzene	135-98-8	mg/kg	0.0018	U			NS	NS	120,000	N	RSL		
Styrene	100-42-5	mg/kg	0.0018	U			NS	NS	51,300	N	NMED		
tert-Butylbenzene	98-06-6	mg/kg	0.0018	U			NS	NS	120,000	N	RSL		
Tetrachloroethene	127-18-4	mg/kg	0.0018	U			1,650	N	629	N	NMED		
Toluene	108-88-3	mg/kg	0.0018	U			NS	NS	61,300	N	NMED		
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0018	U			NS	NS	1,100	N	NMED		
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0018	U			146	N	695	N	NMED[S]		
Trichloroethene	79-01-6	mg/kg	0.0018	U			112	N	37	N	NMED		
Trichlorofluoromethane	75-69-4	mg/kg	0.0018	U			NS	NS	6,030	N	NMED		
Vinyl Chloride	75-01-4	mg/kg	0.0018	U			28	N	46	N	NMED		
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)													
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	U			1,250	N	423	N	NMED		
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	U			NS	NS	13,000	N	NMED		
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	U			6,730	N	90,800	N	NMED[S]		
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	U			6,730	N	90,800	N	NMED		
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	U			NS	NS	91,600	N	NMED		
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	U			2,330	N	916	N	NMED		
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	U			NS	NS	2,750	N	NMED		
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	U			NS	NS	18,300	N	NMED		
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	U			NS	NS	1,830	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	U			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	U			17	N	276	N	NMED		
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	U			NS	NS	104,000	N	NMED		
2-Chlorophenol	95-57-8	mg/kg	0.17	U			NS	NS	6,490	N	NMED		
2-Methylnaphthalene	91-57-6	mg/kg	0.17	U			NS	NS	3,370	N	NMED		
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	U			NS	NS	41,000	N	RSL		
2-Nitroaniline	88-74-4	mg/kg	0.17	U			NS	NS	8,000	N	RSL		
2-Nitrophenol	88-75-5	mg/kg	0.17	U			NS	NS	NS	NS	NS		
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	U			NS	NS	410	N	NMED		
3-Nitroaniline	99-09-2	mg/kg	0.17	U			1,100	N	3,300	N	RSL[S]		

TABLE D1-Z24-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID Z24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued													
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	U			NS	NS	73	N	NMED		
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	U			NS	NS	NS	NS	NS		
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	U			NS	NS	82,000	N	RSL		
4-Chloroaniline	106-47-8	mg/kg	0.17	U			110	N	410	N	RSL		
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	U			NS	NS	NS	NS	NS		
4-Nitroaniline	100-01-6	mg/kg	0.17	U			1,100	N	3,300	N	RSL		
4-Nitrophenol	100-02-7	mg/kg	0.17	U			NS	NS	NS	NS	NS		
Acenaphthene	83-32-9	mg/kg	0.17	U			NS	NS	50,500	N	NMED		
Acenaphthylene	208-96-8	mg/kg	0.17	U			NS	NS	25,300	N	NMED[S]		
Anthracene	120-12-7	mg/kg	0.17	U			NS	NS	253,000	N	NMED		
Benzo(a)anthracene	56-55-3	mg/kg	0.17	U			32	N	NS	NS	NMED		
Benzo(a)pyrene	50-32-8	mg/kg	0.13	U			24	N	251	N	NMED		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	U			32	N	NS	NS	NMED		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	U			NS	NS	25,300	N	NMED[S]		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	U			323	N	NS	NS	NMED		
Benzoic Acid	65-85-0	mg/kg	0.17	U			NS	NS	3,300,000	N	RSL		
Benzyl Alcohol	100-51-6	mg/kg	0.17	U			NS	NS	82,000	N	RSL		
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	U			NS	NS	2,500	N	RSL		
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	U			16	N	NS	NS	NMED		
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	U			519	N	NS	NS	NMED		
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	J			1,830	N	18,300	N	NMED	9.29E-10	9.29E-06
Butylbenzylphthalate	85-68-7	mg/kg	0.17	U			12,000	N	160,000	N	RSL		
Carbazole	86-74-8	mg/kg	0.17	U			NS	NS	NS	NS	NS		
Chrysene	218-01-9	mg/kg	0.17	U			3,230	N	NS	NS	NMED		
Di-n-butylphthalate	84-74-2	mg/kg	0.17	U			NS	NS	91,600	N	NMED		
Di-n-octylphthalate	117-84-0	mg/kg	0.17	U			NS	NS	8,200	N	RSL		
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	U			3	N	NS	NS	NMED		
Dibenzofuran	132-64-9	mg/kg	0.17	U			NS	NS	1,200	N	RSL		
Diethylphthalate	84-66-2	mg/kg	0.17	U			NS	NS	733,000	N	NMED		
Dimethylphthalate	131-11-3	mg/kg	0.17	U			NS	NS	916,000	N	NMED		
Fluoranthene	206-44-0	mg/kg	0.17	U			NS	NS	33,700	N	NMED		
Fluorene	86-73-7	mg/kg	0.17	U			NS	NS	33,700	N	NMED		
Hexachlorobenzene	118-74-1	mg/kg	0.17	U			16	N	733	N	NMED		
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	U			52	N	916	N	NMED		
Hexachloroethane	67-72-1	mg/kg	0.17	U			641	N	641	N	NMED		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	U			32	N	NS	NS	NMED		
Isophorone	78-59-1	mg/kg	0.17	U			27,000	N	183,000	N	NMED		
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	U			3	N	NS	NS	RSL		
N-Nitrosodimethylamine	62-75-9	mg/kg	0.02	UJ			1	N	7	N	NMED		
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	U			5,240	N	NS	NS	NMED		
Naphthalene	91-20-3	mg/kg	0.17	U			108	N	843	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.17	U			293	N	1,540	N	NMED		
Pentachlorophenol	87-86-5	mg/kg	0.17	U			45	N	3,180	N	NMED		
Phenanthrene	85-01-8	mg/kg	0.17	U			NS	NS	27,500	N	NMED		
Phenol	108-95-2	mg/kg	0.17	U			NS	NS	275,000	N	NMED		
Pyrene	129-00-0	mg/kg	0.17	U			NS	NS	25,300	N	NMED		

TABLE D1-Z24-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID Z24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)													
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.15	UJ			NS	NS	32,000	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.15	UJ			NS	NS	82	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.15	UJ			1,070	N	573	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.15	UJ			82	N	1,820	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.15	UJ			17	N	276	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.15	UJ			NS	NS	127	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.15	UJ			165	N	1,170	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.15	UJ			NS	NS	92	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.15	UJ			NS	NS	125	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.15	UJ			1,600	N	3,670	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.15	UJ			428	N	4,890	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.15	UJ			NS	NS	2,590	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.15	UJ			293	N	1,540	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.3	UJ			1,510	N	92	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.15	UJ			NS	NS	63,300	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.5	UJ			5,300	N	7,400	N	RSL		
POLYCHLORINATED BIPHENYLS (mg/kg)													
Aroclor 1016	12674-11-2	mg/kg		R			304	N	57	N	NMED		
Aroclor 1221	11104-28-2	mg/kg		R			9	N	NS	NS	NMED		
Aroclor 1232	11141-16-5	mg/kg		R			9	N	NS	NS	NMED		
Aroclor 1242	53469-21-9	mg/kg		R			11	N	NS	NS	NMED		
Aroclor 1248	12672-29-6	mg/kg		R			11	N	NS	NS	NMED		
Aroclor 1254	11097-69-1	mg/kg		R			11	N	16	N	NMED		
Aroclor 1260	11096-82-5	mg/kg		R			11	N	NS	NS	NMED		
DIOXINS/FURANS (mg/kg) (2)													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.0000011	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000039	J	0.000013	0.0003	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000054	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.0000021	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000012	0.01	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000075	0.1	NS	NS	NS	NS	NMED		
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000025	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.00000007	0.1	NS	NS	NS	NS	NMED		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000084	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.000000092	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg	0.000000014	J	0.00000014	0.1	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.0000002	0.03	NS	NS	NS	NS	NMED		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000037	1	NS	NS	NS	NS	NMED		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.000000038	0.1	NS	NS	NS	NS	NMED		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.0000002	0.3	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		UJ	0.000005	0.1	NS	NS	NS	NS	NMED		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000069	1	NS	NS	NS	NS	NMED		
TEQ		mg/kg	0.000000018				0.000238	N	0.000808	N	NMED	7.52E-10	2.22E-05

TABLE D1-Z24-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID Z24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
METALS (mg/kg)													
Aluminum	7429-90-5	mg/kg	17,000				NS	NS	1,290,000	N	NMED		1.32E-02
Antimony	7440-36-0	mg/kg	0.2				NS	NS	519	N	NMED		3.85E-04
Arsenic	7440-38-2	mg/kg	1.8				36	N	208	N	NMED	5.01E-07	8.65E-03
Barium	7440-39-3	mg/kg	410				NS	NS	255,000	N	NMED		1.61E-03
Beryllium	7440-41-7	mg/kg	0.9	J			313,000	N	2,580	N	NMED	2.88E-11	3.49E-04
Cadmium	7440-43-9	mg/kg	1.1				417,000	N	1,110	N	NMED	2.64E-11	9.91E-04
Calcium	7440-70-2	mg/kg	8,600				NS	NS	32,400,000	N	NMED		2.65E-04
Chromium (Total) (3)	7440-47-3	mg/kg	17				505	N	314,000	N	NMED	3.37E-07	5.41E-05
Cobalt	7440-48-4	mg/kg	5.4				83,400	N	388	N	NMED	6.47E-10	1.39E-02
Copper	7440-50-8	mg/kg	240				NS	NS	51,900	N	NMED		4.62E-03
Iron	7439-89-6	mg/kg	9,900				NS	NS	908,000	N	NMED		1.09E-02
Lead	7439-92-1	mg/kg	18				NS	NS	800	N	RSL		
Magnesium	7439-95-4	mg/kg	5,700				NS	NS	5,680,000	N	NMED		1.00E-03
Manganese	7439-96-5	mg/kg	790				NS	NS	160,000	N	NMED		4.94E-03
Mercury (Elemental)	7439-97-6	mg/kg	0.19				NS	NS	112	N	NMED		1.70E-03
Nickel	7440-02-0	mg/kg	13				2,890,000	N	25,700	N	NMED	4.50E-11	5.06E-04
Potassium	7440-09-7	mg/kg	1,400				NS	NS	76,200,000	N	NMED		1.84E-05
Selenium	7782-49-2	mg/kg	1.7				NS	NS	6,490	N	NMED		2.62E-04
Silver	7440-22-4	mg/kg	0.21	J			NS	NS	6,490	N	NMED		3.24E-05
Sodium	7440-23-5	mg/kg	55				NS	NS	37,300,000	N	NMED		1.47E-06
Thallium	7440-28-0	mg/kg	0.16				NS	NS	13	N	NMED		1.23E-02
Vanadium	7440-62-2	mg/kg	18				NS	NS	6,530	N	NMED		2.76E-03
Zinc	7440-66-6	mg/kg	40				NS	NS	38,900	N	NMED		1.03E-03

TABLE D1-Z24-2
CALCULATION OF INDUSTRIAL WORKER RISKS FOR BUFFER AREA GRID Z24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Industrial Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Industrial Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1)	Estimated Cancer Risk	Estimated Hazard Quotient
OTHER PARAMETERS (mg/kg)													
Cyanide	57-12-5	mg/kg	0.32	U			NS	NS	63	N	NMED		
Nitrate	14797-55-8	mg/kg	21				NS	NS	2,080,000	N	NMED		1.01E-05
Perchlorate	14797-73-0	mg/kg	0.002	U			NS	NS	908	N	NMED		
										Cumulative Risk/Hazard		**8E-07**	**0.08**
										Exceeds Target Level		**N**	**N**

Notes:

s = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1

2) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

3) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
IEUBK = Integrated Exposure Uptake Biokentic Model
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect

TABLE D1-Z24-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID Z24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.0018	U			659	N	10,600	N	NMED			
1,1,1-Trichloroethane	71-55-6	mg/kg	0.0018	U			NS	NS	13,600	N	NMED			
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0018	U			197	N	7,080	N	NMED			
1,1,2-Trichloroethane	79-00-5	mg/kg	0.0018	U			4,300	N	2	N	NMED			
1,1-Dichloroethane	75-34-3	mg/kg	0.0018	U			1,820	N	70,800	N	NMED			
1,1-Dichloroethene	75-35-4	mg/kg	0.0018	U			NS	NS	424	N	NMED			
1,1-Dichloropropene	563-58-6	mg/kg	0.0018	U			781	N	130	N	NMED[S]			
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0018	U			NS	NS	283	N	NMED[C]			
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0046	U			8	N	6	N	NMED			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0018	U			8,540	N	79	N	NMED			
1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.0018	U			NS	NS	492	N	NMED[C]			
1,2-Dibromo-3-Chloropropane	96-12-8	mg/kg	0.0046	U			6	N	8	N	NMED			
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	mg/kg	0.0018	U			16	N	140	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.0018	U			NS	NS	2,500	N	NMED			
1,2-Dichloroethane	107-06-2	mg/kg	0.0018	U			195	N	54	N	NMED			
1,2-Dichloropropane	78-87-5	mg/kg	0.0018	U			415	N	25	N	NMED			
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	mg/kg	0.0018	U			NS	NS	422	N	NMED[C]			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0018	U			45,900	N	24,800	N	NMED[S]			
1,3-Dichloropropane	142-28-9	mg/kg	0.0018	U			NS	NS	7,080	N	NMED[C]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.0018	U			45,900	N	24,800	N	NMED			
2,2-Dichloropropane	594-20-7	mg/kg	0.0018	U			415	N	25	N	NMED[S]			
2-Butanone	78-93-3	mg/kg	0.0028	U			NS	NS	90,700	N	NMED			
2-Chlorotoluene (o-chlorotoluene)	95-49-8	mg/kg	0.0018	U			NS	NS	7,080	N	NMED			
2-Hexanone	591-78-6	mg/kg	0.0018	U			NS	NS	599	N	NMED[C]			
4-Chlorotoluene (p-chlorotoluene)	106-43-4	mg/kg	0.0018	U			NS	NS	7,080	N	NMED[C]			
4-Methyl-2-Pentanone (Methyl Isobutyl ketone)	108-10-1	mg/kg	0.0018	U			NS	NS	20,400	N	NMED[C]			
Acetone	67-64-1	mg/kg	0.35	J			NS	NS	242,000	N	NMED		1.45E-06	
Benzene	71-43-2	mg/kg	0.0018	U			423	N	142	N	NMED			
Bromobenzene	108-86-1	mg/kg	0.0018	U			NS	NS	538	N	NMED[C]			
Bromochloromethane	74-97-5	mg/kg	0.0018	U			NS	NS	296	N	NMED[C]			
Bromodichloromethane	75-27-4	mg/kg	0.0018	U			143	N	7,080	N	NMED			
Bromoform (Tribromomethane)	75-25-2	mg/kg	0.0018	U			23,700	N	5,380	N	NMED			
Bromomethane	74-83-9	mg/kg	0.0018	U			NS	NS	18	N	NMED			
Carbon Disulfide	75-15-0	mg/kg	0.0018	U			NS	NS	1,620	N	NMED			
Carbon Tetrachloride	56-23-5	mg/kg	0.0018	U			252	N	202	N	NMED			
Chlorobenzene	108-90-7	mg/kg	0.0018	U			NS	NS	412	N	NMED			
Chloroethane (Ethyl Chloride)	75-00-3	mg/kg	0.0018	U			NS	NS	16,600	N	NMED			
Chloroform	67-66-3	mg/kg	0.0018	U			134	N	391	N	NMED			
Chloromethane	74-87-3	mg/kg	0.0046	U			956	N	235	N	NMED			
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0018	U			NS	NS	708	N	NMED			
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0018	U			781	N	130	N	NMED[S]			
Dibromochloromethane	124-48-1	mg/kg	0.0018	U			340	N	5,380	N	NMED			
Dibromomethane (Methylene bromide)	74-95-3	mg/kg	0.0018	U			NS	NS	54	N	NMED			

TABLE D1-Z24-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID Z24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
VOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
Dichlorodifluoromethane	75-71-8	mg/kg	0.0018	U			NS	NS	161	N	NMED			
Ethylbenzene	100-41-4	mg/kg	0.0018	U			1,770	N	5,800	N	NMED			
Hexachlorobutadiene	87-68-3	mg/kg	0.0018	U			2,400	N	269	N	NMED			
Isopropylbenzene (Cumene)	98-82-8	mg/kg	0.0018	U			NS	NS	2,740	N	NMED			
m,p-Xylene (sum of isomers)	179601-23-1	mg/kg	0.0046	U			NS	NS	696	N	NMED[S]			
Methyl t-Butyl Ether	1634-04-4	mg/kg	0.0018	U			24,200	N	33,100	N	NMED			
Methylene Chloride	75-09-2	mg/kg	0.0092	U			89,600	N	1,210	N	NMED			
n-Butylbenzene	104-51-8	mg/kg	0.0018	U			NS	NS	17,700	N	NMED[C]			
n-Propylbenzene	103-65-1	mg/kg	0.0018	U			NS	NS	6,730	N	NMED[C]			
Naphthalene	91-20-3	mg/kg	0.0018	U			633	N	159	N	NMED			
o-Xylene	95-47-6	mg/kg	0.0023	U			NS	NS	736	N	NMED			
p-Isopropyltoluene	99-87-6	mg/kg	0.0018	U			NS	NS	2,740	N	NMED[S]			
sec-Butylbenzene	135-98-8	mg/kg	0.0018	U			NS	NS	35,400	N	NMED[C]			
Styrene	100-42-5	mg/kg	0.0018	U			NS	NS	10,200	N	NMED			
tert-Butylbenzene	98-06-6	mg/kg	0.0018	U			NS	NS	35,400	N	NMED[C]			
Tetrachloroethene	127-18-4	mg/kg	0.0018	U			7,910	N	120	N	NMED			
Toluene	108-88-3	mg/kg	0.0018	U			NS	NS	14,000	N	NMED			
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.0018	U			NS	NS	206	N	NMED			
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0018	U			781	N	130	N	NMED[S]			
Trichloroethene	79-01-6	mg/kg	0.0018	U			5,370	N	7	N	NMED			
Trichlorofluoromethane	75-69-4	mg/kg	0.0018	U			NS	NS	1,130	N	NMED			
Vinyl Chloride	75-01-4	mg/kg	0.0018	U			161	N	162	N	NMED			
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)														
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.17	U			8,540	N	79	N	NMED			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.17	U			NS	NS	2,500	N	NMED			
1,3-Dichlorobenzene	541-73-1	mg/kg	0.17	U			45,900	N	24,800	N	NMED[S]			
1,4-Dichlorobenzene	106-46-7	mg/kg	0.17	U			45,900	N	24,800	N	NMED			
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.17	U			NS	NS	26,900	N	NMED			
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.17	U			17,000	N	269	N	NMED			
2,4-Dichlorophenol	120-83-2	mg/kg	0.17	U			NS	NS	807	N	NMED			
2,4-Dimethylphenol	105-67-9	mg/kg	0.17	U			NS	NS	5,380	N	NMED			
2,4-Dinitrophenol	51-28-5	mg/kg	0.17	U			NS	NS	538	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.17	U			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.17	U			165	N	81	N	NMED			
2-Chloronaphthalene (b-Chloronaphthalene)	91-58-7	mg/kg	0.17	U			NS	NS	28,300	N	NMED			
2-Chlorophenol	95-57-8	mg/kg	0.17	U			NS	NS	1,770	N	NMED			
2-Methylnaphthalene	91-57-6	mg/kg	0.17	U			NS	NS	1,000	N	NMED			
2-Methylphenol (o-cresol)	95-48-7	mg/kg	0.17	U			NS	NS	13,500	N	NMED[C]			
2-Nitroaniline	88-74-4	mg/kg	0.17	U			NS	NS	2,690	N	NMED[C]			
2-Nitrophenol	88-75-5	mg/kg	0.17	U			NS	NS	NS	NS	NS			
3,3-Dichlorobenzidine	91-94-1	mg/kg	0.17	U			410	N	NS	NS	NMED			
3-Nitroaniline	99-09-2	mg/kg	0.17	U			135	N	1,080	N	NMED[SC]			
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	mg/kg	0.17	U			NS	NS	22	N	NMED			

TABLE D1-Z24-3
CALCULATION OF CONSTRUCTION WORKER RISKS FOR BUFFER AREA GRID Z24
FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg), continued														
4-Bromophenyl-phenylether	101-55-3	mg/kg	0.17	U			NS	NS	NS	NS	NS			
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.17	U			NS	NS	26,900	N	NMED[C]			
4-Chloroaniline	106-47-8	mg/kg	0.17	U			14	N	135	N	NMED[C]			
4-Chlorophenyl-phenylether	7005-72-3	mg/kg	0.17	U			NS	NS	NS	NS	NS			
4-Nitroaniline	100-01-6	mg/kg	0.17	U			135	N	1,080	N	NMED[C]			
4-Nitrophenol	100-02-7	mg/kg	0.17	U			NS	NS	NS	NS	NS			
Acenaphthene	83-32-9	mg/kg	0.17	U			NS	NS	15,100	N	NMED			
Acenaphthylene	208-96-8	mg/kg	0.17	U			NS	NS	7,530	N	NMED[S]			
Anthracene	120-12-7	mg/kg	0.17	U			NS	NS	75,300	N	NMED			
Benzo(a)anthracene	56-55-3	mg/kg	0.17	U			240	N	NS	NS	NMED			
Benzo(a)pyrene	50-32-8	mg/kg	0.13	U			173	N	15	N	NMED			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.17	U			240	N	NS	NS	NMED			
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.17	U			NS	NS	7,530	N	NMED[S]			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.17	U			2,310	N	NS	NS	NMED			
Benzoic Acid	65-85-0	mg/kg	0.17	U			NS	NS	1,080,000	N	NMED[C]			
Benzyl Alcohol	100-51-6	mg/kg	0.17	U			NS	NS	26,900	N	NMED[C]			
bis(2-Chloroethoxy)methane	111-91-1	mg/kg	0.17	U			NS	NS	807	N	NMED[C]			
bis(2-Chloroethyl)ether	111-44-4	mg/kg	0.17	U			2	N	NS	NS	NMED			
bis(2-Chloroisopropyl)ether	108-60-1	mg/kg	0.17	U			3,540	N	NS	NS	NMED			
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.17	J			13,400	N	5,380	N	NMED	1.27E-10	3.16E-05	
Butylbenzylphthalate	85-68-7	mg/kg	0.17	U			1,420	N	53,800	N	NMED[C]			
Carbazole	86-74-8	mg/kg	0.17	U			NS	NS	NS	NS	NS			
Chrysene	218-01-9	mg/kg	0.17	U			23,100	N	NS	NS	NMED			
Di-n-butylphthalate	84-74-2	mg/kg	0.17	U			NS	NS	26,900	N	NMED			
Di-n-octylphthalate	117-84-0	mg/kg	0.17	U			NS	NS	2,690	N	NMED[C]			
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.13	U			24	N	NS	NS	NMED			
Dibenzofuran	132-64-9	mg/kg	0.17	U			NS	NS	269	N	NMED[C]			
Diethylphthalate	84-66-2	mg/kg	0.17	U			NS	NS	215,000	N	NMED			
Dimethylphthalate	131-11-3	mg/kg	0.17	U			NS	NS	269,000	N	NMED			
Fluoranthene	206-44-0	mg/kg	0.17	U			NS	NS	10,000	N	NMED			
Fluorene	86-73-7	mg/kg	0.17	U			NS	NS	10,000	N	NMED			
Hexachlorobenzene	118-74-1	mg/kg	0.17	U			117	N	215	N	NMED			
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	87-68-3	mg/kg	0.17	U			2,400	N	269	N	NMED			
Hexachloroethane	67-72-1	mg/kg	0.17	U			4,670	N	188	N	NMED			
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.17	U			240	N	NS	NS	NMED			
Isophorone	78-59-1	mg/kg	0.17	U			198,000	N	53,700	N	NMED			
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.17	U			0.38	N	NA	N	NMED[C]			
N-Nitrosodimethylamine	62-75-9	mg/kg	0.02	UJ			4	N	2	N	NMED			
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.17	U			37,900	N	NS	NS	NMED			
Naphthalene	91-20-3	mg/kg	0.17	U			633	N	159	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.17	U			1,350	N	353	N	NMED			
Pentachlorophenol	87-86-5	mg/kg	0.17	U			346	N	989	N	NMED			
Phenanthrene	85-01-8	mg/kg	0.17	U			NS	NS	8,070	N	NMED			
Phenol	108-95-2	mg/kg	0.17	U			NS	NS	77,400	N	NMED			
Pyrene	129-00-0	mg/kg	0.17	U			NS	NS	7,530	N	NMED			

TABLE D1-Z24-3
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FORT WINGATE DEPOT ACTIVITY INNER FENCE
MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.15	UJ			NS	NS	8,070	N	NMED[C]			
1,3-Dinitrobenzene	99-65-0	mg/kg	0.15	UJ			NS	NS	27	N	NMED[C]			
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.15	UJ			7,500	N	161	N	NMED			
2,4-Dinitrotoluene	121-14-2	mg/kg	0.15	UJ			600	N	536	N	NMED			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.15	UJ			165	N	81	N	NMED			
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.15	UJ			NS	NS	17	N	NMED			
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.15	UJ			1,130	N	319	N	NMED			
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.15	UJ			NS	NS	27	N	NMED			
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.15	UJ			NS	NS	17	N	NMED			
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.15	UJ			11,800	N	1,080	N	NMED			
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.15	UJ			2,960	N	1,350	N	NMED			
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.15	UJ			NS	NS	706	N	NMED			
Nitrobenzene	98-95-3	mg/kg	0.15	UJ			1,350	N	353	N	NMED			
Nitroglycerine	55-63-0	mg/kg	0.3	UJ			11,100	N	27	N	NMED			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.15	UJ			NS	NS	17,400	N	NMED			
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.5	UJ			626	N	2,420	N	NMED[C]			
POLYCHLORINATED BIPHENYLS (mg/kg)														
Aroclor 1016	12674-11-2	mg/kg		R			2,440	N	17	N	NMED			
Aroclor 1221	11104-28-2	mg/kg		R			55	N	NS	NS	NMED			
Aroclor 1232	11141-16-5	mg/kg		R			58	N	NS	NS	NMED			
Aroclor 1242	53469-21-9	mg/kg		R			85	N	NS	NS	NMED			
Aroclor 1248	12672-29-6	mg/kg		R			85	N	NS	NS	NMED			
Aroclor 1254	11097-69-1	mg/kg		R			85	N	5	N	NMED			
Aroclor 1260	11096-82-5	mg/kg		R			85	N	NS	NS	NMED			
DIOXINS/FURANS (mg/kg) (3)														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	mg/kg		U	0.0000011	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	mg/kg	0.0000000039	J	0.000013	0.0003	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	mg/kg		U	0.00000054	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	mg/kg		U	0.0000021	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	mg/kg		U	0.00000012	0.01	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	mg/kg		U	0.000000075	0.1	NS	NS	NS	NS	NMED			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	mg/kg		U	0.00000025	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	mg/kg		U	0.00000007	0.1	NS	NS	NS	NS	NMED			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	mg/kg		U	0.000000084	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	mg/kg		U	0.000000092	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	mg/kg	0.000000014	J	0.00000014	0.1	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	mg/kg		U	0.0000002	0.03	NS	NS	NS	NS	NMED			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	mg/kg		U	0.000000037	1	NS	NS	NS	NS	NMED			
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	mg/kg		U	0.000000038	0.1	NS	NS	NS	NS	NMED			
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	mg/kg		U	0.0000002	0.3	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	mg/kg		UJ	0.000005	0.1	NS	NS	NS	NS	NMED			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	mg/kg		U	0.000000069	1	NS	NS	NS	NS	NMED			
TEQ		mg/kg	0.000000018				0.00172	N	0.000226	N	NMED	1.04E-10	7.92E-05	

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MCKINLEY COUNTY, NEW MEXICO

	CAS Number	Units	Final Result		Raw Data Result	TEF	Construction Worker Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Construction Worker Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (1,2)	Estimated Cancer Risk	Estimated Hazard Quotient	Target Organ Assessment
METALS (mg/kg)														
Aluminum	7429-90-5	mg/kg	17,000				NS	NS	41,400	N	NMED		4.11E-01	Nervous
Antimony	7440-36-0	mg/kg	0.2				NS	NS	142	N	NMED		1.41E-03	
Arsenic	7440-38-2	mg/kg	1.8				216	N	41	N	NMED	8.33E-08	4.37E-02	
Barium	7440-39-3	mg/kg	410				NS	NS	4,390	N	NMED		9.34E-02	
Beryllium	7440-41-7	mg/kg	0.9	J			2,710	N	148	N	NMED	3.32E-09	6.08E-03	
Cadmium	7440-43-9	mg/kg	1.1				3,610	N	72	N	NMED	3.05E-09	1.53E-02	
Calcium	7440-70-2	mg/kg	8,600				NS	NS	8,850,000	N	NMED		9.72E-04	
Chromium (Total) (4)	7440-47-3	mg/kg	17				468	N	134	N	NMED	3.63E-07	1.27E-01	GI, Blood
Cobalt	7440-48-4	mg/kg	5.4				722	N	37	N	NMED	7.48E-08	1.47E-01	Endocrine
Copper	7440-50-8	mg/kg	240				NS	NS	14,200	N	NMED		1.69E-02	
Iron	7439-89-6	mg/kg	9,900				NS	NS	248,000	N	NMED		3.99E-02	
Lead	7439-92-1	mg/kg	18				NS	NS	800	N	RSL			
Magnesium	7439-95-4	mg/kg	5,700				NS	NS	1,550,000	N	NMED		3.68E-03	
Manganese	7439-96-5	mg/kg	790				NS	NS	464	Y	NMED		1.70E+00	Nervous
Mercury (Elemental)	7439-97-6	mg/kg	0.19				NS	NS	21	N	NMED		9.18E-03	
Nickel	7440-02-0	mg/kg	13				20,500	N	753	N	NMED	6.34E-09	1.73E-02	
Potassium	7440-09-7	mg/kg	1,400				NS	NS	20,800,000	N	NMED		6.73E-05	
Selenium	7782-49-2	mg/kg	1.7				NS	NS	1,750	N	NMED		9.71E-04	
Silver	7440-22-4	mg/kg	0.21	J			NS	NS	1,770	N	NMED		1.19E-04	
Sodium	7440-23-5	mg/kg	55				NS	NS	10,200,000	N	NMED		5.39E-06	
Thallium	7440-28-0	mg/kg	0.16				NS	NS	4	N	NMED		4.52E-02	
Vanadium	7440-62-2	mg/kg	18				NS	NS	614	N	NMED		2.93E-02	
Zinc	7440-66-6	mg/kg	40				NS	NS	106,000	N	NMED		3.77E-04	

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OTHER PARAMETERS (mg/kg)														
Cyanide	57-12-5	mg/kg	0.32	U			NS	NS	12	N	NMED			
Nitrate	14797-55-8	mg/kg	21				NS	NS	566,000	N	NMED		3.71E-05	
Perchlorate	14797-73-0	mg/kg	0.002	U			NS	NS	248	N	NMED			
										Cumulative Risk/Hazard		**5E-07**	**2.7**	
										Exceeds Target Level		**N**	**Y**	

Notes:

[s] = 1,3-Dichloropropene was used as a surrogate for 1,1-dichloropropene and cis- and trans-1,3-dichloropropene. 1,4-Dichlorobenzene was used as a surrogate for 1,3-dichlorobenzene. 1,2-Dichloropropane was used as a surrogate for 2,2-dichloropropane. For m,p-xylenes the lower value between m-xylene and p-xylene was used for the sum of the isomers. Cumene was used as a surrogate for p-isopropyltoluene. 4-Nitroaniline was used as a surrogate for 3-nitroaniline. Pyrene was used as a surrogate for acenaphthylene and benzo(g,h,i)perylene.

1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2023, November Update).

2) NMED[C] = For chemicals with no current NMED SSL, the SSL was calculated using NMED methodology. See **Appendix D**.

3) Toxicity data for the dioxin and furan congeners were assessed using the 2005 World Health Organization's (WHO) toxicity equivalency factors (TEF) (Van den berg, et al 2006). TEFs were applied to the analytical results and summed for each sample resulting in a toxicity equivalent (TEQ). The TEQ was then compared to the NMED cancer and non-cancer SSLs for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). (NMED 2022, November update).

4) Chromium screening value is for Total Chromium.

Dibenz(a,h)anthracene has an SSL above the DL and LOD but below the LOQ. However, this compound is not known to have been used at FWDA. Dibenzo(a,h)anthracene is a polycyclic aromatic hydrocarbon (PAH) with no commercial production or known use. It occurs as a component of coal tars, shale oils, and soots and has been detected in gasoline engine exhaust, coke oven emissions, cigarette smoke, charcoal broiled meats, vegetation near heavily travelled roads, and combustion sources. (If there was a detection between the DL and LOQ the lab would J qualify the result the substance might be there but at a higher degree of uncertainty. Results were U qualified to the LOD as non-detect per the DoD QSM.)

N-Nitrosodimethylamine has an SSL below the DL, LOD, and LOQ. However, this analyte is not suspected to have been used at Fort Wingate. N-nitrosodimethylamine was produced by industry only in small amounts for research.

According to Section 5.3 of the NMED RAG, November 2022 update, essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, sodium) should be evaluated separately. "If the maximum detected concentration for the site is below the soil SSL, resulting in an HQ of less than one, then exposure is not likely to cause adverse effects to receptors, and the inorganic constituent may be eliminated from further evaluation in the risk assessments. The risks from essential nutrients may be discussed separately from the overall HI for noncarcinogens.

CAS = Chemical Abstracts Service
J = Estimated
mg/kg = milligrams per kilogram
NS = No Standard
U = Nondetect
UJ = Estimated Nondetect

System	Hazard Quotient
Nervous	2.1
Endocrine	0.15
GI	0.13
Blood	0.13
All Others	0.32

Appendix D.2 Ecological Risk Screen

Appendix D.2 – Attachment 1
Ecological Risk Assessment Scoping Assessment

ATTACHMENT A
SCREENING-LEVEL ECOLOGICAL RISK ASSESSMENT
SCOPING ASSESSMENT
SITE ASSESSMENT CHECKLIST

INTRODUCTION

This checklist has been developed as a tool for gathering information about the facility property and surrounding areas, as part of the scoping assessment. Specifically, the checklist assists in the compilation of information on the physical and biological aspects of the site including the site environmental setting, usage of the site, releases at the site, contaminant fate and transport mechanisms, and the area's habitats, receptors, and exposure pathways. The completed checklist can then be used to construct the preliminary conceptual site exposure model (PCSEM) for the site. In addition, the checklist and PCSEM will serve as the basis for the scoping assessment. Section III of this document provides further information on using the completed checklist to develop the PCSEM.

In general, the checklist is designed for applicability to all sites; however, there may be unusual circumstances which require professional judgment to determine the need for further ecological evaluation (*e.g.*, cave-dwelling receptors). In addition, some of the questions in the checklist may not be relevant to all sites. Some facilities may have large amounts of data available regarding contaminant concentrations and hydrogeologic conditions at the site, while other may have only limited data. In either case, the questions on the checklist should be addressed as completely as possible with the information available.

Habitats and receptors, which may be present at the site, can be identified by direct or indirect[1] observations and by contacting local and regional natural resource agencies. Habitat types may be determined by reviewing LULC, which are available via the Internet at http://www.nationalatlas.gov/mapit.html. With regard to receptors, it should be noted that receptors are often present at a site even when they are not observed. Therefore, for the purposes of this checklist, it should be assumed that receptors are present if viable habitat is present. The presence of receptors should be confirmed by contacting one or several of the organizations listed below.

Sources of general information available for the identification of ecological receptors and habitats include:

- U.S. Fish and Wildlife Service (http://www.fws.gov)
- Biota Information System of New Mexico (BISON-M) maintained by the New Mexico Department of Game and Fish (NMGF) (http://151.199.74.229/states/nm.htm)
- U.S. Forest Service (USFS) (http://www.fs.fed.us/)
- New Mexico Forestry Division (NMFD) of the Energy, Minerals and Natural Resources Department (http://www.emnrd.state.nm.us/forestry/index.htm)
- U.S. Bureau of Land Management (USBLM) (http://www.blm.gov/nhp/index.htm) or (http://www.nm.blm.gov/www/new_home_2.html)
- United States Geological Service (USGS) (http://www.usgs.gov)

1 Examples of indirect observations that indicate the presence of receptors include: tracks, feathers, burrows, scat

- National Wetland Inventory Maps (http://wetlands.fws.gov)
- National Audubon Society (http://www.audobon.com)
- National Biological Information Infrastructure (http://biology.usgs.gov)
- Sierra Club (http://www.sierraclub.org)
- National Geographic Society (http://www.nationalgeographic.com)
- New Mexico Natural Heritage Program (http://nmnhp.unm.edu/)
- State and National Parks System
- Local universities
- Tribal organizations

INSTRUCTIONS FOR COMPLETING THE CHECKLIST

The checklist consists of four sections: Site Location, Site Characterization, Habitat Evaluation, and Exposure Pathway Evaluation. Answers to the checklist should reflect existing conditions and should not consider future remedial actions at the site. Completion of the checklist should provide sufficient information for the preparation of a PCSEM and scoping report and allow for the identification of any data gaps.

Section I - Site Location, provides general site information, which identifies the facility being evaluated, and gives specific location information. Site maps and diagrams, which should be attached to the completed checklist, are an important part of this section. The following elements should be clearly illustrated: 1) the location and boundaries of the site relative to the surrounding area, 2) any buildings, structures or important features of the facility or site, and 3) all ecological areas or habitats identified during completion of the checklist. It is possible that several maps will be needed to illustrate the required elements clearly and adequately. Although topographical information should be illustrated on at least one map, it is not required for every map. Simplified diagrams (preferably to scale) of the site and surrounding areas will usually suffice.

Section II - Site Characterization, is intended to provide additional temporal and contextual information about the site, which may have an impact on determining whether a certain area should be characterized as ecologically viable habitat or contains receptors. Answers to the questions in Section II will help the reviewer develop a broader and more complete evaluation of the ecological aspects of a site.

Section III - Habitat Evaluation, provides information regarding the physical and biological characteristics of the different habitat types present at or in the locality of the site. Aquatic features such as lakes, ponds, streams, arroyos and ephemeral waters can be identified by reviewing aerial photographs, LULC and topographic maps and during site reconnaissance visits. In New Mexico, there are several well-defined terrestrial communities, which occur naturally. Typical communities include wetlands, forest (e.g., mixed conifer, ponderosa pine and pinyon juniper), scrub/shrub, grassland, and desert. Specific types of vegetation characterize each of these communities and can be used to identify them. Field guides are often useful for identifying vegetation types. A number of sites may be in areas that have been disturbed by human activities and may no longer match any of the naturally occurring communities typical of the southwest. Particularly at heavily used areas at facilities, the two most common of these areas are usually

described as "weed fields" and "lawn grass". Vegetation at "weed fields" should be examined to determine whether the weeds consist primarily of species native to the southwest or introduced species such as Kochia. Fields of native weeds and lawn grass are best evaluated using the short grass prairie habitat guides.

The applicable portions of Section III of the checklist should be completed for each individual habitat identified. For example, the questions in Section III.A of the checklist should be answered for each wetland area identified at or in the locality of the site and the individual areas must be identified on a map or maps.

Section IV- Exposure Pathway Evaluation is used to determine if contaminants at the site have the potential to impact habitat identified in Section III. An exposure pathway is the course a chemical or physical agent takes from a source to an exposed organism. Each exposure pathway includes a source (or release from a source), an environmental transport mechanism, an exposure point, and an exposure route. A complete exposure pathway is one in which each of these components, as well as a receptor to be exposed, is present. Essentially, this section addresses the fate and transport of contaminants that are known or suspected to have been released at the site. In most cases, without a complete exposure pathway between contaminants and receptors, additional ecological evaluation is not warranted.

Potential transport pathways addressed in this checklist include migration of contaminants via air dispersion, leaching into groundwater, soil erosion/runoff, groundwater discharge to surface water, and irradiation. Due to New Mexico's semi-arid climate, vegetation is generally sparse. The sparse vegetation, combined with the intense nature of summer storms in New Mexico, results in soil erosion that occurs sporadically over a very brief time frame. Soil erosion may be of particular concern for sites located in steeply sloped areas. Several questions within Section IV of this checklist have been developed to aid in the identification of those sites where soil erosion/runoff would be an important transport mechanism.

USING THE CHECKLIST TO DEVELOP THE PRELIMINARY CONCEPTUAL SITE EXPOSURE MODEL

The completed Site Assessment Checklist can be used to construct the PCSEM. An example PCSEM diagram is presented in Figure 1. The CSM illustrates actual and potential contaminant migration and exposure pathways to associated receptors. The components of a complete exposure pathway are simplified and grouped into three main categories: sources, release mechanisms, and potential receptors. As a contaminant migrates and/or is transformed in the environment, sources and release mechanisms may expand into primary, secondary, and tertiary levels. For example, Figure 1 illustrates releases from inactive lagoons (primary sources) through spills (primary release mechanism), which migrate to surface and subsurface soils (secondary sources), which are then leached (secondary release mechanism) to groundwater (tertiary source). Similarly, exposures of various trophic levels to the contaminant(s) and consequent exposures via the food chain may lead to multiple groups of receptors. For example, Figure 1 illustrates groups of both aquatic and terrestrial receptors which may be exposed and subsequently serve as tertiary release mechanisms to receptors which prey on them.

Although completing the checklist will not provide the user with a readymade PCSEM, a majority of the components of the PCSEM can be found in the answers to the checklist. It is

 then up to the user to put the pieces together into a comprehensive whole. The answers from Section II of the checklist, Site Characterization, can be used to identify sources of releases. The answers to Section IV, Exposure Pathway Evaluation, will assist users in tracing the migration pathways of releases in the environment, thus helping to identify release mechanisms and sources. The results of Section III, Habitat Evaluation, can be used to both identify secondary and tertiary sources and to identify the types of receptors which may be exposed. Appendix B of the NMED's *Guidance for Assessing Ecological Risks Posed by Chemicals: Screening-Level Ecological Assessment* also contains sample food webs which may be used to develop the PCSEM.

Once all of the components have been identified, one can begin tracing the steps between the primary releases and the potential receptors. For each potential receptor, the user should consider all possible exposure points (e.g., prey items, direct contact with contaminated soil or water, etc.) then begin eliminating pathways, which are not expected to result in exposure to the contaminant at the site. Gradually, the links between the releases and receptors can be filled in, resulting in potential complete exposure pathways.

For further guidance on constructing a PCSEM, consult the NMED's *Guidance for Assessing Ecological Risks Posed by Chemicals: Screening-Level Ecological Assessment* (2000), and EPA's Office of Solid Waste and Emergency *Response's Soil Screening Guidance: User's Guide* (1996).

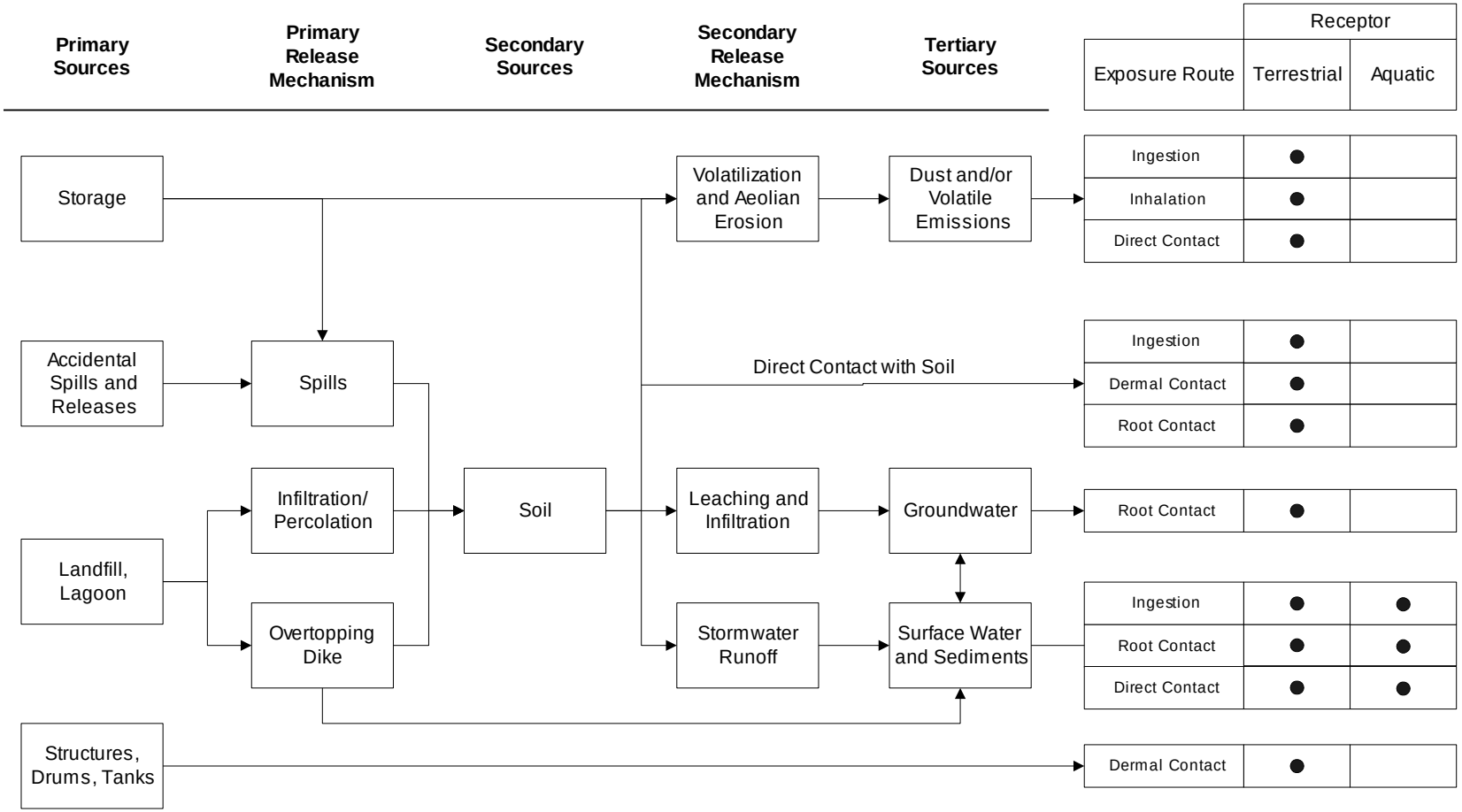

Figure 1. Example Preliminary Conceptual Site Exposure Model Diagram

NEW MEXICO ENVIRONMENT DEPARTMENT
SITE ASSESSMENT CHECKLIST

I. SITE LOCATION

1. Site Name: FWDA Parcel 3 - Inner Fence
   US EPA I.D. Number: NM6213820974
   Location: 8 miles east of Gallup on Highway 66
   County: McKinley
   City: _____ State: NM

2. Latitude: _____ Longitude: _____

3. Attach site maps, including a topographical map, a diagram which illustrates the layout of the facility (e.g., site boundaries, structures, etc.), and maps showing all habitat areas identified in Section III of the checklist. Also, include maps which illustrate known release areas, sampling locations, and any other important features, if available.

II. SITE CHARACTERIZATION

1. Indicate the approximate area of the site (i.e., acres or sq. ft)
   200 acres
2. Provide an approximate breakdown of the land uses on the site:

_____% Heavy Industrial	_____% Light Industrial	_____% Urban
_____% Residential	_____% Rural	_____% Agricultural[b]
_____% Recreational[a]	_____% Undisturbed	100 % Other[c]

[a]For recreational areas, please describe the usage of the area (e.g., park, playing field, etc.):
_____

[b]For agricultural areas, please list the crops and/or livestock which are present:
_____

[c]For areas designated as "other", please describe the usage of the area:
Currently not used, security fencing around area prevents access

3. Provide an approximate breakdown of the land uses in the area surrounding the site. Indicate the radius (in miles) of the area described: _____

_____% Heavy Industrial	_____% Light Industrial	_____% Urban
_____% Residential	_____% Rural	_____% Agricultural[b]
_____% Recreational[a]	_____% Undisturbed	100 % Other [c]

[a]For recreational areas, please describe the usage of the area (e.g., park, playing field, golf course, etc.):

_____

[b]For agricultural areas, please list the crops and/or livestock which are present:

_____

[c]For areas designated as "other", please describe the usage of the area:

Not used. site is surrounded by a former Army Depot
Building and roads in various stages of decay are present

4. Describe reasonable and likely future land and/or water use(s) at the site.

Site will not be used. The site is secure and will remain in the Army's possession.

5. Describe the historical uses of the site. Include information on chemical releases that may have occurred as a result of previous land uses. For each chemical release, provide information on the form of the chemical released (i.e., solid, liquid, vapor) and the known or suspected causes or mechanism of the release (i.e., spills, leaks, material disposal, dumping, explosion, etc.).

The site was a Army Depot and is contaminated with unexploded ordnance (UXO). Any releases would be the result of exposed explosive filler (e.g. TNT) to the environment from incompleted destruction.

6. If any movement of soil has taken place at the site, describe the degree of the disturbance. Indicate the likely source of any disturbances (e.g., erosion, agricultural, mining, industrial activities, removals, etc.) and estimate when these events occurred.

No significant movement of soil has occurred. Erosion may move soils during rain events, however, the site is in the high desert and doesn't receive significant rainfall.

7. Describe the current uses of the site. Include information on recent (previous 5 years) disturbances or chemical releases that have occurred. For each chemical release, provide information on the form of the chemical released and the causes or mechanism of the release.

The site is unused. There are no known or confirmed chemical releases. Any release would be from exposed explosive filler to the environment as a result of incomplete detonation of UXO.

8. Identify the location or suspected location of chemical releases at the site. Provide an estimate of the distance between these locations and the areas identified in Section III.

There are no know releases. Location(s) would be arbitrary from individual UXO where explosive filler was exposed to the environment.

9. Identify the suspected contaminants of concern (COCs) at the site. If known, include the maximum contaminant levels. Please indicate the source of data cited (e.g., RFI, confirmatory sampling, etc.).

Explosives such as RDX, HMX, and TNT and metals such as cadmium and chromium. Confirmatory sampling was completed at 200 locations within the site.

10. Identify the media (e.g., soil (surface or subsurface), surface water, air, groundwater) which are known or suspected to contain COCs.

Surface soil.

11. Indicate the approximate depth to groundwater (in feet below ground surface [(bgs)].

Greater than 50 feet.

12. Indicate the direction of groundwater flow (e.g., north, southeast, etc.)

Unknown.

III. HABITAT EVALUATION

III.A Wetland Habitats

Are any wetland[2] areas such as marshes or swamps on or adjacent to the site?

☐ Yes ☒ No

If yes, indicate the wetland area on the attached site map and answer the following questions regarding the wetland area. If more than one wetland area is present on or adjacent to the site, make additional copies of the following questions and fill out for each individual wetland area. Distinguish between wetland areas by using names or other designations (such as location), and clearly identify each area on the site map. Also, obtain and attach a National Wetlands Inventory Map (or maps) to illustrate each wetland area.

Identify the sources of the observations and information (e.g., National Wetland Inventory, Federal or State Agency, USGS topographic maps) used to make the determination that wetland areas are or are not present.
National Wetlands Inventory Wetlands Mapper, USGS Topographic Map
_____
_____
_____

If no wetland areas are present, proceed to Section III.B.

Wetland Area Questions

☐ Onsite ☐ Offsite

Name or
Designation:_____

1. Indicate the approximate area of the wetland (acres or ft^2)_____

2. Identify the type(s) of vegetation present in the wetland.

- ❑ Submergent (i.e., underwater) vegetation
- ❑ Emergent (i.e., rooted in the water, but rising above it) vegetation
- ❑ Floating vegetation
- ❑ Scrub/shrub
- ❑ Wooded

2Wetlands are defined in 40 CFR §232.2 as " Areas inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances does support, a prevalence of vegetation typically adapted for life in saturated soil conditions." Examples of typical wetlands plants include: cattails, cordgrass, willows and cypress trees. National wetland inventory maps may be available at http:\\nwi.fws.gov. Additional information on wetland delineation criteria is also available from the Army Corps of Engineers.

- ❑ Other (Please describe):_____

3. Estimate the vegetation density of the wetland area.

   - ❑ Dense (i.e., greater than 75% vegetation)
   - ❑ Moderate (i.e., 25% to 75% vegetation)
   - ❑ Sparse (i.e., less than 25% vegetation)

4. Is standing water present? ☐ Yes ☐ No

   If yes, is the water primarily: ☐ Fresh or ☐ Brackish
   Indicate the approximate area of the standing water (ft^2):
   _____
   Indicate the approximate depth of the standing water, if known (ft. or in.)_____

5. If known, indicate the source of the water in the wetland.

   - ❑ Stream/River/Creek/Lake/Pond
   - ❑ Flooding
   - ❑ Groundwater
   - ❑ Surface runoff

6. Is there a discharge from the facility to the wetland? ☐ Yes ☐ No
   If yes, please describe:_____
   _____
   _____
   _____
   _____
   _

Wetland Area Questions (Continued)

7. Is there a discharge from the wetland? ☐ Yes ☐ No
If yes, indicate the type of aquatic feature the wetland discharges into:

- ❑ Surface stream/River (Name:_____)
- ❑ Lake/Pond (Name:_____)
- ❑ Groundwater
- ❑ Not sure

8. Does the area show evidence of flooding? ☐ Yes ☐ No
If yes, indicate which of the following are present (mark all that apply):

- ❑ Standing water
- ❑ Water-saturated soils
- ❑ Water marks
- ❑ Buttressing
- ❑ Debris lines
- ❑ Mud cracks
- ❑ Other (Please describe):_____

9. Animals observed in the wetland area or suspected to be present based on indirect evidence or file material:

- ❑ Birds
- ❑ Fish
- ❑ Mammals
- ❑ Reptiles (e.g., snakes, turtles)
- ❑ Amphibians (e.g., frogs, salamanders)
- ❑ Sediment-dwelling invertebrates (e.g., mussels, crayfish, insect nymphs)

Specify species, if known:

_____
_____
_____
_____

III.B Aquatic Habitats
III.B.1 Non-Flowing Aquatic Features

Are any non-flowing aquatic features (such as ponds or lakes) located at or adjacent to the site?

☐ Yes ☒ No

If yes, indicate the aquatic feature on the attached site map and answer the following questions regarding the non-flowing aquatic features. If more than one non-flowing aquatic feature is present on or adjacent to the site, make additional copies of the following questions and fill out for each individual aquatic feature. Distinguish between aquatic features by using names or other designations, and clearly identify each area on the site map.

If no, proceed to Section III.B.2.

Non-Flowing Aquatic Feature Questions

☐ Onsite ☐ Offsite

Name or Designation:_____

1. Indicate the type of aquatic feature present:

   - ❑ Natural (e.g., pond or lake)
   - ❑ Man-made (e.g., impoundment, lagoon, canal, etc.)

2. Estimate the approximate size of the water body (in acres or sq. ft.)_____

3. If known, indicate the depth of the water body (in ft. or in.)._____

Non-Flowing Aquatic Feature Questions (Continued)

4. Indicate the general composition of the bottom substrate. Mark all sources that apply from the following list.

☐ Bedrock	☐ Sand	☐ Concrete
☐ Boulder (>10 in.)	☐ Silt	☐ Debris
☐ Cobble (2.5 - 10 in.)	☐ Clay	☐ Detritus
☐ Gravel (0.1 - 2.5 in.)	☐ Muck (fine/black)	

☐ Other (please specify):_____

5. Indicate the source(s) of the water in the aquatic feature. Mark all sources that apply from the following list.

- ❑ River/Stream/Creek
- ❑ Groundwater
- ❑ Industrial Discharge
- ❑ Surface Runoff
- ❑ Other (please specify):_____

6. Is there a discharge from the facility to the aquatic feature? ☐ Yes ☐ No

If yes, describe the origin of each discharge and its migration path:

_____
_____
_____
_____

7. Does the aquatic feature discharge to the surrounding environment? ☐ Yes ☐ No

If yes, indicate the features from the following list into which the aquatic feature discharges, and indicate whether the discharge occurs onsite or offsite:

- ❑ River/Stream/Creek ☐ onsite ☐ offsite
- ❑ Groundwater ☐ onsite ☐ offsite
- ❑ Wetland ☐ onsite ☐ offsite
- ❑ Impoundment ☐ onsite ☐ offsite
- ❑ Other (please describe)_____

Non-Flowing Aquatic Feature Questions (Continued)

8. Animals observed in the vicinity of the aquatic feature or suspected to be present based on indirect evidence or file material:

- ❑ Birds
- ❑ Fish
- ❑ Mammals
- ❑ Reptiles (e.g., snakes, turtles)
- ❑ Amphibians (e.g., frogs, salamanders)
- ❑ Sediment-dwelling invertebrates (e.g., mussels, crayfish, insect nymphs)

Specify species, if known:

_____
_____
_____
_____

III.B.2 Flowing Aquatic Features

Are any flowing aquatic features (such as streams or rivers) located at or adjacent to the site?

☒ Yes ☐ No

If yes, indicate the aquatic feature on the attached site map and answer the following questions regarding the flowing aquatic features. If more than one flowing aquatic feature is present on or adjacent to the site, make additional copies of the following questions and fill out for each individual aquatic feature. Distinguish between aquatic features by using names or other designations, and clearly identify each area on the site map

If no, proceed to Section III.C.

Flowing Aquatic Feature Questions

☒ Onsite ☒ Offsite

Name or Designation: Two unnamed arroyo exiting the site

1. Indicate the type of flowing aquatic feature present.

- ☐ River
- ☐ Stream
- ☐ Creek
- ☐ Brook
- ☐ Dry wash
- ☒ Arroyo
- ☐ Intermittent stream
- ☐ Artificially created (ditch, etc.)
- ☐ Other (specify)
- ☐

2. Indicate the general composition of the bottom substrate.

☐ Bedrock	☒ Sand	☐ Concrete
☐ Boulder (>10 in.)	☒ Silt	☐ Debris
☐ Cobble (2.5 - 10 in.)	☒ Clay	☐ Detritus
☐ Gravel (0.1 - 2.5 in.)	☐ Muck (fine/black)	

☐ Other (please specify): _____

3. Describe the condition of the bank (e.g., height, slope, extent of vegetative cover) of the aquatic feature.

Height varries from 5 to 15 feet. Slope varies from nearly vertical to 15 percent. Sslope is 75 percent covered with vegetation that includes desert grasses, shrubs and pinion/juniper trees.

4. Is there a discharge from the facility to the aquatic feature? ☐ Yes ☒ No

If yes, describe the origin of each discharge and its migration path:

Discharge is limited to runoff during summer rain events.

5. Indicate the discharge point of the water body. Specify name, if known.

Unknown.

Flowing Aquatic Feature Questions (Continued)

6. If the flowing aquatic feature is a dry wash or arroyo, answer the following questions.
   - ❑ Check here if feature is not a dry wash or arroyo

   If known, specify the average number of days in a year in which flowing water is present in the feature: 15

   Is standing water or mud present? Check all that apply.
   - ❑ Standing water
   - ❑ Mud
   - ☒ Neither standing water or mud

   Does the area show evidence of recent flow (e.g., flood debris clinging to vegetation)?
   - ❑ Yes
   - ☒ No
   - ❑ Not sure

7. Animals observed in the vicinity of the aquatic feature or suspected to be present based on indirect evidence or file material:

   - ❑ Birds
   - ❑ Fish
   - ☒ Mammals
   - ☒ Reptiles (e.g., snakes, turtles)
   - ❑ Amphibians (e.g., frogs, salamanders)
   - ❑ Sediment-dwelling invertebrates (e.g., mussels, crayfish, insect nymphs)

   Specify species, if known:
   Unknown, but species that have been seen in the area include, deer, elk, coyotes, rattlesnake

III.C Terrestrial Habitats
III.C.1 Wooded

Are any wooded areas on or adjacent to the site? ☒ Yes ☐ No

If yes, indicate the wooded area on the attached site map and answer the following questions. If more than one wooded area is present on or adjacent to the site, make additional copies of the following questions and fill out for each individual wooded area. Distinguish between wooded areas by using names or other designations, and clearly identify each area on the site map.

If no, proceed to Section III.C.2.

Wooded Area Questions

☒ On-site ☒ Off-site

Name or Designation: Unnamed area

1. Estimate the approximate size of the wooded area (in acres or sq. ft.) 180 acres

2. Indicate the dominant type of vegetation in the wooded area.

   - ☐ Evergreen
   - ☐ Deciduous
   - ☒ Mixed

   Dominant plant species, if known: Juniper and pinion

3. Estimate the vegetation density of the wooded area.

   - ☐ Dense (i.e., greater than 75% vegetation)
   - ☒ Moderate (i.e., 25% to 75% vegetation)
   - ☐ Sparse (i.e., less than 25% vegetation)

4. Indicate the predominant size of the trees at the site. Use diameter at chest height.

   - ☐ 0-6 inches
   - ☐ 6-12 inches
   - ☐ >12 inches
   - ☒ No single size range is predominant

5. Animals observed in the wooded area or suspected to be present based on indirect evidence or file material:

   - ☒ Birds
   - ☒ Mammals
   - ☒ Reptiles (e.g., snakes, lizards)
   - ☐ Amphibians (e.g., toads, salamanders)

   Specify species, if known:
   Deer, elk, coyotes, rattlesnakes and various bird species have been observed.

III.C.2 Shrub/Scrub

Are any shrub/scrub areas on or adjacent to the site? ☒ Yes ☐ No

If yes, indicate the shrub/scrub area on the attached site map and answer the following questions. If more than one shrub/scrub area is present on or adjacent to the site, make additional copies of the following questions and fill out for each individual shrub/scrub area. Distinguish between shrub/scrub areas, using names or other designations, and clearly identify each area on the site map.

If no, proceed to Section III.C.3.

Shrub/Scrub Area Questions

☒ Onsite ☒ Offsite

Name or Designation: Unnamed

1. Estimate the approximate size of the shrub/scrub area (in acres or sq. ft.). 180acres

2. Indicate the dominant type of shrub/scrub vegetation present, if known.
Sagebrush that is interspersed within the wooded areas.

3. Estimate the vegetation density of the shrub/scrub area.

- ☐ Dense (i.e., greater than 75% vegetation)
- ☒ Moderate (i.e., 25% to 75% vegetation)
- ☐ Sparse (i.e., less than 25% vegetation)

4. Indicate the approximate average height of the scrub/shrub vegetation.

- ☒ 0-2 feet
- ☐ 2-5 feet
- ☐ >5 feet

5. Animals observed in the shrub/scrub area or suspected to be present based on indirect evidence or file material:

- ☒ Birds
- ☒ Mammals
- ☒ Reptiles (e.g., snakes, lizards)
- ☐ Amphibians (e.g., toads, salamanders)

Specify species, if known:
Species observed at the site include deer, elk, various species of birds, rattlesnakes.

III.C.3 Grassland

Are any grassland areas on or adjacent to the site? ☐ Yes ☒ No

If yes, indicate the grassland area on the attached site map and answer the following questions. If more than one grassland area is present on or adjacent to the site, make additional copies of the following questions and fill out for each individual grassland area. Distinguish between grassland areas by using names or other designations, and clearly identify each area on the site map.

If no, proceed to Section III.C.4.

Grassland Area Questions

☐ Onsite ☐ Offsite

Name or Designation:_____

1. Estimate the approximate size of the grassland area (in acres or sq. ft.)._____

2. Indicate the dominant plant type, if known.
_____
_____
_____
_____

3. Estimate the vegetation density of the grassland area.

   - ❑ Dense (i.e., greater than 75% vegetation)
   - ❑ Moderate (i.e., 25% to 75% vegetation)
   - ❑ Sparse (i.e., less than 25% vegetation)

4. Indicate the approximate average height of the dominant plant type (in ft. or in.)_

5. Animals observed in the grassland area or suspected to be present based on indirect evidence or file material:

   ❑Birds
   ❑Mammals
   ❑Reptiles (e.g., snakes, lizards)
   ❑Amphibians (e.g., toads, salamanders)

   Specify species, if known:

III.C.4 Desert

Are any desert areas on or adjacent to the site? ☒ Yes ☐ No

If yes, indicate the desert area on the attached site map and answer the following questions. If more than one desert area is present on or adjacent to the site, make additional copies of the following questions and fill out for each individual desert area. Distinguish between desert areas by using names or other designations, and clearly identify each area on the site map.

If no, proceed to Section III.C.5.

Desert Area Questions

☒ Onsite ☒ Offsite

Name or Designation:_____

1. Estimate the approximate size of the desert area (in acres or sq. ft.). 180 acres

2. Describe the desert area (e.g., presence or absence of vegetation, vegetation types, presence/size of rocks, sand, etc.)
Entire site is located in the high desert and consist of a mixture of desert grasses, sagebrush, pinion, junipers and small cactus.

3. Animals observed in the desert area or suspected to be present based on indirect evidence or file material:

☒ Birds
☒ Mammals
☒ Reptiles (e.g., snakes, lizards)
☐ Amphibians (e.g., toads, salamanders)

Specify species, if known:
Same species as observed through the site.

III.C.5 Other

1. Are there any other terrestrial communities or habitats on or adjacent to the site which were not previously described?

☐ Yes ☐ No

If yes, indicate the "other" area(s) on the attached site map and describe the area(s) below. Distinguish between onsite and offsite areas. If no, proceed to Section III.D.

III.D Sensitive Environments and Receptors

1. Do any other potentially sensitive environmental areas[3] exist adjacent to or within 0.5 miles of the site? If yes, list these areas and provide the source(s) of information used to identify sensitive areas. *Do not answer "no" without confirmation from the U.S. Fish and Wildlife Service and appropriate State of New Mexico division.*

There are no known sensitive environmental areas. Sources include the USFWS Information for Planning and Consultantion (IPaC) tool, NMED Bison-M and USGS Topographical Maps.
However, potential habitat was identified for potentially sensitive, threatened or endangered species, including gray verio, Zuni fleabane and monarch butterfly (see report text).

3 Areas that provide unique and often protected habitat for wildlife species. These areas are typically used during critical life stages such as breeding, hatching, rearing of young and overwintering. Refer to **Table 1** at the end of this document for examples of sensitive environments.

2. Are any areas on or near (i.e., within 0.5 miles) the site which are owned or used by local tribes? If yes, describe. *Contact the Tribal Liaison in the Office of the Secretary (505)827-2855 to obtain this information.*

No. The Army will retain possession of the area.

4. Does the site serve or potentially serve as a habitat, foraging area, or refuge by rare, threatened, endangered, candidate and/or proposed species (plants or animals), or any otherwise protected species? If yes, identify species. *This information should be obtained from the U.S. Fish and Wildlife Service and appropriate State of New Mexico division.*

Please see response to III.D.1

5. Is the site potentially used as a breeding, roosting or feeding area by migratory bird species? If yes, identify which species.

Potential habitat may exist for the Gray Vireo, which is federally listed under the migratory bird treaty act.

6. Is the site used by any ecologically[4], recreationally, or commercially important species? If yes, explain.

No

4 Ecologically important species include populations of species which provide a critical (i.e., not replaceable) food resource for higher organisms and whose function as such would not be replaced by more tolerant species; or perform a critical ecological function (such as organic matter decomposition) and whose functions will not be replaced by other species. Ecologically important species include pest and opportunistic species that populate an area if they serve as a food source for other species, but do not include domesticated animals (e.g., pets and livestock) or plants/animals whose existence is maintained by continuous human interventions (e.g., fish hatcheries, agricultural crops, etc.,)

IV. EXPOSURE PATHWAY EVALUATION

1. Do existing data provide sufficient information on the nature, rate, and extent of contamination at the site?

   - [x] Yes
   - [ ] No
   - [ ] Uncertain

   Please provide an explanation for your answer:
   Incremental and discrete samples were collected from 200 grids (each approximately 1/4 acre in size)

2. Do existing data provide sufficient information on the nature, rate, and extent of contamination in offsite affected areas?

   - [x] Yes
   - [ ] No
   - [ ] Uncertain
   - [ ] No offsite contamination

   Please provide an explanation for your answer:
   Sampling has been completed in the former HWMU, which is where one of the arroyos is located.

3. Do existing data address potential migration pathways of contaminants at the site?

   - [ ] Yes
   - [ ] No
   - [x] Uncertain

   Please provide an explanation for your answer:

4. Do existing data address potential migration pathways of contaminants in offsite affected areas?

- ❑ Yes
- ❑ No
- ☒ Uncertain
- ❑ No offsite contamination

Please provide an explanation for your answer:

5. Are there visible indications of stressed habitats or receptors on or near (i.e., within 0.5 miles) the site that may be the result of a chemical release? If yes, explain. Attach photographs if available.

No.

6. Is the location of the contamination such that receptors might be reasonably expected to come into contact with it? For soil, this means contamination in the soil 0 to 5 feet below ground surface (bgs). If yes, explain.

If contamination is present then receptors may reasonably come into contact with the contamination.

7. Are receptors located in or using habitats where chemicals exist in air, soil, sediment or surface water? If yes, explain.

If contamination is present, then receptors are located in or using habitat that may contain contaminants in shallow soil.

8. Could chemicals reach receptors via groundwater? Can chemicals leach or dissolve to groundwater? Are chemicals mobile in groundwater? Does groundwater discharge into receptor habitats? If yes, explain.

No, groundwater is deep at the site and infiltration is unlikely due to lavk of precipitation (`11 inches/year).

9. Could chemicals reach receptors through runoff or erosion? Answer the following questions:

What is the approximate distance from the contaminated area to the nearest watercourse or arroyo?

- ❑ 0 feet (i.e., contamination has reached a watercourse or arroyo)
- ❑ 1-10 feet
- ❑ 11-20 feet
- ❑ 21-50 feet
- ❑ 51-100 feet
- ❑ 101-200 feet
- ❑ > 200 feet
- ❑ > 500 feet
- ☒ > 1000 feet

What is the slope of the ground in the contaminated area?

- ❑ 0-10%
- ☒ 10-30%
- ❑ > 30%

What is the approximate amount of ground and canopy vegetative cover in the contaminated area?

- ❑ < 25%
- ☒ 25-75%
- ❑ > 75%

Is there visible evidence of erosion (e.g., a rill or gully) in or near the contaminated area?

- ☒ Yes
- ❑ No
- ❑ Do not know

Do any structures, pavement, or natural drainage features direct run-on flow (i.e., surface flows originating upstream or uphill from the area of concern) into the contaminated area?

- ❑ Yes
- ☒ No
- ❑ Do not know

10. Could chemicals reach receptors through the dispersion of contaminants in air (e.g., volatilization, vapors, fugitive dust)? If yes, explain.

No.

11. Could chemicals reach receptors through migration of non-aqueous phase liquids (NAPLs)? Is a NAPL present at the site that might be migrating towards receptors or habitats? Could NAPL discharge contact receptors or their habitat?

No.

12. Could receptors be impacted by external irradiation at the site? Are gamma emitting radionuclides present at the site? Is the radionuclide contamination buried or at the surface?

No.

PHOTOGRAPHIC DOCUMENTATION

During the site visit(s), photographs should be taken to document the current conditions at the site and to support the information entered in the checklist. For example, photographs may be used to document the following:

- The nature, quality, and distribution of vegetation at the site
- Receptors or evidence of receptors
- Potentially important ecological features, such as ponds and drainage ditches
- Potential exposure pathways
- Any evidence of contamination or impact

The following space may be used to record photo subjects.

SUMMARY OF OBSERVATIONS AND SITE SETTING

Include information on significant source areas and migration pathways that are likely to constitute complete exposure pathways.

Checklist Completed by John Carson

Affiliation

Author Assisted by

Date 2/28/2024

TABLE 3
EXAMPLES OF SENSITIVE ENVIRONMENTS

National Parks and National Monuments

Designated or Administratively Proposed Federal Wilderness Areas

National Preserves

National or State Wildlife Refuges

National Lakeshore Recreational Areas

Federal land designated for protection of natural ecosystems

State land designated for wildlife or game management

State designated Natural Areas

Federal or state designated Scenic or Wild River

All areas that provide or could potentially provide critical habitat[1] for state and federally listed Threatened or Endangered Species, those species that are currently petitioned for listing, and species designated by other agencies as sensitive or species of concern

All areas that provide or could potentially provide habitat for state protected species as defined in the Wildlife Code, Chapter 17 of the New Mexico Statutes

All areas that provide or could potentially provide habitat for migratory birds as protected by the Migratory Bird Treaty Act (16 U.S.C. §§ 703-712)

All areas that provide or could potentially provide habitat for bald eagles and golden eagles as protected by the Bald and Golden Eagle Protection Act (16 U.S.C. 668-668d)

All areas that provide or could potentially provide habitat for song birds as protected by the State of New Mexico statute (New Mexico Statute, 1978, Chapter 17, Game and Fish, 17-2-13)

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1 Critical habitats are defined by the Endangered Species Act (50 CFR §424.02(d)) as:

> 1) Specific areas within the geographical area currently occupied by a species, at the time it is listed in accordance with the Act, on which are found those physical or biological features (I) essential to the conservation of the species and (ii) that may require special management considerations or protection, and 2) Specific areas outside the geographical area occupied by a species at the time it is listed upon a determination by the Secretary [of Interior] that such areas are essential for the conservation of the species.

All areas that provide or could potentially provide habitat for hawks, vultures and owls as protected by the State of New Mexico statute (New Mexico Statute, 1978, Chapter 17, Game and Fish, 17-2-14)

All areas that provide or could potentially provide habitat for horned toads and Bullfrogs as protected by the State of New Mexico statute (New Mexico Statute, 1978, Chapter 17, Game and Fish, 17-2-15 and 16, resp.)

All perennial waters (e.g., rivers, lakes, playas, sloughs, ponds, etc.)

All ephemeral drainage (e.g., arroyos, puddles/pools, intermittent streams, etc.) that provide significant wildlife habitat or that could potentially transport contaminants off site to areas that provide wildlife habitat

All riparian habitats

All perennial and ephemeral wetlands (not limited to jurisdictional wetlands)

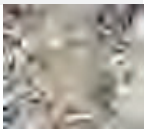
All areas that are potentially important breeding, staging, and overwintering habitats as well as other habitats important for the survival of animals during critical periods of their life cycle.

Appendix D.2 – Attachment 2
McKinley County Special Status Species

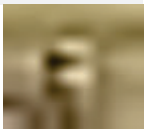
All Species
McKinley

Taxonomic Group	# Species	Taxonomic Group	# Species
Amphibians	9	Birds	231
Coleoptera; beetles	9	Crustaceans	1
Ephemeroptera; mayfiles	1	Fish	11
Lepidoptera; moths and butterflies	143	Mammals	60
Misc. Arachnids	2	Molluscs	11
Odonata; dragonflies	16	Orthoptera; grasshoppers & crickets	34
Reptiles	20	Spiders	1

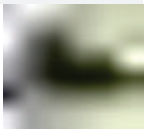
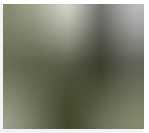
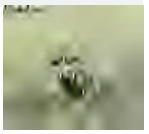
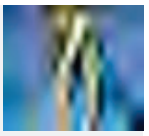
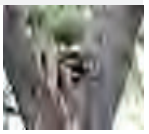
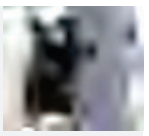
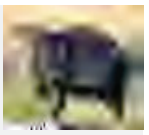
TOTAL SPECIES: 549

Common Name	Scientific Name	NMGF	US FWS	Critical Habitat	SGCN	Photo
Yucca Giant-Skipper	Megathymus yuccae					No Photo
Old World Swallowtail	Papilio machaon					No Photo
Southwestern Orangetip	Anthocharis thoosa					No Photo
Dryope Hairstreak	Satyrium dryope putnami					No Photo
Western Azure	Celastrina echo					No Photo
Pallid Blue	Euphilotes pallescens					No Photo
Lupine Blue	Plebejus lupini					No Photo
Mylitta Crescent	Phyciodes mylitta mylitta					No Photo
Gray Buckeye	Junonia grisea					No Photo
Black-tailed Jackrabbit	Lepus californicus					
Desert Cottontail Rabbit	Sylvilagus audubonii					
Merriam's Shrew	Sorex merriami					No Photo
Dusky Shrew	Sorex monticola					No Photo
Brazilian Free-tailed Bat	Tadarida brasiliensis					
Hoary Bat	Aeorestes cinereus					No Photo

All Species
McKinley

Common Name	Scientific Name	NMGF	US FWS	Critical Habitat	SGCN	Photo
Pallid Bat	Antrozous pallidus					
Big Brown Bat	Eptesicus fuscus					No Photo
Western Small-footed Myotis	Myotis ciliolabrum					
Long-eared Myotis	Myotis evotis					No Photo
Southwestern Little Brown Myotis	Myotis occultus					No Photo
Fringed Myotis	Myotis thysanodes					
Long-legged Myotis	Myotis volans					
Canyon Bat	Parastrellus hesperus					
Coyote	Canis latrans					
Common Gray Fox	Urocyon cinereoargenteus					
Kit Fox	Vulpes macrotis					
Red Fox	Vulpes vulpes					
Canada Lynx	Lynx canadensis		T			No Photo
Bobcat	Lynx rufus					

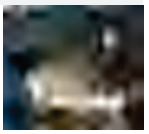
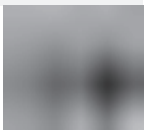
All Species
McKinley

Common Name	Scientific Name	NMGF	US FWS	Critical Habitat	SGCN	Photo
Mountain Lion	Puma concolor					
Striped Skunk	Mephitis mephitis					
Western Spotted Skunk	Spilogale gracilis					
American Badger	Taxidea taxus					
Ringtail	Bassariscus astutus					
Common Raccoon	Procyon lotor					
Black Bear	Ursus americanus					
Pronghorn	Antilocapra americana americana					
Elk	Cervus canadensis nelsoni					
Mule Deer	Odocoileus hemionus					
Collared Peccary	Peccari tajacu sonoriensis; angulatus					
American Beaver	Castor canadensis					

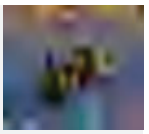
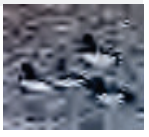
All Species
McKinley

Common Name	Scientific Name	NMGF	US FWS	Critical Habitat	SGCN	Photo
Long-tailed Vole	Microtus longicaudus longicaudus; alticola; baileyi; mordax					No Photo
Mogollon Vole	Microtus mogollonensis guadalupensis; mogollonensis					No Photo
Navajo Mogollon Vole	Microtus mogollonensis navaho					No Photo
White-throated Woodrat	Neotoma albigula					
Mexican Woodrat	Neotoma mexicana mexicana; inopinata; pinetorum; scopulorum					No Photo
Stephen's Woodrat	Neotoma stephensi					No Photo
Northern Grasshopper Mouse	Onychomys leucogaster					No Photo
Brush Mouse	Peromyscus boylii					No Photo
Canyon Mouse	Peromyscus crinitus					No Photo
Deer Mouse	Peromyscus maniculatus					No Photo
Northern Rock Mouse	Peromyscus nasutus					No Photo
Pinyon Mouse	Peromyscus truei					No Photo
Western Harvest Mouse	Reithrodontomys megalotis megalotis; aztecus					No Photo
Common Porcupine	Erethizon dorsatum					
Botta's Pocket Gopher	Thomomys bottae					No Photo
Ord's Kangaroo Rat	Dipodomys ordii					
Banner-tailed Kangaroo Rat	Dipodomys spectabilis baileyi; clarencei; spectabilis					No Photo
Plains Pocket Mouse	Perognathus flavescens					No Photo
Silky Pocket Mouse	Perognathus flavus flavus; hopiensis					No Photo
White-tailed Antelope Squirrel	Ammospermophilus leucurus					

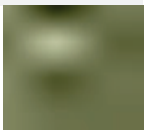
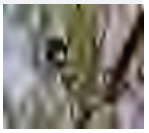
All Species
McKinley

Common Name	Scientific Name	NMGF	US FWS	Critical Habitat	SGCN	Photo
Gunnison's prairie dog	Cynomys gunnisoni				Y	
Rock Squirrel	Otospermophilus variegatus grammurus					
Abert's Squirrel	Sciurus aberti aberti; chuscensis; ferreus					
Cliff Chipmunk	Neotamias dorsalis					
Colorado Chipmunk	Neotamias quadrivittatus quadrivittatus; australis; oscuraensis					
Red Squirrel	Tamiasciurus fremonti					No Photo
Red Squirrel	Tamiasciurus hudsonicus lychnuchus; mogollonensis					
Spotted Ground Squirrel	Xerospermophilus spilosoma					No Photo
Snow Goose	Anser caerulescens					
Canada Goose	Branta canadensis					
Tundra Swan	Cygnus columbianus					
Northern Shoveler Duck	Spatula clypeata					
Cinnamon Teal Duck	Spatula cyanoptera					

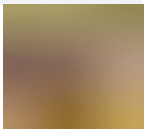
All Species
McKinley

Common Name	Scientific Name	NMGF	US FWS	Critical Habitat	SGCN	Photo
Blue-winged Teal Duck	Spatula discors					
American Wigeon Duck	Mareca americana					
Gadwall Duck	Mareca strepera					
Mallard Duck	Anas platyrhynchos					
Mexican Duck	Anas diazi					No Photo
Northern Pintail	Anas acuta					
Green-winged Teal Duck	Anas crecca					
Canvasback Duck	Aythya valisineria					
Redhead Duck	Aythya americana					
Ring-necked Duck	Aythya collaris					
Lesser Scaup Duck	Aythya affinis					
Bufflehead Duck	Bucephala albeola					
Common Goldeneye Duck	Bucephala clangula					

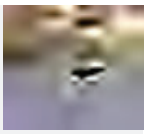
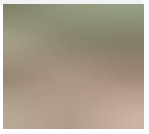
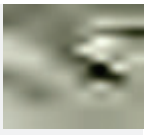
All Species
McKinley

Common Name	Scientific Name	NMGF	US FWS	Critical Habitat	SGCN	Photo
Common Merganser Duck	Mergus merganser					
Ruddy Duck	Oxyura jamaicensis					
Scaled Quail	Callipepla squamata					
Pied-billed Grebe	Podilymbus podiceps					
Eared Grebe	Podiceps nigricollis				Y	
Western Grebe	Aechmophorus occidentalis					
Rock Pigeon	Columba livia					
Band-tailed Pigeon	Patagioenas fasciata					
Eurasian Collared-Dove	Streptopelia decaocto					
White-winged Dove	Zenaida asiatica					
Mourning Dove	Zenaida macroura					
Greater Roadrunner	Geococcyx californianus					

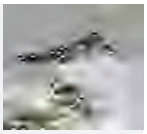
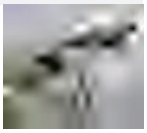
All Species
McKinley

Common Name	Scientific Name	NMGF	US FWS	Critical Habitat	SGCN	Photo
Yellow-billed Cuckoo (western pop)	Coccyzus americanus occidentalis		T	Y	Y	
Common Nighthawk	Chordeiles minor				Y	
Common Poorwill	Phalaenoptilus nuttalli					No Photo
White-throated Swift	Aeronautes saxatalis					
Blue-throated Mountain-gem	Lampornis clemenciae					
Black-chinned Hummingbird	Archilochus alexandri					
Costa's Hummingbird	Calypte costae	T			Y	
Calliope Hummingbird	Selasphorus calliope					
Rufous Hummingbird	Selasphorus rufus					
Broad-tailed Hummingbird	Selasphorus platycercus					
Virginia Rail	Rallus limicola					
Sora	Porzana carolina					
Common Gallinule	Gallinula galeata					

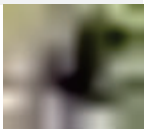
All Species
McKinley

Common Name	Scientific Name	NMGF	US FWS	Critical Habitat	SGCN	Photo
American Coot	Fulica americana					
Sandhill Crane	Antigone canadensis					
Black-necked Stilt	Himantopus mexicanus					
American Avocet	Recurvirostra americana					
Black-bellied Plover	Pluvialis squatarola					
Killdeer	Charadrius vociferus					
Mountain Plover	Charadrius montanus				Y	
Long-billed Curlew	Numenius americanus				Y	
Marbled Godwit	Limosa fedoa					
Ruff	Calidris pugnax					No Photo
Baird's Sandpiper	Calidris bairdii					
Least Sandpiper	Calidris minutilla					
Pectoral Sandpiper	Calidris melanotos					

All Species
McKinley

Common Name	Scientific Name	NMGF	US FWS	Critical Habitat	SGCN	Photo
Western Sandpiper	Calidris mauri					
Long-billed Dowitcher	Limnodromus scolopaceus					
Wilson's Snipe	Gallinago delicata					
Spotted Sandpiper	Actitis macularius					
Solitary Sandpiper	Tringa solitaria					
Lesser Yellowlegs	Tringa flavipes					
Willet	Tringa semipalmata					
Wilson's Phalarope	Phalaropus tricolor					
Red-necked Phalarope	Phalaropus lobatus					No Photo
Bonaparte's Gull	Choricocephalus philadelphia					
Franklin's Gull	Leucophaeus pipixcan					
Ring-billed Gull	Larus delawarensis					
Least Tern	Sternula antillarum	E			Y	

All Species
McKinley

Common Name	Scientific Name	NMGF	US FWS	Critical Habitat	SGCN	Photo
Black Tern	Chlidonias niger					
Forster's Tern	Sterna forsteri					
Common Loon	Gavia immer					No Photo
American White Pelican	Pelecanus erythrorhynchos					
American Bittern	Botaurus lentiginosus				Y	
Great Blue Heron	Ardea herodias					
Great Egret	Ardea alba					
Snowy Egret	Egretta thula					
Little Blue Heron	Egretta caerulea					
Cattle Egret	Bubulcus ibis					
White-faced Ibis	Plegadis chihi					
Turkey Vulture	Cathartes aura					
Osprey	Pandion haliaetus					

All Species
McKinley

Common Name	Scientific Name	NMGF	US FWS	Critical Habitat	SGCN	Photo
Golden Eagle	Aquila chrysaetos					
Northern Harrier	Circus hudsonius					
Sharp-shinned Hawk	Accipiter striatus					
Cooper's Hawk	Accipiter cooperii					
American Goshawk	Accipiter atricapillus					
Bald Eagle	Haliaeetus leucocephalus	T			Y	
Swainson's Hawk	Buteo swainsoni					
Red-tailed Hawk	Buteo jamaicensis					
Rough-legged Hawk	Buteo lagopus					
Ferruginous Hawk	Buteo regalis					
Flammulated Owl	Psiloscops flammeolus				Y	
Great Horned Owl	Bubo virginianus					

All Species
McKinley

Common Name	Scientific Name	NMGF	US FWS	Critical Habitat	SGCN	Photo
Northern Pygmy Owl	Glaucidium gnoma					
Burrowing Owl	Athene cunicularia				Y	
Mexican Spotted Owl	Strix occidentalis lucida		T	Y	Y	
Long-eared Owl	Asio otus					
Belted Kingfisher	Megaceryle alcyon					
Lewis's Woodpecker	Melanerpes lewis				Y	
Red-headed Woodpecker	Melanerpes erythrocephalus				Y	
Williamson's Sapsucker	Sphyrapicus thyroideus				Y	
Yellow-bellied Sapsucker	Sphyrapicus varius					
Hairy Woodpecker	Dryobates villosus					
Northern Flicker	Colaptes auratus					
American Kestrel	Falco sparverius					

All Species
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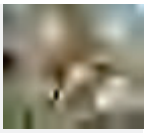
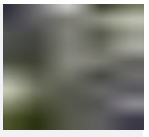
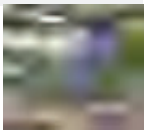
Common Name	Scientific Name	NMGF	US FWS	Critical Habitat	SGCN	Photo
Peregrine Falcon	Falco peregrinus	T			Y	
Arctic Peregrine Falcon	Falco peregrinus tundrius					No Photo
Prairie Falcon	Falco mexicanus					
Ash-throated Flycatcher	Myiarchus cinerascens					
Great Kiskadee	Pitangus sulphuratus					
Cassin's Kingbird	Tyrannus vociferans					
Western Kingbird	Tyrannus verticalis					
Eastern Kingbird	Tyrannus tyrannus					
Olive-sided Flycatcher	Contopus cooperi				Y	
Western Wood Pewee	Contopus sordidulus					
Eastern Wood Pewee	Contopus virens					No Photo
Southwestern Willow Flycatcher	Empidonax traillii extimus	E	E	Y	Y	
Gray Flycatcher	Empidonax wrightii					

All Species
McKinley

Common Name	Scientific Name	NMGF	US FWS	Critical Habitat	SGCN	Photo
Dusky Flycatcher	Empidonax oberholseri					
Western Flycatcher	Empidonax dificilis					
Black Phoebe	Sayornis nigricans					
Say's Phoebe	Sayornis saya					
Loggerhead Shrike	Lanius ludovicianus				Y	
Northern Shrike	Lanius borealis					No Photo
Gray Vireo	Vireo vicinior	T			Y	
Cassin's Vireo	Vireo cassinii					
Blue-headed Vireo	Vireo solitarius					
Plumbeous Vireo	Vireo plumbeus					
Warbling Vireo	Vireo gilvus					
Red-eyed Vireo	Vireo olivaceus					
Pinyon Jay	Gymnorhinus cyanocephalus				Y	

All Species
McKinley

Common Name	Scientific Name	NMGF	US FWS	Critical Habitat	SGCN	Photo
Steller's Jay	Cyanocitta stelleri					
Woodhouse's Scrub Jay	Aphelocoma woodhouseii					
Black-billed Magpie	Pica hudsonia					
American Crow	Corvus brachyrhynchos					
Common Raven	Corvus corax					
Horned Lark	Eremophila alpestris					
Bank Swallow	Riparia riparia				Y	
Tree Swallow	Tachycineta bicolor					
Violet-green Swallow	Tachycineta thalassina					
Northern Rough-winged Swallow	Stelgidopteryx serripennis					
Purple Martin	Progne subis					
Barn Swallow	Hirundo rustica					

All Species
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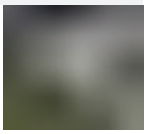
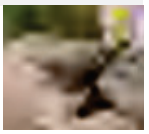
Common Name	Scientific Name	NMGF	US FWS	Critical Habitat	SGCN	Photo
Cliff Swallow	Petrochelidon pyrrhonota					
Mountain Chickadee	Poecile gambeli					
Juniper Titmouse	Baeolophus ridgwayi				Y	
Bushtit	Psaltriparus minimus					
Red-breasted Nuthatch	Sitta canadensis					
White-breasted Nuthatch	Sitta carolinensis					
Pygmy Nuthatch	Sitta pygmaea				Y	
Rock Wren	Salpinctes obsoletus					
Canyon Wren	Catherpes mexicanus					
House Wren	Troglodytes aedon					
Winter Wren	Troglodytes hiemalis					No Photo
Marsh Wren	Cistothorus palustris					
Bewick's Wren	Thryomanes bewickii					

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Common Name	Scientific Name	NMGF	US FWS	Critical Habitat	SGCN	Photo
Blue-gray Gnatcatcher	Polioptila caerulea					
Golden-crowned Kinglet	Regulus satrapa					No Photo
Ruby-crowned Kinglet	Regulus calendula					
Western Bluebird	Sialia mexicana				Y	
Mountain Bluebird	Sialia currucoides				Y	
Townsend's Solitaire	Myadestes townsendi					
Hermit Thrush	Catharus guttatus					
American Robin	Turdus migratorius					
Curve-billed Thrasher	Toxostoma curvirostre					
Bendire's Thrasher	Toxostoma bendirei				Y	
Crissal Thrasher	Toxostoma crissale					
Sage Thrasher	Oreoscoptes montanus					
Northern Mockingbird	Mimus polyglottos					

All Species
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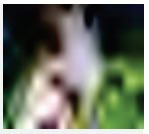
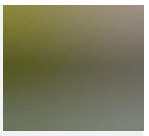
Common Name	Scientific Name	NMGF	US FWS	Critical Habitat	SGCN	Photo
European Starling	Sturnus vulgaris					
Cedar Waxwing	Bombycilla cedrorum					
Phainopepla	Phainopepla nitens					
House Sparrow	Passer domesticus					
American Pipit	Anthus rubescens					
Evening Grosbeak	Coccothraustes vespertinus				Y	
House Finch	Haemorhous mexicanus					
Cassin's Finch	Haemorhous cassinii				Y	
Red Crossbill	Loxia curvirostra					
Pine Siskin	Spinus pinus					
Lesser Goldfinch	Spinus psaltria					
American Goldfinch	Spinus tristis					

All Species
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Common Name	Scientific Name	NMGF	US FWS	Critical Habitat	SGCN	Photo
Cassin's Sparrow	Peucaea cassinii				Y	
Grasshopper Sparrow	Ammodramus savannarum perpallidus					
Black-throated Sparrow	Amphispiza bilineata					
Lark Sparrow	Chondestes grammacus					
Lark Bunting	Calamospiza melanocorys					
Chipping Sparrow	Spizella passerina					
Brewer's Sparrow	Spizella breweri					
Fox Sparrow	Passerella iliaca					
Dark-eyed Junco	Junco hyemalis					
White-crowned Sparrow	Zonotrichia leucophrys					
Harris's Sparrow	Zonotrichia querula					
Sagebrush Sparrow	Artemisiospiza nevadensis				Y	

All Species
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Common Name	Scientific Name	NMGF	US FWS	Critical Habitat	SGCN	Photo
Vesper Sparrow	Pooecetes gramineus				Y	
Savannah Sparrow	Passerculus sandwichensis nevadensis; anthinus					
Song Sparrow	Melospiza melodia					
Canyon Towhee	Melozone fusca					
Green-tailed Towhee	Pipilo chlorurus					
Spotted Towhee	Pipilo maculatus					
Yellow-breasted Chat	Icteria virens					
Yellow-headed Blackbird	Xanthocephalus xanthocephalus					
Western Meadowlark	Sturnella neglecta					
Hooded Oriole	Icterus cucullatus					
Bullock's Oriole	Icterus bullockii					
Baltimore Oriole	Icterus galbula					

All Species
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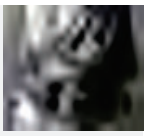
Common Name	Scientific Name	NMGF	US FWS	Critical Habitat	SGCN	Photo
Scott's Oriole	Icterus parisorum					
Red-winged Blackbird	Agelaius phoeniceus					
Brown-headed Cowbird	Molothrus ater					
Brewer's Blackbird	Euphagus cyanocephalus					
Northern Waterthrush	Parkesia noveboracensis					
Orange-crowned Warbler	Leiothlypis celata					
Lucy's Warbler	Leiothlypis luciae				Y	
Nashville Warbler	Leiothlypis ruficapilla					
Virginia's Warbler	Leiothlypis virginiae				Y	
Macgillivray's Warbler	Geothlypis tolmiei					
Common Yellowthroat	Geothlypis trichas					
Yellow Warbler	Setophaga petechia					

All Species
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Common Name	Scientific Name	NMGF	US FWS	Critical Habitat	SGCN	Photo
Yellow-rumped Warbler	Setophaga coronata					
Grace's Warbler	Setophaga graciae				Y	
Black-throated Gray Warbler	Setophaga nigrescens				Y	
Townsend's Warbler	Setophaga townsendi					
Wilson's Warbler	Cardellina pusilla					
Painted Redstart	Myioborus pictus				Y	
Hepatic Tanager	Piranga flava					
Western Tanager	Piranga ludoviciana					
Rose-breasted Grosbeak	Pheucticus ludovicianus					
Black-headed Grosbeak	Pheucticus melanocephalus					
Blue Grosbeak	Passerina caerulea					
Lazuli Bunting	Passerina amoena					

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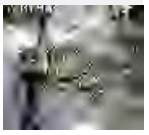
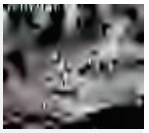
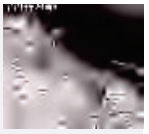
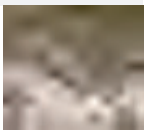
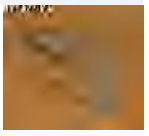
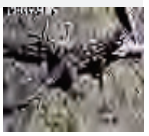
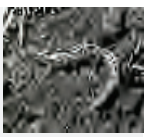
Common Name	Scientific Name	NMGF	US FWS	Critical Habitat	SGCN	Photo
Painted Bunting	Passerina ciris					
Eastern Collared Lizard	Crotaphytus collaris					
Common Lesser Earless Lizard	Holbrookia maculata maculata; bunkeri; ruthveni					
Hernandez's Short-horned Lizard	Phrynosoma hernandesi					
Round-tailed Horned Lizard	Phrynosoma modestum					
Southwestern Fence Lizard	Sceloporus cowlesi					
Northern Sagebrush Lizard	Sceloporus graciosus					
Desert Spiny Lizard	Sceloporus magister					
Northern Tree Lizard	Urosaurus ornatus					
Common Side-blotched Lizard	Uta stansburiana					
Woodland Striped Whiptail	Aspidoscelis inornata junipera					No Photo
Plateau Striped Whiptail	Aspidoscelis velox					
Many-lined Skink	Plestiodon multivirgatus					

All Species
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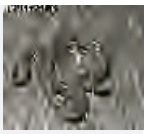
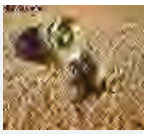
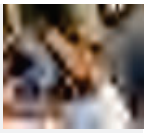
Common Name	Scientific Name	NMGF	US FWS	Critical Habitat	SGCN	Photo
North American Racer	Coluber constrictor					
Desert Striped Whipsnake	Coluber taeniatus					
Ringneck Snake	Diadophis punctatus					
Chihuahuan Nightsnake	Hypsiglena jani					
Gophersnake	Pituophis catenifer					
Wandering Gartersnake	Thamnophis elegans					
Western Diamond-backed Rattlesnake	Crotalus atrox					
Prairie Rattlesnake	Crotalus viridis					
Tiger Salamander	Ambystoma mavortium mavortium; nebulosum					
Plains Spadefoot	Spea bombifrons					
New Mexico Spadefoot	Spea multiplicata					
Red-spotted Toad	Anaxyrus punctatus					

All Species
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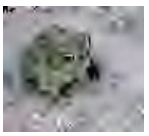
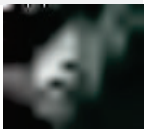
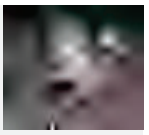
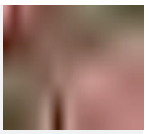
Common Name	Scientific Name	NMGF	US FWS	Critical Habitat	SGCN	Photo
Woodhouse's Toad	Anaxyrus woodhousii					
Canyon Treefrog	Hyla arenicolor					
Arizona Treefrog	Hyla wrightorum				Y	
Boreal Chorus Frog	Pseudacris maculata				Y	
Northern Leopard Frog	Lithobates pipiens				Y	
Grass Carp	Ctenopharyngodon idella					No Photo
Fathead Minnow	Pimephales promelas					
Speckled Dace	Rhinichthys osculus					No Photo
White Sucker	Catostomus commersoni					
Zuni Bluehead Sucker	Catostomus discobolus yarrowi	E	E	Y	Y	
Black Bullhead	Ameiurus melas					
Channel Catfish	Ictalurus punctatus					
Rainbow Trout	Oncorhynchus mykiss					

All Species
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Common Name	Scientific Name	NMGF	US FWS	Critical Habitat	SGCN	Photo
Northern Pike	Esox lucius					
Plains Killifish	Fundulus zebrinus					No Photo
Green Sunfish	Lepomis cyanellus					
Diablo Mountainsnail	Oreohelix houghi					No Photo
Sluice Snaggletooth Snail	Gastrocopta ashmuni					No Photo
Montane Snaggletooth Snail	Gastrocopta pilsbryana					No Photo
Ribbed Dagger Snail	Pupoides hordaceus					No Photo
Crestless Column Snail	Pupilla hebes					No Photo
Vertigo Snail	Vertigo arizonensis					No Photo
Silky Vallonia Snail	Vallonia cyclophorella					No Photo
Western Glass Snail	Vitrina pellucida					No Photo
Minute Gem Snail	Hawaiia minuscula					No Photo
Quick Gloss Snail	Zonitoides arboreus					No Photo
Brown Hive Snail	Euconulus fulvus					No Photo
Tiger Beetle	Cicindela marutha					No Photo
Tiger Beetle	Cicindela nigrocoerula					No Photo
Tiger Beetle	Cicindela obsoleta obsoleta; santaclarae					No Photo
Tiger Beetle	Cicindela oregona					No Photo
Tiger Beetle	Cicindela pulchra					No Photo
Tiger Beetle	Cicindela punctulata					No Photo
Tiger Beetle	Cicindela purpurea					No Photo
Variable Tiger Beetle	Cicindela terricola					No Photo
Tiger Beetle	Cicindela tranquebarica					No Photo
Oslar's Oakworm Moth	Anisota oslari					
Grote's Buck Moth	Hemileuca grotei					No Photo
Magnificent Sheepmoth	Hemileuca hera magnifica					No Photo

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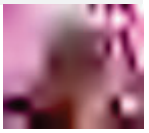
Common Name	Scientific Name	NMGF	US FWS	Critical Habitat	SGCN	Photo
Columbia Silkmoth	Hyalophora gloveri					
Moth	Sagenosoma elsa					No Photo
One-eyed Sphinx Moth	Smerinthus cerisyi					
Asella Sphinx	Sphinx asellus					No Photo
Great Ash Moth	Sphinx chersis					
Moth	Sphinx perelegans					No Photo
Afranius Duskywing Skipper	Erynnis afranius					No Photo
Sleepy Duskywing Skipper	Erynnis brizo					
Funereal Duskywing Skipper	Erynnis funeralis					
Pacuvius Duskywing Skipper	Erynnis pacuvius					No Photo
Rocky Mtn Duskywing Skipper	Erynnis telemachus					
Northern White Skipper	Heliopetes ericetorum					No Photo
Saltbush Sootywing Skipper	Hesperopsis alpheus					No Photo
Common Sootywing Skipper	Pholisora catullus					
White Checkered Skipper	Pyrgus albescens					
Common Checkered-Skipper	Burnsius communis					

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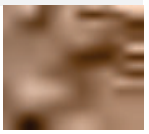
Common Name	Scientific Name	NMGF	US FWS	Critical Habitat	SGCN	Photo
Small Checkered Skipper	Pyrgus scriptura					
Mountain Checkered-Skipper	Pyrgus xanthus					No Photo
Northern Cloudywing Skipper	Thorybes pylades					
Short-Tailed Skipper	Zestusa dorus					No Photo
Bronze Roadside Skipper	Amblyscirtes aenus					No Photo
Cassus Roadside Skipper	Amblyscirtes cassus					No Photo
Oslar's Roadside Skipper	Amblyscirtes oslari					No Photo
Orange-headed Roadside Skipper	Amblyscirtes phylace					No Photo
Simius Roadside Skipper	Notamblyscirtes simius					No Photo
Python Skipper	Atrytonopsis python					No Photo
Viereck's Skipper	Atrytonopsis vierecki					No Photo
Orange Skipperling	Copaeodes aurantiaca					
Susan's Skipper	Hesperia colorado susanae					No Photo
Pahaska Skipper	Hesperia pahaska pahaska					No Photo
Uncas Skipper	Hesperia uncas uncas					No Photo
Green Skipper	Hesperia viridis					
Apache Skipper	Hesperia woodgatei					No Photo
Edwards' Skipperling	Copaeodes edwardsii					No Photo
Garita Skipperling Skipper	Oarisma garita					
Snow's Skipper	Paratrytone snowi					No Photo
Taxiles Skipper	Poanes taxiles					

All Species
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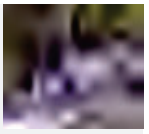
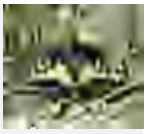
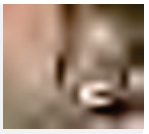
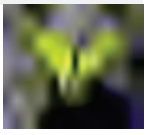
Common Name	Scientific Name	NMGF	US FWS	Critical Habitat	SGCN	Photo
Draco Skipper	Polites draco					
Tawny-Edged Skipper	Polites themistocles					
Morrison's Skipper	Stinga morrisoni					No Photo
Navajo Yucca Borer Skipper	Megathymus coloradensis navajo					No Photo
Strecker's Giant Skipper	Megathymus streckeri streckeri					
Rhesus Skipper	Polites rhesus					No Photo
Pipevine Swallowtail Butterfly	Battus philenor					
Baird's Swallowtail Butterfly	Papilio bairdii					No Photo
Minor's Swallowtail Butterfly	Papilio indra					No Photo
Black Swallowtail Butterfly	Papilio polyxenes asterius					
Nitra Swallowtail Butterfly	Papilio zelicaon nitra					No Photo
Anise Swallowtail Butterfly	Papilio zelicaon zelicaon					
Western Tiger Swallowtail Butterfly	Pterourus rutulus rutulus					
Ingham's Orangetip Butterfly	Anthocharis sara					
Two-Tailed Swallowtail Butterfly	Pterourus multicaudata					
Pale Swallowtail Butterfly	Pterourus eurymedon					No Photo
Desert Marble	Euchloe lotta					No Photo

All Species
McKinley

Common Name	Scientific Name	NMGF	US FWS	Critical Habitat	SGCN	Photo
Pine White Butterfly	Neophasia menapia					
McDunnough's White Butterfly	Pieris napi mcdunnoughi					No Photo
Cabbage White Butterfly	Pieris rapae					
Becker's White Butterfly	Pontia beckerii					No Photo
Checkered White Butterfly	Pontia protodice					
Spring White Butterfly	Pontia sisymbrii elivata					No Photo
Orange Sulphur Butterfly	Colias eurytheme					
Western Common Sulphur Butterfly	Colias eriphyle					
Mexican Yellow Butterfly	Eurema mexicanum					No Photo
Sleepy Orange Butterfly	Eurema nicippe					
Dainty Sulphur Butterfly	Nathalis iole					
Cloudless Sulphur Butterfly	Phoebis sennae					
Southern Dogface Butterfly	Zerene cesonia					
Colorado Hairstreak Butterfly	Hypaurotis crysalus					

All Species
McKinley

Common Name	Scientific Name	NMGF	US FWS	Critical Habitat	SGCN	Photo
Great Purple Hairstreak Butterfly	Atlides halesus					
Apama Hairstreak Butterfly	Callophrys affinis apama					No Photo
Western Pine Elfin Butterfly	Callophrys eryphon					No Photo
Desert Elfin Butterfly	Callophrys fotis					No Photo
Obscure Elfin Butterfly	Callophrys polios					No Photo
Juniper Hairstreak Butterfly	Callophrys gryneus					
Thicket Hairstreak Butterfly	Callophrys spinetorum					
Cross's Hairstreak Butterfly	Satyrium behrii					No Photo
Itys Hairstreak Butterfly	Satyrium dryope					No Photo
Frank's Common Hairstreak Butterfly	Strymon melinus					
Rustic Blue Butterfly	Agriades rusticus					
Arizona Blue Butterfly	Celastrina ladon cinerea					No Photo
Square-spotted Blue Butterfly	Euphilotes battoides centralis					
Ellis's Blue Butterfly	Euphilotes battoides ellisi					No Photo
Rita Blue Butterfly	Euphilotes rita rita					
Spalding's Blue Butterfly	Euphilotes spaldingi					
Western Tailed Blue Butterfly	Cupido amyntula					

All Species
McKinley

Common Name	Scientific Name	NMGF	US FWS	Critical Habitat	SGCN	Photo
Eastern Tailed Blue Butterfly	Cupido comyntas					
Silvery Blue Butterfly	Glaucopsyche lygdamus oro					
Arrowhead Blue Butterfly	Glaucopsyche piasus					No Photo
Ceraunus Blue Butterfly	Hemiargus ceraunus					No Photo
Reakirt's Blue Butterfly	Echinargus isola					
Marine Blue Butterfly	Leptotes marina					
Melissa Blue Butterfly	Plebejus melissa					
Texas Blue Butterfly	Plebejus acmon					
Lycea Blue Butterfly	Plebejus icarioides lycea					
Boisduval's Blue Butterfly	Plebejus icarioides sacre					
Mormon Metalmark Butterfly	Apodemia mormo mormo					No Photo
Mormon Metalmark Butterfly	Apodemia mormo ssp.					No Photo
Shellbach's Copper Butterfly	Tharsalea arota					
Nais Metalmark Butterfly	Apodemia nais					No Photo
Leda Hairstreak Butterfly	Ministrymon leda					No Photo
Western Pygmy-Blue Butterfly	Brephidium exilis					

All Species
McKinley

Common Name	Scientific Name	NMGF	US FWS	Critical Habitat	SGCN	Photo
American Snout	Libytheana bachmanii					No Photo
Buckeye Butterfly	Junonia coenia					
Mourning Cloak Butterfly	Nymphalis antiopa					
Hoary Comma Butterfly	Polygonia gracilis					
Satyr Anglewing Butterfly	Polygonia satyrus					No Photo
West Coast Lady Butterfly	Vanessa annabella					
Red Admiral Butterfly	Vanessa atalanta					
Painted Lady Butterfly	Vanessa cardui					
American Lady Butterfly	Vanessa virginiensis					
Variegated Fritillary Butterfly	Euptoieta claudia					
Dorothy's Fritillary Butterfly	Speyeria hesperis dorothea					No Photo
Eurynome Silverspot Butterfly	Argynnis bischoffii					
Crocale Patch Butterfly	Chlosyne lacinia					
Chuska Mountains Checkerspot Butterfly	Euphydryas anicia chuskae					No Photo

All Species
McKinley

Common Name	Scientific Name	NMGF	US FWS	Critical Habitat	SGCN	Photo
Mylitta Crescent Butterfly	Phyciodes mylitta					
Camillus Crescent Butterfly	Phyciodes pulchella					
Montane Penstemon Checkerspot Butterfly	Poladryas minuta arachne					No Photo
Fulvia Checkerspot Butterfly	Chlosyne fulvia					
Arizona Sister Butterfly	Adelpha eulalia					
Canyonland Satyr Butterfly	Cyllopsis pertepida dorothea					
Ridings' Arctic	Oeneis ridingsii neomexicanus					No Photo
Ridings' Arctic	Oeneis ridingsii ridingsii					No Photo
Striated Queen	Danaus gilippus					
Monarch Butterfly	Danaus plexippus		C			
Pearly Checkerspot Butterfly	Chlosyne acastus acastus					No Photo
SW Pearly Checkerspot Butterfly	Chlosyne acastus sabina					No Photo
Alena Checkerspot Butterfly	Occidryas anicia alena					No Photo
Noctuid Moth	Schinia zuni					No Photo
Viceroy Butterfly	Limenitis archippus archippus					No Photo
Weidemeyer's Admiral Butterfly	Limenitis weidemeyerii weidemeyerii					
Plateau Spreadwing	Lestes alacer					

All Species
McKinley

Common Name	Scientific Name	NMGF	US FWS	Critical Habitat	SGCN	Photo
Spotted Spreadwing	Lestes congener					
Northern Spreadwing	Lestes disjunctus					No Photo
Emerald Spreadwing	Lestes dryas					No Photo
Western Red Damsel	Amphiagrion abbreviatum					
Aztec Dancer	Argia nahuana					
Springwater Dancer	Argia plana					
Northern Bluet	Enallagma annexum					
Boreal Bluet	Enallagma boreale					No Photo
Tule Bluet	Enallagma carunculatum					
Plains Forktail	Ischnura damula					
Paddle-tailed Darner	Aeshna palmata					
Blue-eyed Darner	Rhionaeschna multicolor					
Western Pondhawk	Erythemis collocata					No Photo
Variegated meadowhawk	Sympetrum corruptum					

All Species
McKinley

Common Name	Scientific Name	NMGF	US FWS	Critical Habitat	SGCN	Photo
Striped Meadowhawk	Sympetrum pallipes					
White Whiskers Grasshopper	Ageneotettix deorum					No Photo
Elliott Grasshopper	Aulocara elliotti					No Photo
White Cross Grasshopper	Aulocara femoratum					No Photo
Spotted Wing Grasshopper	Cordillacris occipitalis					No Photo
Rufous Grasshopper	Heliaula rufa					No Photo
Brown Spotted Range Grasshopper	Psoloessa delicatula					No Photo
Grasshopper	Psoloessa texana					No Photo
Speckled Rangeland Grasshopper	Arphia conspera					No Photo
Red-Winged Grasshopper	Arphia pseudonietana					No Photo
Clear-Winged Grasshopper	Camnula pellucida					No Photo
Wrangler Grasshopper	Circotettix rabula					
Grasshopper	Conozoa texana					No Photo
Pronotal Range Grasshopper	Cratypedes neglectus					No Photo
Carolina Grasshopper	Dissosteira carolina					No Photo
Campestral Grasshopper	Spharagemon campestris					No Photo
Blue-Winged Grasshopper	Trimerotropis cyaneipennis					No Photo
Thomas' Slender Grasshopper	Trimerotropis gracilis					No Photo
Grasshopper	Trimerotropis inconspicua					No Photo
Broad-Banded Grasshopper	Trimerotropis latifasciata					No Photo
Grasshopper	Trimerotropis modesta					No Photo
Red Shanks Grasshopper	Xanthippus corallipes					No Photo
Grasshopper	Xanthippus montanus					No Photo
Fuzzy Olive-Green Grasshopper	Campylacantha olivacea					No Photo
Green Streak Grasshopper	Hesperotettix viridis					No Photo
Arizona Spur-Throat Grasshopper	Melanoplus arizonae					No Photo
Two-Striped Grasshopper	Melanoplus bivittatus					No Photo
Grasshopper	Melanoplus bohemani					No Photo

All Species
McKinley

Common Name	Scientific Name	NMGF	US FWS	Critical Habitat	SGCN	Photo
Bowditch's Spur-Throat Grasshopper	Melanoplus bowditchi					No Photo
Little Pasture Spur-Throat Grasshopper	Melanoplus confusus					No Photo
Grasshopper	Melanoplus foedus					No Photo
Gladston's Spur-Throat Grasshopper	Melanoplus gladstoni					No Photo
Packard's Grasshopper	Melanoplus packardi					No Photo
Lesser Migratory Grasshopper	Melanoplus sanguinipes					No Photo
Platte Range Grasshopper	Mestobregna plattei					No Photo
Mayfly	Callibaetis pictus					No Photo
Spider	Metepeira foxi					No Photo
Pseudoscorpion	Parachelifer persimilis					No Photo
Pseudoscorpion	Lustrochernes grossus					No Photo
Scud	Hyalella azteca					No Photo

Appendix D.2 – Attachment 3
IPaC Resource List

IPaC **U.S. Fish & Wildlife Service**

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

NOT FOR CONSULTATION

Location

McKinley County, New Mexico

Local office

New Mexico Ecological Services Field Office

(505) 346-2525
(505) 346-2542

2105 Osuna Road Ne
Albuquerque, NM 87113-1001

NOT FOR CONSULTATION

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

---

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).

NOT FOR CONSULTATION

2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Birds

NAME	STATUS
Mexican Spotted Owl *Strix occidentalis lucida* Wherever found There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/8196	Threatened
Yellow-billed Cuckoo *Coccyzus americanus* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/3911	Threatened

Fishes

NAME	STATUS
Zuni Bluehead Sucker *Catostomus discobolus yarrowi* Wherever found There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/3536	Endangered

Insects

NAME	STATUS
Monarch Butterfly *Danaus plexippus* Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/9743	Candidate

Flowering Plants

NAME	STATUS

NOT FOR CONSULTATION

Zuni Fleabane Erigeron rhizomatus Threatened

Wherever found

No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/5700

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

There are no critical habitats at this location.

You are still required to determine if your project(s) may have effects on all above listed species.

Bald & Golden Eagles

Bald and golden eagles are protected under the Bald and Golden Eagle Protection Act[1] and the Migratory Bird Treaty Act[2].

Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats[3], should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the "Supplemental Information on Migratory Birds and Eagles".

Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

There are bald and/or golden eagles in your project area.

NOT FOR CONSULTATION

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Golden Eagle Aquila chrysaetos This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds Dec 1 to Aug 31

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.

NOT FOR CONSULTATION

3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

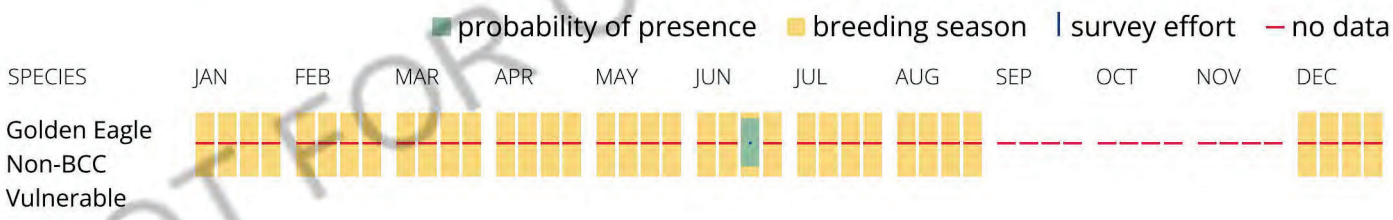
Breeding Season (▪)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



NOT FOR CONSULTATION

What does IPaC use to generate the potential presence of bald and golden eagles in my specified location?

The potential for eagle presence is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply). To see a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What does IPaC use to generate the probability of presence graphs of bald and golden eagles in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur. Please contact your local Fish and Wildlife Service Field Office if you have questions.

NOT FOR CONSULTATION

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats[3] should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the "Supplemental Information on Migratory Birds and Eagles".

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this

location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Golden Eagle Aquila chrysaetos This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds Dec 1 to Aug 31

NOT FOR CONSULTATION

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted

Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.

2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (▪)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

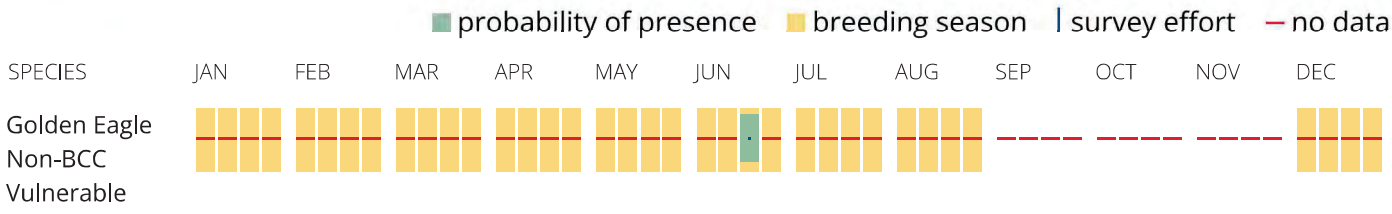
Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

NOT FOR CONSULTATION



Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure.

To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the RAIL Tool and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in

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offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

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Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuge lands at this location.

Fish hatcheries

There are no fish hatcheries at this location.

Wetlands in the National Wetlands Inventory (NWI)

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

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Wetland information is not available at this time

This can happen when the National Wetlands Inventory (NWI) map service is unavailable, or for very large projects that intersect many wetland areas. Try again, or visit the NWI map to view wetlands at this location.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

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Appendix D.3 95 UCL Calculations

Calculation of Weighted 95% UCLs for the a Combined Decision Unit (DU) from Several Smaller DUs Having Replicate Incremental Samples

Enter information in green highlighted cells. See the "Instructions" tab for detailed instructions.

Project ID:	Fort Wingate Inner Fence
Property/Sample ID:	Inner Fence Area Grids
Date of calculations:	7/6/2024
Calculator completed by:	CMC
Analyte:	Antimony
Analyte units:	mg/kg
DU metric units:	Sq feet
Notes:	

Click in green cell below to select from drop-down menu

DU size metric: area, volume, or depth interval: Area

Note: Assumes all replicates have the same number of increments

Number of increments per replicate: 50

Row #	IDs/Names of the Smaller DUs	DU Area (Sq feet)	Replicate field sample concentrations						Number of Replicates	Weight	Arithmetic Mean	SD of Replicates	calc'd SD of Increments	calc'd CV for the DU	Adj Factor	adj'd SD of Increments	adj'd CV for DU	SE of DU	95% UCL			
			Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6											Student's-t	Chebychev	CV of Increments	95% UCL
1	AA32	10000.0	0.075	0.075	0.075				3	0.01	0.1	0.00	0.00	0.00	1.13	0.00	0.00	0.00	0.1	0.1	Low	0.1
2	AB27	10000.0	0.075	0.075	0.075				3	0.01	0.1	0.00	0.00	0.00	1.13	0.00	0.00	0.00	0.1	0.1	Low	0.1
3	AB38	13378.0	0.3	0.12	0.084				3	0.01	0.2	0.12	0.82	4.87	2.50	2.05	12.18	0.07	0.4	0.5	High	0.5
4	AC34	10000.0	0.075	0.075	0.075				3	0.01	0.1	0.00	0.00	0.00	1.13	0.00	0.00	0.00	0.1	0.1	Low	0.1
5	AD28	10000.0	0.075	0.16	0.075				3	0.01	0.1	0.05	0.35	3.36	1.75	0.61	5.87	0.03	0.2	0.2	High	0.2
6	AD34	10000.0	0.087	0.075	0.15				3	0.01	0.1	0.04	0.28	2.74	1.52	0.43	4.18	0.02	0.2	0.2	High	0.2
7	AE27	9999.9	0.075	0.075	0.075				3	0.01	0.1	0.00	0.00	0.00	1.13	0.00	0.00	0.00	0.1	0.1	Low	0.1
8	AE38	13378.0	0.075	0.075	0.075				3	0.01	0.1	0.00	0.00	0.00	1.13	0.00	0.00	0.00	0.1	0.1	Low	0.1
9	AF29	10000.0	0.075	0.075	0.075				3	0.01	0.1	0.00	0.00	0.00	1.13	0.00	0.00	0.00	0.1	0.1	Low	0.1
10	AF30	10000.0	0.62	0.31	0.24				3	0.01	0.4	0.20	1.43	3.67	1.88	2.69	6.89	0.12	0.7	0.9	High	0.9
11	AF32	10000.0	0.075	0.075	0.12				3	0.01	0.1	0.03	0.18	2.04	1.33	0.24	2.72	0.02	0.1	0.2	Med	0.2
12	AF34	10000.0	0.075	0.075	0.075				3	0.01	0.1	0.00	0.00	0.00	1.13	0.00	0.00	0.00	0.1	0.1	Low	0.1
13	AH28	10000.0	0.18	0.29	0.11				3	0.01	0.2	0.09	0.64	3.32	1.73	1.11	5.75	0.05	0.3	0.4	High	0.4
14	AH39	10617.1	0.22	0.075	0.075				3	0.01	0.1	0.08	0.59	4.80	2.46	1.46	11.80	0.05	0.3	0.3	High	0.3
15	AI26	10000.0	0.25	0.17	0.14				3	0.01	0.2	0.06	0.40	2.15	1.36	0.55	2.93	0.03	0.3	0.3	Med	0.3
16	AI29	10000.0	0.075	0.075	0.082				3	0.01	0.1	0.00	0.03	0.37	1.13	0.03	0.42	0.00	0.1	0.1	Low	0.1
17	AI31	10000.0	0.078	0.075	0.13				3	0.01	0.1	0.03	0.22	2.32	1.40	0.31	3.25	0.02	0.1	0.2	High	0.2
18	AJ26	10000.0	0.075	0.075	0.075				3	0.01	0.1	0.00	0.00	0.00	1.13	0.00	0.00	0.00	0.1	0.1	Low	0.1
19	AJ27	10000.0	0.087	0.075	0.075				3	0.01	0.1	0.01	0.05	0.62	1.14	0.06	0.70	0.00	0.1	0.1	Low	0.1
20	AJ31	10000.0	0.075	0.11	0.085				3	0.01	0.1	0.02	0.13	1.42	1.21	0.15	1.72	0.01	0.1	0.1	Med	0.1
21	AJ33	10000.0	0.15	0.076	0.096				3	0.01	0.1	0.04	0.27	2.52	1.46	0.39	3.68	0.02	0.2	0.2	High	0.2
22	AK28	10000.0	0.078	0.08	0.077				3	0.01	0.1	0.00	0.01	0.14	1.13	0.01	0.16	0.00	0.1	0.1	Low	0.1
23	AK36	10000.0	0.13	0.097	0.097				3	0.01	0.1	0.02	0.13	1.25	1.19	0.16	1.48	0.01	0.1	0.2	Low	0.1
24	AL27	10000.0	0.075	0.075	0.075				3	0.01	0.1	0.00	0.00	0.00	1.13	0.00	0.00	0.00	0.1	0.1	Low	0.1
25	AL34	10000.0	0.14	0.093	0.1				3	0.01	0.1	0.03	0.18	1.62	1.25	0.22	2.01	0.01	0.2	0.2	Med	0.2
26	AL39	7384.7	0.075	0.075	0.075				3	0.00	0.1	0.00	0.00	0.00	1.13	0.00	0.00	0.00	0.1	0.1	Low	0.1
27	AM29	10000.0	0.088	0.095	0.075				3	0.01	0.1	0.01	0.07	0.83	1.15	0.08	0.96	0.01	0.1	0.1	Low	0.1
28	AM33	10000.0	0.1	0.097	0.13				3	0.01	0.1	0.02	0.13	1.18	1.18	0.15	1.40	0.01	0.1	0.2	Low	0.1
29	AN27	10000.0	0.16	0.075	0.11				3	0.01	0.1	0.04	0.30	2.63	1.49	0.45	3.91	0.02	0.2	0.2	High	0.2
30	AN28	10000.0	0.075	0.075	0.075				3	0.01	0.1	0.00	0.00	0.00	1.13	0.00	0.00	0.00	0.1	0.1	Low	0.1
31	AN38	6980.7	0.075	0.075	0.075				3	0.00	0.1	0.00	0.00	0.00	1.13	0.00	0.00	0.00	0.1	0.1	Low	0.1
32	AO26	10000.0	0.091	0.087	0.11				3	0.01	0.1	0.01	0.09	0.91	1.15	0.10	1.04	0.01	0.1	0.1	Low	0.1
33	AP28	8819.3	0.082	0.075	0.095				3	0.01	0.1	0.01	0.07	0.85	1.15	0.08	0.98	0.01	0.1	0.1	Low	0.1
34	AQ15	13466.3	0.19	0.098	0.15				3	0.01	0.1	0.05	0.33	2.23	1.38	0.45	3.08	0.03	0.2	0.3	High	0.3
35	AQ22	11017.2	0.075	0.075	0.075				3	0.01	0.1	0.00	0.00	0.00	1.13	0.00	0.00	0.00	0.1	0.1	Low	0.1
36	C27	14788.0	0.075	0.075	0.075				3	0.01	0.1	0.00	0.00	0.00	1.13	0.00	0.00	0.00	0.1	0.1	Low	0.1
37	C35	9243.3	0.077	0.19	0.075				3	0.01	0.1	0.07	0.47	4.08	2.07	0.96	8.46	0.04	0.2	0.3	High	0.3
38	C37	7935.9	0.075	0.075	0.075				3	0.00	0.1	0.00	0.00	0.00	1.13	0.00	0.00	0.00	0.1	0.1	Low	0.1
39	E27	14436.0	0.075	0.075	0.075				3	0.01	0.1	0.00	0.00	0.00	1.13	0.00	0.00	0.00	0.1	0.1	Low	0.1
40	F32	10000.0	0.085	0.12	0.075				3	0.01	0.1	0.02	0.17	1.79	1.28	0.21	2.29	0.01	0.1	0.2	Med	0.2
41	G30	10000.0	0.075	0.13	0.075				3	0.01	0.1	0.03	0.22	2.41	1.43	0.32	3.43	0.02	0.1	0.2	High	0.2
42	H35	10000.0	0.075	0.075	0.075				3	0.01	0.1	0.00	0.00	0.00	1.13	0.00	0.00	0.00	0.1	0.1	Low	0.1
43	H39	12972.6	0.19	0.01	0.075				3	0.01	0.1	0.09	0.64	7.03	4.09	2.64	28.75	0.05	0.2	0.3	High	0.3
44	I29	10000.0	0.075	0.075	0.075				3	0.01	0.1	0.00	0.00	0.00	1.13	0.00	0.00	0.00	0.1	0.1	Low	0.1
45	I30	10000.0	0.075	0.075	0.12				3	0.01	0.1	0.03	0.18	2.04	1.33	0.24	2.72	0.02	0.1	0.2	Med	0.2
46	I33	10000.0	0.075	0.075	0.075				3	0.01	0.1	0.00	0.00	0.00	1.13	0.00	0.00	0.00	0.1	0.1	Low	0.1
47	I38	12991.4	0.075	0.075	0.075				3	0.01	0.1	0.00	0.00	0.00	1.13	0.00	0.00	0.00	0.1	0.1	Low	0.1
48	K30	10000.0	0.086	0.075	0.075				3	0.01	0.1	0.01	0.04	0.57	1.13	0.05	0.65	0.00	0.1	0.1	Low	0.1
49	K34	10000.0	0.075	0.23	0.075				3	0.01	0.1	0.09	0.63	5.00	2.58	1.63	12.87	0.05	0.3	0.4	High	0.4
50	L29	10000.0	0.075	0.075	0.22				3	0.01	0.1	0.08	0.59	4.80	2.46	1.46	11.80	0.05	0.3	0.3	High	0.3

Row #	IDs/Names of the Smaller DUs	DU Area (Sq feet)	Replicate field sample concentrations						Number of Replicates	Weight	Arithmetic Mean	SD of Replicates	calc'd SD of Increments	calc'd CV for the DU	Adj Factor	adj'd SD of Increments	adj'd CV for DU	SE of DU	95% UCL			
			Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6											Student's-t	Chebychev	CV of Increments	95% UCL
51	L34	10000.0	0.075	0.093	0.075				3	0.01	0.1	0.01	0.07	0.91	1.15	0.08	1.05	0.01	0.1	0.1	Low	0.1
52	L37	10000.0	0.075	0.075	0.075				3	0.01	0.1	0.00	0.00	0.00	1.13	0.00	0.00	0.00	0.1	0.1	Low	0.1
53	M28	10000.0	0.1	0.17	0.075				3	0.01	0.1	0.05	0.35	3.03	1.62	0.57	4.91	0.03	0.2	0.2	High	0.2
54	M32	10000.0	0.075	0.075	0.075				3	0.01	0.1	0.00	0.00	0.00	1.13	0.00	0.00	0.00	0.1	0.1	Low	0.1
55	M39	13011.8	0.2	0.25	0.11				3	0.01	0.2	0.07	0.50	2.69	1.51	0.76	4.05	0.04	0.3	0.4	High	0.4
56	N27	10000.0	0.075	0.075	0.075				3	0.01	0.1	0.00	0.00	0.00	1.13	0.00	0.00	0.00	0.1	0.1	Low	0.1
57	N28	10000.0	0.075	0.077	0.094				3	0.01	0.1	0.01	0.07	0.90	1.15	0.09	1.04	0.01	0.1	0.1	Low	0.1
58	N37	10000.0	0.075	0.075	0.075				3	0.01	0.1	0.00	0.00	0.00	1.13	0.00	0.00	0.00	0.1	0.1	Low	0.1
59	O27	10000.0	0.079	0.075	0.075				3	0.01	0.1	0.00	0.02	0.21	1.13	0.02	0.24	0.00	0.1	0.1	Low	0.1
60	O32	10000.0	0.075	0.075	0.075				3	0.01	0.1	0.00	0.00	0.00	1.13	0.00	0.00	0.00	0.1	0.1	Low	0.1
61	O37	10000.0	0.075	0.075	0.075				3	0.01	0.1	0.00	0.00	0.00	1.13	0.00	0.00	0.00	0.1	0.1	Low	0.1
62	P32	10000.0	0.075	0.075	0.075				3	0.01	0.1	0.00	0.00	0.00	1.13	0.00	0.00	0.00	0.1	0.1	Low	0.1
63	P33	10000.0	0.075	0.12	0.075				3	0.01	0.1	0.03	0.18	2.04	1.33	0.24	2.72	0.02	0.1	0.2	Med	0.2
64	Q26	10000.0	0.075	0.075	0.075				3	0.01	0.1	0.00	0.00	0.00	1.13	0.00	0.00	0.00	0.1	0.1	Low	0.1
65	Q29	10000.0	0.075	0.075	0.075				3	0.01	0.1	0.00	0.00	0.00	1.13	0.00	0.00	0.00	0.1	0.1	Low	0.1
66	Q38	13187.6	0.095	0.075	0.075				3	0.01	0.1	0.01	0.08	1.00	1.16	0.09	1.16	0.01	0.1	0.1	Low	0.1
67	Q39	13187.6	0.075	0.075	0.075				3	0.01	0.1	0.00	0.00	0.00	1.13	0.00	0.00	0.00	0.1	0.1	Low	0.1
68	R24	10000.0	0.075	0.075	0.075				3	0.01	0.1	0.00	0.00	0.00	1.13	0.00	0.00	0.00	0.1	0.1	Low	0.1
69	R32	10000.0	0.075	0.08	0.075				3	0.01	0.1	0.00	0.02	0.27	1.13	0.02	0.30	0.00	0.1	0.1	Low	0.1
70	S26	10000.0	0.17	0.13	0.11				3	0.01	0.1	0.03	0.22	1.58	1.24	0.27	1.96	0.02	0.2	0.2	Med	0.2
71	S29	10000.0	0.075	0.075	0.075				3	0.01	0.1	0.00	0.00	0.00	1.13	0.00	0.00	0.00	0.1	0.1	Low	0.1
72	S36	10000.0	0.23	0.075	0.11				3	0.01	0.1	0.08	0.57	4.16	2.11	1.21	8.76	0.05	0.3	0.3	High	0.3
73	T23	10000.0	0.18	0.36	0.23				3	0.01	0.3	0.09	0.66	2.56	1.47	0.97	3.76	0.05	0.4	0.5	High	0.5
74	T28	10000.0	0.15	0.086	0.089				3	0.01	0.1	0.04	0.26	2.36	1.41	0.36	3.33	0.02	0.2	0.2	High	0.2
75	T32	10000.0	0.075	0.075	0.11				3	0.01	0.1	0.02	0.14	1.65	1.25	0.18	2.06	0.01	0.1	0.1	Med	0.1
76	T39	13380.2	0.075	0.075	0.075				3	0.01	0.1	0.00	0.00	0.00	1.13	0.00	0.00	0.00	0.1	0.1	Low	0.1
77	U28	10000.0	0.15	0.15	0.15				3	0.01	0.2	0.00	0.00	0.00	1.13	0.00	0.00	0.00	0.2	0.2	Low	0.2
78	U32	10000.0	0.22	0.075	0.076				3	0.01	0.1	0.08	0.59	4.77	2.44	1.44	11.65	0.05	0.3	0.3	High	0.3
79	U33	10000.0	0.075	0.075	0.075				3	0.01	0.1	0.00	0.00	0.00	1.13	0.00	0.00	0.00	0.1	0.1	Low	0.1
80	U35	10000.0	0.28	0.18	0.086				3	0.01	0.2	0.10	0.69	3.77	1.92	1.32	7.25	0.06	0.3	0.4	High	0.4
81	U37	10000.0	0.075	0.075	0.3				3	0.01	0.2	0.13	0.92	6.12	3.35	3.08	20.51	0.08	0.4	0.5	High	0.5
82	V30	10000.0	0.075	0.075	0.075				3	0.01	0.1	0.00	0.00	0.00	1.13	0.00	0.00	0.00	0.1	0.1	Low	0.1
83	V33	10000.0	0.075	0.075	0.075				3	0.01	0.1	0.00	0.00	0.00	1.13	0.00	0.00	0.00	0.1	0.1	Low	0.1
84	V36	10000.0	0.075	0.075	0.075				3	0.01	0.1	0.00	0.00	0.00	1.13	0.00	0.00	0.00	0.1	0.1	Low	0.1
85	W26	10000.0	0.16	0.15	0.15				3	0.01	0.2	0.01	0.04	0.27	1.13	0.05	0.30	0.00	0.2	0.2	Low	0.2
86	W28	10000.0	0.2	0.16	0.18				3	0.01	0.2	0.02	0.14	0.79	1.14	0.16	0.90	0.01	0.2	0.2	Low	0.2
87	W31	10000.0	0.083	0.075	0.075				3	0.01	0.1	0.00	0.03	0.42	1.13	0.04	0.47	0.00	0.1	0.1	Low	0.1
88	W34	10000.0	0.075	0.075	0.077				3	0.01	0.1	0.00	0.01	0.11	1.13	0.01	0.12	0.00	0.1	0.1	Low	0.1
89	W39	13397.6	0.075	0.075	0.075				3	0.01	0.1	0.00	0.00	0.00	1.13	0.00	0.00	0.00	0.1	0.1	Low	0.1
90	X25	10000.0	0.075	0.075	0.075				3	0.01	0.1	0.00	0.00	0.00	1.13	0.00	0.00	0.00	0.1	0.1	Low	0.1
91	X33	10000.0	0.23	0.087	0.075				3	0.01	0.1	0.09	0.61	4.67	2.38	1.45	11.12	0.05	0.3	0.3	High	0.3
92	X36	10000.0	0.075	0.075	0.075				3	0.01	0.1	0.00	0.00	0.00	1.13	0.00	0.00	0.00	0.1	0.1	Low	0.1
93	Z29	10000.0	0.075	0.075	0.075				3	0.01	0.1	0.00	0.00	0.00	1.13	0.00	0.00	0.00	0.1	0.1	Low	0.1
94	AA24	10000.0	0.19	0.075	0.075				3	0.01	0.1	0.07	0.47	4.14	2.10	0.99	8.71	0.04	0.2	0.3	High	0.3
95	AB24	10000.0	0.1	0.075	0.075				3	0.01	0.1	0.01	0.10	1.22	1.19	0.12	1.45	0.01	0.1	0.1	Low	0.1
96	AB25	10000.0	0.29	0.075	0.075				3	0.01	0.1	0.12	0.88	5.98	3.24	2.85	19.42	0.07	0.4	0.5	High	0.5
97	AC25	10000.0	0.11	0.11	0.1				3	0.01	0.1	0.01	0.04	0.38	1.13	0.05	0.43	0.00	0.1	0.1	Low	0.1
98	AD25	10000.0	0.1	0.075	0.075				3	0.01	0.1	0.01	0.10	1.22	1.19	0.12	1.45	0.01	0.1	0.1	Low	0.1
99	AE25	10000.0	0.075	0.075	0.075				3	0.01	0.1	0.00	0.00	0.00	1.13	0.00	0.00	0.00	0.1	0.1	Low	0.1
100	AF25	10000.0	0.075	0.097	0.085				3	0.01	0.1	0.01	0.08	0.91	1.15	0.09	1.05	0.01	0.1	0.1	Low	0.1
101	AG25	10000.0	0.24	0.23	0.16				3	0.01	0.2	0.04	0.31	1.47	1.22	0.38	1.79	0.03	0.3	0.3	Med	0.3
102	AH24	10000.0	0.1	0.11	0.078				3	0.01	0.1	0.02	0.12	1.21	1.18	0.14	1.43	0.01	0.1	0.1	Low	0.1
103	AI23	10000.0	0.11	0.075	0.075				3	0.01	0.1	0.02	0.14	1.65	1.25	0.18	2.06	0.01	0.1	0.1	Med	0.1
104	AI24	10000.0	0.2	0.15	0.14				3	0.01	0.2	0.03	0.23	1.39	1.21	0.28	1.68	0.02	0.2	0.2	Med	0.2
105	AJ23	10000.0	0.075	0.075	0.075				3	0.01	0.1	0.00	0.00	0.00	1.13	0.00	0.00	0.00	0.1	0.1	Low	0.1
106	AK23	10000.0	0.075	0.075	0.077				3	0.01	0.1	0.00	0.01	0.11	1.13	0.01	0.12	0.00	0.1	0.1	Low	0.1
107	AL23	10000.0	0.075	0.075	0.075				3	0.01	0.1	0.00	0.00	0.00	1.13	0.00	0.00	0.00	0.1	0.1	Low	0.1
108	AL24	10000.0	0.075	0.075	0.075				3	0.01	0.1	0.00	0.00	0.00	1.13	0.00	0.00	0.00	0.1	0.1	Low	0.1
109	AL25	10000.0	0.089	0.075	0.075				3	0.01	0.1	0.01	0.06	0.72	1.14	0.07	0.82	0.00	0.1	0.1	Low	0.1
110	AM25	10000.0	0.15	0.13	0.13				3	0.01	0.1	0.01	0.08	0.60	1.13	0.09	0.68	0.01	0.2	0.2	Low	0.2
111	AN25	10000.0	0.13	0.075	0.075				3	0.01	0.1	0.03	0.22	2.41	1.43	0.32	3.43	0.02	0.1	0.2	High	0.2
112	AO25	10000.0	0.075	0.075	0.075				3	0.01	0.1	0.00	0.00	0.00	1.13	0.00	0.00	0.00	0.1	0.1	Low	0.1
113	AP8	12741.9	0.075	0.075	0.075				3	0.01	0.1	0.00	0.00	0.00	1.13	0.00	0.00	0.00	0.1	0.1	Low	0.1
114	AP9	12741.9	0.075	0.075	0.075				3	0.01	0.1	0.00	0.00	0.00	1.13	0.00	0.00	0.00	0.1	0.1	Low	0.1
115	AP10	12742.0	0.075	0.075	0.075				3	0.01	0.1	0.00	0.00	0.00	1.13	0.00	0.00	0.00	0.1	0.1	Low	0.1

Row #	IDs/Names of the Smaller DUs	DU Area (Sq feet)	Replicate field sample concentrations						Number of Replicates	Weight	Arithmetic Mean	SD of Replicates	calc'd SD of Increments	calc'd CV for the DU	Adj Factor	adj'd SD of Increments	adj'd CV for DU	SE of DU	95% UCL			
			Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6											Student's-t	Chebychev	CV of Increments	95% UCL
116	AP11	12741.9	0.075	0.075	0.075				3	0.01	0.1	0.00	0.00	0.00	1.13	0.00	0.00	0.00	0.1	0.1	Low	0.1
117	AP12	12742.0	0.24	0.11	0.08				3	0.01	0.1	0.09	0.60	4.20	2.13	1.28	8.93	0.05	0.3	0.4	High	0.4
118	AP14	12741.6	0.15	0.16	0.21				3	0.01	0.2	0.03	0.23	1.31	1.20	0.27	1.57	0.02	0.2	0.3	Med	0.3
119	AP15	12742.2	0.18	0.17	0.19				3	0.01	0.2	0.01	0.07	0.39	1.13	0.08	0.44	0.01	0.2	0.2	Low	0.2
120	AP16	12741.9	0.14	0.18	0.19				3	0.01	0.2	0.03	0.19	1.10	1.17	0.22	1.29	0.02	0.2	0.2	Low	0.2
121	AP17	12741.9	0.092	0.12	0.16				3	0.01	0.1	0.03	0.24	1.95	1.31	0.32	2.56	0.02	0.2	0.2	Med	0.2
122	AP18	12741.9	0.15	0.12	0.1				3	0.01	0.1	0.03	0.18	1.44	1.22	0.22	1.76	0.01	0.2	0.2	Med	0.2
123	AP19	12741.9	0.075	0.099	0.075				3	0.01	0.1	0.01	0.10	1.18	1.18	0.12	1.40	0.01	0.1	0.1	Low	0.1
124	AP20	12741.9	0.13	0.27	0.085				3	0.01	0.2	0.10	0.68	4.22	2.14	1.46	9.04	0.06	0.3	0.4	High	0.4
125	AP21	12741.9	0.075	0.075	0.14				3	0.01	0.1	0.04	0.27	2.75	1.53	0.41	4.19	0.02	0.2	0.2	High	0.2
126	AP22	12742.0	0.21	0.075	0.099				3	0.01	0.1	0.07	0.51	3.98	2.02	1.03	8.04	0.04	0.2	0.3	High	0.3
127	AP25	12741.8	0.13	0.075	0.075				3	0.01	0.1	0.03	0.22	2.41	1.43	0.32	3.43	0.02	0.1	0.2	High	0.2
128	AQ23	10435.9	0.075	0.1	0.075				3	0.01	0.1	0.01	0.10	1.22	1.19	0.12	1.45	0.01	0.1	0.1	Low	0.1
129	AQ24	9852.5	0.075	0.075	0.075				3	0.01	0.1	0.00	0.00	0.00	1.13	0.00	0.00	0.00	0.1	0.1	Low	0.1
130	B8	8381.5	0.14	0.18	0.12				3	0.00	0.1	0.03	0.22	1.47	1.22	0.26	1.80	0.02	0.2	0.2	Med	0.2
131	B20	7901.2	0.075	0.086	0.075				3	0.00	0.1	0.01	0.04	0.57	1.13	0.05	0.65	0.00	0.1	0.1	Low	0.1
132	B21	7425.3	0.075	0.075	0.15				3	0.00	0.1	0.04	0.31	3.06	1.64	0.50	5.01	0.03	0.2	0.2	High	0.2
133	B22	6933.6	0.25	0.075	0.12				3	0.00	0.1	0.09	0.64	4.33	2.20	1.41	9.53	0.05	0.3	0.4	High	0.4
134	C8	9158.1	0.19	0.29	0.18				3	0.01	0.2	0.06	0.43	1.96	1.31	0.56	2.57	0.04	0.3	0.4	Med	0.4
135	C22	6929.0	0.075	0.075	0.075				3	0.00	0.1	0.00	0.00	0.00	1.13	0.00	0.00	0.00	0.1	0.1	Low	0.1
136	D8	9410.4	0.2	0.13	0.13				3	0.01	0.2	0.04	0.29	1.86	1.29	0.37	2.41	0.02	0.2	0.3	Med	0.3
137	D22	10000.0	0.075	0.075	0.21				3	0.01	0.1	0.08	0.55	4.59	2.34	1.29	10.75	0.05	0.3	0.3	High	0.3
138	E22	10000.0	0.53	0.13	0.23				3	0.01	0.3	0.21	1.47	4.96	2.56	3.76	12.68	0.12	0.6	0.8	High	0.8
139	E23	10000.0	0.11	0.31	0.088				3	0.01	0.2	0.12	0.86	5.11	2.65	2.29	13.52	0.07	0.4	0.5	High	0.5
140	E24	10000.0	0.075	0.075	0.075				3	0.01	0.1	0.00	0.00	0.00	1.13	0.00	0.00	0.00	0.1	0.1	Low	0.1
141	E25	10000.0	0.075	0.075	0.075				3	0.01	0.1	0.00	0.00	0.00	1.13	0.00	0.00	0.00	0.1	0.1	Low	0.1
142	E26	13604.3	0.09	0.2	0.077				3	0.01	0.1	0.07	0.48	3.91	1.99	0.95	7.76	0.04	0.2	0.3	High	0.3
143	F26	5258.3	0.075	0.086	0.075				3	0.00	0.1	0.01	0.04	0.57	1.13	0.05	0.65	0.00	0.1	0.1	Low	0.1
144	G25	8218.3	0.18	0.075	0.075				3	0.00	0.1	0.06	0.43	3.90	1.98	0.85	7.73	0.04	0.2	0.3	High	0.3
145	G26	9346.7	0.076	0.15	0.075				3	0.01	0.1	0.04	0.30	3.03	1.62	0.49	4.92	0.02	0.2	0.2	High	0.2
146	H25	10000.0	0.082	0.2	0.088				3	0.01	0.1	0.07	0.47	3.81	1.94	0.91	7.40	0.04	0.2	0.3	High	0.3
147	I25	7781.1	0.075	0.075	0.075				3	0.00	0.1	0.00	0.00	0.00	1.13	0.00	0.00	0.00	0.1	0.1	Low	0.1
148	J22	10000.0	0.13	0.31	0.11				3	0.01	0.2	0.11	0.78	4.25	2.16	1.68	9.16	0.06	0.4	0.5	High	0.5
149	J23	10000.4	0.16	0.075	0.075				3	0.01	0.1	0.05	0.35	3.36	1.75	0.61	5.87	0.03	0.2	0.2	High	0.2
150	J24	7428.9	0.075	0.11	0.075				3	0.00	0.1	0.02	0.14	1.65	1.25	0.18	2.06	0.01	0.1	0.1	Med	0.1
151	J25	6743.5	0.075	0.075	0.075				3	0.00	0.1	0.00	0.00	0.00	1.13	0.00	0.00	0.00	0.1	0.1	Low	0.1
152	K22	10000.0	0.085	0.075	0.18				3	0.01	0.1	0.06	0.41	3.62	1.86	0.76	6.71	0.03	0.2	0.3	High	0.3
153	L22	10000.0	0.16	0.13	0.1				3	0.01	0.1	0.03	0.21	1.63	1.25	0.26	2.04	0.02	0.2	0.2	Med	0.2
154	M22	10000.0	0.28	0.19	0.099				3	0.01	0.2	0.09	0.64	3.37	1.75	1.12	5.92	0.05	0.3	0.4	High	0.4
155	N22	10000.0	0.079	0.075	0.075				3	0.01	0.1	0.00	0.02	0.21	1.13	0.02	0.24	0.00	0.1	0.1	Low	0.1
156	O22	10000.0	0.28	0.23	0.58				3	0.01	0.4	0.19	1.34	3.68	1.89	2.52	6.95	0.11	0.7	0.8	High	0.8
157	P22	10000.0	0.075	0.17	0.075				3	0.01	0.1	0.05	0.39	3.64	1.86	0.72	6.78	0.03	0.2	0.2	High	0.2
158	Q22	10000.0	0.087	0.14	0.1				3	0.01	0.1	0.03	0.20	1.79	1.28	0.25	2.29	0.02	0.2	0.2	Med	0.2
159	R22	7999.4	0.19	0.075	0.075				3	0.00	0.1	0.07	0.47	4.14	2.10	0.99	8.71	0.04	0.2	0.3	High	0.3
160	S22	10000.0	0.37	0.17	0.19				3	0.01	0.2	0.11	0.78	3.20	1.69	1.31	5.40	0.06	0.4	0.5	High	0.5
161	T22	9920.3	0.19	0.62	0.14				3	0.01	0.3	0.26	1.87	5.89	3.18	5.93	18.72	0.15	0.8	1.0	High	1.0
162	U22	6762.1	0.49	0.27	0.24				3	0.00	0.3	0.14	0.97	2.90	1.58	1.52	4.57	0.08	0.6	0.7	High	0.7
163	V22	10000.0	0.11	0.11	0.17				3	0.01	0.1	0.03	0.24	1.88	1.30	0.32	2.45	0.02	0.2	0.2	Med	0.2
164	W22	10000.0	0.13	0.075	0.075				3	0.01	0.1	0.03	0.22	2.41	1.43	0.32	3.43	0.02	0.1	0.2	High	0.2
165	W23	10000.0	0.079	0.075	0.075				3	0.01	0.1	0.00	0.02	0.21	1.13	0.02	0.24	0.00	0.1	0.1	Low	0.1
166	W24	10000.0	0.28	0.13	0.075	0.075	0.075		5	0.01	0.1	0.09	0.63	4.94	2.40	1.51	11.86	0.04	0.2	0.3	High	0.3
167	X24	10000.0	0.14	0.15	0.11				3	0.01	0.1	0.02	0.15	1.10	1.17	0.17	1.30	0.01	0.2	0.2	Low	0.2
168	Y24	10000.0	0.075	0.075	0.075				3	0.01	0.1	0.00	0.00	0.00	1.13	0.00	0.00	0.00	0.1	0.1	Low	0.1
169	Z24	10000.0	0.075	0.072	0.2				3	0.01	0.1	0.07	0.52	4.47	2.27	1.17	10.14	0.04	0.2	0.3	High	0.3
	Sum:	1734193	--	--	--	--	--	--	509	1.00	0.111	0.00	0.01	0.06	NA	0.02	0.14	0.00	0.1	0.1	Low	0.113

df by Welch-Satterthwaite approximation:	**2.0**

Recommended UCL: **0.113** **mg/kg** >> Student's t 95% UCL

Note: Student's-t or Chebychev 95% UCL may be appropriate.

*Student's t UCL is acceptable if adj'd CV for DU is "Low" (e.g., CV ≤ 1.5). The User should consult the instructions for additional guidance on which 95% UCL is recommended for specific data sets.

Notes

adj'd	= adjusted	df	= degrees of freedom	SD	= arithmetic standard deviation
calc'd	= calculated	DU	= decision unit	SE	= standard error
CV	= coefficient of variation	RSD	= relative standard deviation	95% UCL	= 95% upper confidence limit for arithmetic mean

Calculation of Weighted 95% UCLs for a Combined Decision Unit (DU) from Several Smaller DUs Having Replicate Incremental Samples

Enter information in green highlighted cells. See the "Instructions" tab for detailed instructions.

Project ID:	Fort Wingate Inner Fence
Property/Sample ID:	Inner Fence Area Grids
Date of calculations:	7/6/2024
Calculator completed by:	CMC
Analyte:	Arsenic
Analyte units:	mg/kg
DU metric units:	Sq feet
Notes:	

Click in green cell below to select from drop-down menu

DU size metric: area, volume, or depth interval: Area

Note: Assumes all replicates have the same number of increments

Number of increments per replicate: 50

Row #	IDs/Names of the Smaller DUs	DU Area (Sq feet)	Replicate field sample concentrations						Number of Replicates	Weight	Arithmetic Mean	SD of Replicates	calc'd SD of Increments	calc'd CV for the DU	Adj Factor	adj'd SD of Increments	adj'd CV for DU	SE of DU	95% UCL			
			Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6											Student's-t	Chebychev	CV of Increments	95% UCL
1	AA32	10000.0	1.1	1.2	1.1				3	0.01	1.1	0.06	0.41	0.36	1.13	0.46	0.41	0.03	1.2	1.3	Low	1.2
2	AB27	10000.0	1.7	1.8	1.7				3	0.01	1.7	0.06	0.41	0.24	1.13	0.46	0.27	0.03	1.8	1.9	Low	1.8
3	AB38	13378.0	1	1.1	1.1				3	0.01	1.1	0.06	0.41	0.38	1.13	0.46	0.43	0.03	1.2	1.2	Low	1.2
4	AC34	10000.0	1.4	1.3	1.2				3	0.01	1.3	0.10	0.71	0.54	1.13	0.80	0.62	0.06	1.5	1.6	Low	1.5
5	AD28	10000.0	1.1	1.1	1.1				3	0.01	1.1	0.00	0.00	0.00	1.13	0.00	0.00	0.00	1.1	1.1	Low	1.1
6	AD34	10000.0	1	1.1	0.97				3	0.01	1.0	0.07	0.48	0.47	1.13	0.54	0.53	0.04	1.1	1.2	Low	1.1
7	AE27	9999.9	1.2	1.3	1.1				3	0.01	1.2	0.10	0.71	0.59	1.13	0.80	0.67	0.06	1.4	1.5	Low	1.4
8	AE38	13378.0	1	1.1	1.1				3	0.01	1.1	0.06	0.41	0.38	1.13	0.46	0.43	0.03	1.2	1.2	Low	1.2
9	AF29	10000.0	1.3	1.2	1.4				3	0.01	1.3	0.10	0.71	0.54	1.13	0.80	0.62	0.06	1.5	1.6	Low	1.5
10	AF30	10000.0	1.6	1.8	1.7				3		1.7	0.10	0.71	0.42	1.13	0.80	0.47	0.06	1.9	2.0	Low	1.9
11	AF32	10000.0	1.2	1.1	1.2				3	0.01	1.2	0.06	0.41	0.35	1.13	0.46	0.39	0.03	1.3	1.3	Low	1.3
12	AF34	10000.0	1.3	1.3	1.4				3	0.01	1.3	0.06	0.41	0.31	1.13	0.46	0.34	0.03	1.4	1.5	Low	1.4
13	AH28	10000.0	1.1	1.2	1				3	0.01	1.1	0.10	0.71	0.64	1.14	0.80	0.73	0.06	1.3	1.4	Low	1.3
14	AH39	10617.1	0.81	0.82	0.74				3	0.01	0.8	0.04	0.31	0.39	1.13	0.35	0.44	0.03	0.9	0.9	Low	0.9
15	AI26	10000.0	1.3	1.2	1.1				3	0.01	1.2	0.10	0.71	0.59	1.13	0.80	0.67	0.06	1.4	1.5	Low	1.4
16	AI29	10000.0	1	1.1	1				3	0.01	1.0	0.06	0.41	0.40	1.13	0.46	0.45	0.03	1.1	1.2	Low	1.1
17	AI31	10000.0	1.2	1	1.1				3	0.01	1.1	0.10	0.71	0.64	1.14	0.80	0.73	0.06	1.3	1.4	Low	1.3
18	AJ26	10000.0	1.2	1.3	1.2				3	0.01	1.2	0.06	0.41	0.33	1.13	0.46	0.37	0.03	1.3	1.4	Low	1.3
19	AJ27	10000.0	1.4	1.8	1.8				3	0.01	1.7	0.23	1.63	0.98	1.16	1.90	1.14	0.13	2.1	2.2	Low	2.1
20	AJ31	10000.0	1.1	1.2	1.3				3	0.01	1.2	0.10	0.71	0.59	1.13	0.80	0.67	0.06	1.4	1.5	Low	1.4
21	AJ33	10000.0	1.4	1.5	1.5				3	0.01	1.5	0.06	0.41	0.28	1.13	0.46	0.31	0.03	1.6	1.6	Low	1.6
22	AK28	10000.0	1.4	1.4	1.4				3	0.01	1.4	0.00	0.00	0.00	1.13	0.00	0.00	0.00	1.4	1.4	Low	1.4
23	AK36	10000.0	1.3	1.3	1.3				3	0.01	1.3	0.00	0.00	0.00	1.13	0.00	0.00	0.00	1.3	1.3	Low	1.3
24	AL27	10000.0	0.96	1	0.95				3	0.01	1.0	0.03	0.19	0.19	1.13	0.21	0.22	0.02	1.0	1.0	Low	1.0
25	AL34	10000.0	2.1	2.1	2.4				3	0.01	2.2	0.17	1.22	0.56	1.13	1.39	0.63	0.10	2.5	2.6	Low	2.5
26	AL39	7384.7	8.6	6.6	6.8				3	0.00	7.3	1.10	7.79	1.06	1.17	9.10	1.24	0.64	9.2	10.1	Low	9.2
27	AM29	10000.0	1.2	1.1	1.2				3	0.01	1.2	0.06	0.41	0.35	1.13	0.46	0.39	0.03	1.3	1.3	Low	1.3
28	AM33	10000.0	2.3	2.5	2.4				3	0.01	2.4	0.10	0.71	0.29	1.13	0.80	0.33	0.06	2.6	2.7	Low	2.6
29	AN27	10000.0	1.1	1.2	1.1				3	0.01	1.1	0.06	0.41	0.36	1.13	0.46	0.41	0.03	1.2	1.3	Low	1.2
30	AN28	10000.0	0.93	1	0.91				3	0.01	0.9	0.05	0.33	0.35	1.13	0.38	0.40	0.03	1.0	1.1	Low	1.0
31	AN38	6980.7	1.8	1.6	1.9				3	0.00	1.8	0.15	1.08	0.61	1.13	1.23	0.69	0.09	2.0	2.2	Low	2.0
32	AO26	10000.0	1.3	1.1	1				3	0.01	1.1	0.15	1.08	0.95	1.16	1.25	1.10	0.09	1.4	1.5	Low	1.4
33	AP28	8819.3	1.6	1.5	1.7				3	0.01	1.6	0.10	0.71	0.44	1.13	0.80	0.50	0.06	1.8	1.9	Low	1.8
34	AQ15	13466.3	1.2	1.1	1.1				3	0.01	1.1	0.06	0.41	0.36	1.13	0.46	0.41	0.03	1.2	1.3	Low	1.2
35	AQ22	11017.2	0.85	0.9	0.86				3	0.01	0.9	0.03	0.19	0.22	1.13	0.21	0.24	0.02	0.9	0.9	Low	0.9
36	C27	14788.0	0.78	0.94	0.81				3	0.01	0.8	0.09	0.60	0.71	1.14	0.69	0.81	0.05	1.0	1.1	Low	1.0
37	C35	9243.3	1.4	1.2	1.2				3	0.01	1.3	0.12	0.82	0.64	1.14	0.93	0.73	0.07	1.5	1.6	Low	1.5
38	C37	7935.9	1.2	1.4	1.3				3	0.00	1.3	0.10	0.71	0.54	1.13	0.80	0.62	0.06	1.5	1.6	Low	1.5
39	E27	14436.0	1.2	1.3	1.6				3	0.01	1.4	0.21	1.47	1.08	1.17	1.72	1.26	0.12	1.7	1.9	Low	1.7
40	F32	10000.0	1.6	1.4	1.3				3	0.01	1.4	0.15	1.08	0.75	1.14	1.23	0.86	0.09	1.7	1.8	Low	1.7
41	G30	10000.0	1.3	1.3	1.4				3	0.01	1.3	0.06	0.41	0.31	1.13	0.46	0.34	0.03	1.4	1.5	Low	1.4

Row #	IDs/Names of the Smaller DUs	DU Area (Sq feet)	Replicate field sample concentrations						Number of Replicates	Weight	Arithmetic Mean	SD of Replicates	calc'd SD of Increments	calc'd CV for the DU	Adj Factor	adj'd SD of Increments	adj'd CV for DU	SE of DU	95% UCL			
			Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6											Student's-t	Chebychev	CV of Increments	95% UCL
42	H35	10000.0	1.4	1.4	1.4				3	0.01	1.4	0.00	0.00	0.00	1.13	0.00	0.00	0.00	1.4	1.4	Low	1.4
43	H39	12972.6	1.1	1.2	1.2				3	0.01	1.2	0.06	0.41	0.35	1.13	0.46	0.39	0.03	1.3	1.3	Low	1.3
44	I29	10000.0	1.1	1.3	1.1				3	0.01	1.2	0.12	0.82	0.70	1.14	0.93	0.80	0.07	1.4	1.5	Low	1.4
45	I30	10000.0	1.1	1.1	1.2				3	0.01	1.1	0.06	0.41	0.36	1.13	0.46	0.41	0.03	1.2	1.3	Low	1.2
46	I33	10000.0	1.3	1.4	1.3				3	0.01	1.3	0.06	0.41	0.31	1.13	0.46	0.34	0.03	1.4	1.5	Low	1.4
47	I38	12991.4	1.4	1.6	1.6				3	0.01	1.5	0.12	0.82	0.53	1.13	0.92	0.60	0.07	1.7	1.8	Low	1.7
48	K30	10000.0	1.1	1.1	1.2				3	0.01	1.1	0.06	0.41	0.36	1.13	0.46	0.41	0.03	1.2	1.3	Low	1.2
49	K34	10000.0	1.1	1.2	1.2				3	0.01	1.2	0.06	0.41	0.35	1.13	0.46	0.39	0.03	1.3	1.3	Low	1.3
50	L29	10000.0	1	1.1	1.1				3	0.01	1.1	0.06	0.41	0.38	1.13	0.46	0.43	0.03	1.2	1.2	Low	1.2
51	L34	10000.0	1.1	1.1	1.2				3	0.01	1.1	0.06	0.41	0.36	1.13	0.46	0.41	0.03	1.2	1.3	Low	1.2
52	L37	10000.0	1.4	1.5	1.5				3	0.01	1.5	0.06	0.41	0.28	1.13	0.46	0.31	0.03	1.6	1.6	Low	1.6
53	M28	10000.0	1	1	1.2				3	0.01	1.1	0.12	0.82	0.77	1.14	0.93	0.88	0.07	1.3	1.4	Low	1.3
54	M32	10000.0	1.1	1.2	1.1				3	0.01	1.1	0.06	0.41	0.36	1.13	0.46	0.41	0.03	1.2	1.3	Low	1.2
55	M39	13011.8	1.9	1.3	1.5				3	0.01	1.6	0.31	2.16	1.38	1.21	2.61	1.67	0.18	2.1	2.3	Med	2.3
56	N27	10000.0	1	0.94	0.84				3	0.01	0.9	0.08	0.57	0.62	1.13	0.65	0.70	0.05	1.1	1.1	Low	1.1
57	N28	10000.0	1.5	1.6	1.5				3	0.01	1.5	0.06	0.41	0.27	1.13	0.46	0.30	0.03	1.6	1.7	Low	1.6
58	N37	10000.0	2	2	2.2				3	0.01	2.1	0.12	0.82	0.40	1.13	0.92	0.45	0.07	2.3	2.4	Low	2.3
59	O27	10000.0	1.1	0.82	0.93				3	0.01	1.0	0.14	1.00	1.05	1.17	1.16	1.23	0.08	1.2	1.3	Low	1.2
60	O32	10000.0	1	1.1	0.97				3	0.01	1.0	0.07	0.48	0.47	1.13	0.54	0.53	0.04	1.1	1.2	Low	1.1
61	O37	10000.0	2.2	2.3	2.2				3	0.01	2.2	0.06	0.41	0.18	1.13	0.46	0.21	0.03	2.3	2.4	Low	2.3
62	P32	10000.0	1.2	0.99	1				3	0.01	1.1	0.12	0.84	0.79	1.14	0.96	0.90	0.07	1.3	1.4	Low	1.3
63	P33	10000.0	1	1.1	1.1				3	0.01	1.1	0.06	0.41	0.38	1.13	0.46	0.43	0.03	1.2	1.2	Low	1.2
64	Q26	10000.0	1.1	1.1	1.1				3	0.01	1.1	0.00	0.00	0.00	1.13	0.00	0.00	0.00	1.1	1.1	Low	1.1
65	Q29	10000.0	1.4	1.2	1.4				3	0.01	1.3	0.12	0.82	0.61	1.13	0.93	0.69	0.07	1.5	1.6	Low	1.5
66	Q38	13187.6	1.9	1.9	1.8				3	0.01	1.9	0.06	0.41	0.22	1.13	0.46	0.25	0.03	2.0	2.0	Low	2.0
67	Q39	13187.6	1.4	1.3	1.4				3	0.01	1.4	0.06	0.41	0.30	1.13	0.46	0.34	0.03	1.5	1.5	Low	1.5
68	R24	10000.0	0.89	0.91	0.94				3	0.01	0.9	0.03	0.18	0.19	1.13	0.20	0.22	0.01	1.0	1.0	Low	1.0
69	R32	10000.0	1.3	1.3	1.2				3	0.01	1.3	0.06	0.41	0.32	1.13	0.46	0.36	0.03	1.4	1.4	Low	1.4
70	S26	10000.0	1.5	1.5	1.4				3	0.01	1.5	0.06	0.41	0.28	1.13	0.46	0.31	0.03	1.6	1.6	Low	1.6
71	S29	10000.0	1.5	1.5	1.4				3	0.01	1.5	0.06	0.41	0.28	1.13	0.46	0.31	0.03	1.6	1.6	Low	1.6
72	S36	10000.0	1.5	1.5	1.5				3	0.01	1.5	0.00	0.00	0.00	1.13	0.00	0.00	0.00	1.5	1.5	Low	1.5
73	T23	10000.0	1.9	1.8	1.6				3	0.01	1.8	0.15	1.08	0.61	1.13	1.23	0.69	0.09	2.0	2.2	Low	2.0
74	T28	10000.0	1.7	1.7	1.9				3	0.01	1.8	0.12	0.82	0.46	1.13	0.92	0.52	0.07	2.0	2.1	Low	2.0
75	T32	10000.0	1.3	1.2	1.3				3	0.01	1.3	0.06	0.41	0.32	1.13	0.46	0.36	0.03	1.4	1.4	Low	1.4
76	T39	13380.2	1.2	1.3	1.2				3	0.01	1.2	0.06	0.41	0.33	1.13	0.46	0.37	0.03	1.3	1.4	Low	1.3
77	U28	10000.0	1.1	1	1.1				3	0.01	1.1	0.06	0.41	0.38	1.13	0.46	0.43	0.03	1.2	1.2	Low	1.2
78	U32	10000.0	1.1	1.2	1.1				3	0.01	1.1	0.06	0.41	0.36	1.13	0.46	0.41	0.03	1.2	1.3	Low	1.2
79	U33	10000.0	1.2	1.2	1.1				3	0.01	1.2	0.06	0.41	0.35	1.13	0.46	0.39	0.03	1.3	1.3	Low	1.3
80	U35	10000.0	2.2	1.9	1.7				3	0.01	1.9	0.25	1.78	0.92	1.16	2.06	1.06	0.15	2.4	2.6	Low	2.4
81	U37	10000.0	2.5	2.7	2.7				3	0.01	2.6	0.12	0.82	0.31	1.13	0.92	0.35	0.07	2.8	2.9	Low	2.8
82	V30	10000.0	1.4	1.4	1.5				3	0.01	1.4	0.06	0.41	0.28	1.13	0.46	0.32	0.03	1.5	1.6	Low	1.5
83	V33	10000.0	1.3	1.4	1.3				3	0.01	1.3	0.06	0.41	0.31	1.13	0.46	0.34	0.03	1.4	1.5	Low	1.4
84	V36	10000.0	1.8	2.2	2.1				3	0.01	2.0	0.21	1.47	0.72	1.14	1.68	0.83	0.12	2.4	2.6	Low	2.4
85	W26	10000.0	1.5	1.2	1.4				3	0.01	1.4	0.15	1.08	0.79	1.15	1.24	0.90	0.09	1.6	1.8	Low	1.6
86	W28	10000.0	1.4	1.3	1.5				3	0.01	1.4	0.10	0.71	0.51	1.13	0.80	0.57	0.06	1.6	1.7	Low	1.6
87	W31	10000.0	1.3	1.1	1.3				3	0.01	1.2	0.12	0.82	0.66	1.14	0.93	0.75	0.07	1.4	1.5	Low	1.4
88	W34	10000.0	1.3	1.3	1.4				3	0.01	1.3	0.06	0.41	0.31	1.13	0.46	0.34	0.03	1.4	1.5	Low	1.4
89	W39	13397.6	1.2	1.2	1.1				3	0.01	1.2	0.06	0.41	0.35	1.13	0.46	0.39	0.03	1.3	1.3	Low	1.3
90	X25	10000.0	0.93	0.93	0.87				3	0.01	0.9	0.03	0.24	0.27	1.13	0.28	0.30	0.02	1.0	1.0	Low	1.0
91	X33	10000.0	1.2	1.2	1.1				3	0.01	1.2	0.06	0.41	0.35	1.13	0.46	0.39	0.03	1.3	1.3	Low	1.3
92	X36	10000.0	1.3	1.4	1.4				3	0.01	1.4	0.06	0.41	0.30	1.13	0.46	0.34	0.03	1.5	1.5	Low	1.5
93	Z29	10000.0	1	1.1	1.1				3	0.01	1.1	0.06	0.41	0.38	1.13	0.46	0.43	0.03	1.2	1.2	Low	1.2
94	AA24	10000.0	1.4	1.3	1.4				3	0.01	1.4	0.06	0.41	0.30	1.13	0.46	0.34	0.03	1.5	1.5	Low	1.5
95	AB24	10000.0	1	1.1	1.1				3	0.01	1.1	0.06	0.41	0.38	1.13	0.46	0.43	0.03	1.2	1.2	Low	1.2
96	AB25	10000.0	1.6	1.4	1.5				3	0.01	1.5	0.10	0.71	0.47	1.13	0.80	0.53	0.06	1.7	1.8	Low	1.7
97	AC25	10000.0	1.6	1.6	1.5				3	0.01	1.6	0.06	0.41	0.26	1.13	0.46	0.29	0.03	1.7	1.7	Low	1.7
98	AD25	10000.0	0.79	0.97	1				3	0.01	0.9	0.11	0.80	0.87	1.15	0.92	1.00	0.07	1.1	1.2	Low	1.1
99	AE25	10000.0	1.2	1.3	1.4				3	0.01	1.3	0.10	0.71	0.54	1.13	0.80	0.62	0.06	1.5	1.6	Low	1.5

Row #	IDs/Names of the Smaller DUs	DU Area (Sq feet)	Replicate field sample concentrations						Number of Replicates	Weight	Arithmetic Mean	SD of Replicates	calc'd SD of Increments	calc'd CV for the DU	Adj Factor	adj'd SD of Increments	adj'd CV for DU	SE of DU	95% UCL			
			Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6											Student's-t	Chebychev	CV of Increments	95% UCL
100	AF25	10000.0	1.2	1.1	1.1				3	0.01	1.1	0.06	0.41	0.36	1.13	0.46	0.41	0.03	1.2	1.3	Low	1.2
101	AG25	10000.0	1	1.1	1.1				3	0.01	1.1	0.06	0.41	0.38	1.13	0.46	0.43	0.03	1.2	1.2	Low	1.2
102	AH24	10000.0	1.2	1.2	1.2				3	0.01	1.2	0.00	0.00	0.00	1.13	0.00	0.00	0.00	1.2	1.2	Low	1.2
103	AI23	10000.0	1.2	1.2	0.97				3	0.01	1.1	0.13	0.94	0.84	1.15	1.08	0.96	0.08	1.3	1.5	Low	1.3
104	AI24	10000.0	1.1	1.2	0.98				3	0.01	1.1	0.11	0.78	0.71	1.14	0.89	0.81	0.06	1.3	1.4	Low	1.3
105	AJ23	10000.0	0.97	1	1				3	0.01	1.0	0.02	0.12	0.12	1.13	0.14	0.14	0.01	1.0	1.0	Low	1.0
106	AK23	10000.0	1.1	1	1.2				3	0.01	1.1	0.10	0.71	0.64	1.14	0.80	0.73	0.06	1.3	1.4	Low	1.3
107	AL23	10000.0	0.99	0.95	1.2				3	0.01	1.0	0.13	0.95	0.91	1.15	1.10	1.05	0.08	1.3	1.4	Low	1.3
108	AL24	10000.0	1.2	1	1.1				3	0.01	1.1	0.10	0.71	0.64	1.14	0.80	0.73	0.06	1.3	1.4	Low	1.3
109	AL25	10000.0	1.2	1.1	1.3				3	0.01	1.2	0.10	0.71	0.59	1.13	0.80	0.67	0.06	1.4	1.5	Low	1.4
110	AM25	10000.0	1.4	1.5	1.4				3	0.01	1.4	0.06	0.41	0.28	1.13	0.46	0.32	0.03	1.5	1.6	Low	1.5
111	AN25	10000.0	1.2	1.2	1				3	0.01	1.1	0.12	0.82	0.72	1.14	0.93	0.82	0.07	1.3	1.4	Low	1.3
112	AO25	10000.0	1.1	0.82	0.82				3	0.01	0.9	0.16	1.14	1.25	1.19	1.36	1.49	0.09	1.2	1.3	Low	1.2
113	AP8	12741.9	1.4	1.3	1.3				3	0.01	1.3	0.06	0.41	0.31	1.13	0.46	0.34	0.03	1.4	1.5	Low	1.4
114	AP9	12741.9	1.7	1.6	1.8				3	0.01	1.7	0.10	0.71	0.42	1.13	0.80	0.47	0.06	1.9	2.0	Low	1.9
115	AP10	12742.0	1.5	1.6	1.5				3	0.01	1.5	0.06	0.41	0.27	1.13	0.46	0.30	0.03	1.6	1.7	Low	1.6
116	AP11	12741.9	1.7	2.1	2				3	0.01	1.9	0.21	1.47	0.76	1.14	1.68	0.87	0.12	2.3	2.5	Low	2.3
117	AP12	12742.0	1.9	2.1	1.8				3	0.01	1.9	0.15	1.08	0.56	1.13	1.22	0.63	0.09	2.2	2.3	Low	2.2
118	AP14	12741.6	1.2	1.2	1.2				3	0.01	1.2	0.00	0.00	0.00	1.13	0.00	0.00	0.00	1.2	1.2	Low	1.2
119	AP15	12742.2	1.4	1.4	1.3				3	0.01	1.4	0.06	0.41	0.30	1.13	0.46	0.34	0.03	1.5	1.5	Low	1.5
120	AP16	12741.9	1.1	1.2	1				3	0.01	1.1	0.10	0.71	0.64	1.14	0.80	0.73	0.06	1.3	1.4	Low	1.3
121	AP17	12741.9	1.2	1.2	1.1				3	0.01	1.2	0.06	0.41	0.35	1.13	0.46	0.39	0.03	1.3	1.3	Low	1.3
122	AP18	12741.9	1	1.3	1.1				3	0.01	1.1	0.15	1.08	0.95	1.16	1.25	1.10	0.09	1.4	1.5	Low	1.4
123	AP19	12741.9	1.1	1.1	1.2				3	0.01	1.1	0.06	0.41	0.36	1.13	0.46	0.41	0.03	1.2	1.3	Low	1.2
124	AP20	12741.9	1.2	1.1	1.1				3	0.01	1.1	0.06	0.41	0.36	1.13	0.46	0.41	0.03	1.2	1.3	Low	1.2
125	AP21	12741.9	0.96	0.98	0.95				3	0.01	1.0	0.02	0.11	0.11	1.13	0.12	0.13	0.01	1.0	1.0	Low	1.0
126	AP22	12742.0	0.93	1	0.96				3	0.01	1.0	0.04	0.25	0.26	1.13	0.28	0.29	0.02	1.0	1.1	Low	1.0
127	AP25	12741.8	1	0.94	0.95				3	0.01	1.0	0.03	0.23	0.24	1.13	0.26	0.27	0.02	1.0	1.0	Low	1.0
128	AQ23	10435.9	0.96	0.92	0.94				3	0.01	0.9	0.02	0.14	0.15	1.13	0.16	0.17	0.01	1.0	1.0	Low	1.0
129	AQ24	9852.5	1	1	1.1				3	0.01	1.0	0.06	0.41	0.40	1.13	0.46	0.45	0.03	1.1	1.2	Low	1.1
130	B8	8381.5	1.3	1.4	1.3				3	0.00	1.3	0.06	0.41	0.31	1.13	0.46	0.34	0.03	1.4	1.5	Low	1.4
131	B20	7901.2	1.2	1.4	1.3				3	0.00	1.3	0.10	0.71	0.54	1.13	0.80	0.62	0.06	1.5	1.6	Low	1.5
132	B21	7425.3	1.6	1.5	1.6				3	0.00	1.6	0.06	0.41	0.26	1.13	0.46	0.29	0.03	1.7	1.7	Low	1.7
133	B22	6933.6	1.6	1.5	1.4				3	0.00	1.5	0.10	0.71	0.47	1.13	0.80	0.53	0.06	1.7	1.8	Low	1.7
134	C8	9158.1	1.4	1.5	1.4				3	0.01	1.4	0.06	0.41	0.28	1.13	0.46	0.32	0.03	1.5	1.6	Low	1.5
135	C22	6929.0	1.1	1.2	1.4				3	0.00	1.2	0.15	1.08	0.88	1.15	1.24	1.01	0.09	1.5	1.6	Low	1.5
136	D8	9410.4	1.9	1.9	1.8				3	0.01	1.9	0.06	0.41	0.22	1.13	0.46	0.25	0.03	2.0	2.0	Low	2.0
137	D22	10000.0	1.2	1.5	1.4				3	0.01	1.4	0.15	1.08	0.79	1.15	1.24	0.90	0.09	1.6	1.8	Low	1.6
138	E22	10000.0	1.8	1.6	1.5				3	0.01	1.6	0.15	1.08	0.66	1.14	1.23	0.75	0.09	1.9	2.0	Low	1.9
139	E23	10000.0	1.2	1.3	1.3				3	0.01	1.3	0.06	0.41	0.32	1.13	0.46	0.36	0.03	1.4	1.4	Low	1.4
140	E24	10000.0	1.5	1.6	1.5				3	0.01	1.5	0.06	0.41	0.27	1.13	0.46	0.30	0.03	1.6	1.7	Low	1.6
141	E25	10000.0	1.1	1.3	1.2				3	0.01	1.2	0.10	0.71	0.59	1.13	0.80	0.67	0.06	1.4	1.5	Low	1.4
142	E26	13604.3	0.95	1	1.1				3	0.01	1.0	0.08	0.54	0.53	1.13	0.61	0.60	0.04	1.1	1.2	Low	1.1
143	F26	5258.3	0.74	0.79	0.85				3	0.00	0.8	0.06	0.39	0.49	1.13	0.44	0.55	0.03	0.9	0.9	Low	0.9
144	G25	8218.3	1.2	1.5	1.3				3	0.00	1.3	0.15	1.08	0.81	1.15	1.24	0.93	0.09	1.6	1.7	Low	1.6
145	G26	9346.7	0.95	1.1	0.97				3	0.01	1.0	0.08	0.58	0.57	1.13	0.65	0.65	0.05	1.1	1.2	Low	1.1
146	H25	10000.0	1.4	1.4	1.4				3	0.01	1.4	0.00	0.00	0.00	1.13	0.00	0.00	0.00	1.4	1.4	Low	1.4
147	I25	7781.1	1.2	1.1	1.2				3	0.00	1.2	0.06	0.41	0.35	1.13	0.46	0.39	0.03	1.3	1.3	Low	1.3
148	J22	10000.0	1.2	1.3	1.3				3	0.01	1.3	0.06	0.41	0.32	1.13	0.46	0.36	0.03	1.4	1.4	Low	1.4
149	J23	10000.4	0.98	0.89	0.86				3	0.01	0.9	0.06	0.44	0.49	1.13	0.50	0.55	0.04	1.0	1.1	Low	1.0
150	J24	7428.9	0.72	1	1				3	0.00	0.9	0.16	1.14	1.26	1.19	1.36	1.50	0.09	1.2	1.3	Med	1.3
151	J25	6743.5	1.9	1.9	1.9				3	0.00	1.9	0.00	0.00	0.00	1.13	0.00	0.00	0.00	1.9	1.9	Low	1.9
152	K22	10000.0	0.98	0.99	1.2				3	0.01	1.1	0.12	0.88	0.83	1.15	1.01	0.95	0.07	1.3	1.4	Low	1.3
153	L22	10000.0	0.78	0.78	0.8				3	0.01	0.8	0.01	0.08	0.10	1.13	0.09	0.12	0.01	0.8	0.8	Low	0.8
154	M22	10000.0	1.4	1.1	0.92				3	0.01	1.1	0.24	1.71	1.50	1.23	2.10	1.85	0.14	1.5	1.8	Med	1.8
155	N22	10000.0	0.8	0.89	0.78				3	0.01	0.8	0.06	0.41	0.50	1.13	0.47	0.57	0.03	0.9	1.0	Low	0.9
156	O22	10000.0	1.5	1.4	1.5				3	0.01	1.5	0.06	0.41	0.28	1.13	0.46	0.31	0.03	1.6	1.6	Low	1.6
157	P22	10000.0	0.62	0.63	0.67				3	0.01	0.6	0.03	0.19	0.29	1.13	0.21	0.33	0.02	0.7	0.7	Low	0.7

Row #	IDs/Names of the Smaller DUs	DU Area (Sq feet)	Replicate field sample concentrations						Number of Replicates	Weight	Arithmetic Mean	SD of Replicates	calc'd SD of Increments	calc'd CV for the DU	Adj Factor	adj'd SD of Increments	adj'd CV for DU	SE of DU	95% UCL			
			Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6											Student's-t	Chebychev	CV of Increments	95% UCL
158	Q22	10000.0	0.58	0.62	0.67				3	0.01	0.6	0.05	0.32	0.51	1.13	0.36	0.58	0.03	0.7	0.7	Low	0.7
159	R22	7999.4	1.4	1.7	1.6				3	0.00	1.6	0.15	1.08	0.69	1.14	1.23	0.79	0.09	1.8	2.0	Low	1.8
160	S22	10000.0	1.2	1.4	1.4				3	0.01	1.3	0.12	0.82	0.61	1.13	0.93	0.69	0.07	1.5	1.6	Low	1.5
161	T22	9920.3	1.4	1.8	1.8				3	0.01	1.7	0.23	1.63	0.98	1.16	1.90	1.14	0.13	2.1	2.2	Low	2.1
162	U22	6762.1	1.5	1.5	1.4				3	0.00	1.5	0.06	0.41	0.28	1.13	0.46	0.31	0.03	1.6	1.6	Low	1.6
163	V22	10000.0	0.97	0.91	1.1				3	0.01	1.0	0.10	0.69	0.69	1.14	0.78	0.79	0.06	1.2	1.2	Low	1.2
164	W22	10000.0	1.1	1.2	1.1				3	0.01	1.1	0.06	0.41	0.36	1.13	0.46	0.41	0.03	1.2	1.3	Low	1.2
165	W23	10000.0	1.1	1.1	1.1				3	0.01	1.1	0.00	0.00	0.00	1.13	0.00	0.00	0.00	1.1	1.1	Low	1.1
166	W24	10000.0	1.5	1.3	0.94	0.99	0.92		5	0.01	1.1	0.26	1.82	1.61	1.13	2.07	1.83	0.12	1.4	1.6	Med	1.6
167	X24	10000.0	1.1	1.1	1.2				3	0.01	1.1	0.06	0.41	0.36	1.13	0.46	0.41	0.03	1.2	1.3	Low	1.2
168	Y24	10000.0	1.2	1.4	1.5				3	0.01	1.4	0.15	1.08	0.79	1.15	1.24	0.90	0.09	1.6	1.8	Low	1.6
169	Z24	10000.0	1.6	1.8	1.8				3	0.01	1.7	0.12	0.82	0.47	1.13	0.92	0.53	0.07	1.9	2.0	Low	1.9
	Sum:	1734193	--	--	--	--	--	--	509	0.99	1.30	0.00	0.00	0.00	NA	0.01	0.00	0.00	1.3	1.3	Low	1.30

df by Welch-Satterthwaite approximation:	5.5

Recommended UCL: **1.30** **mg/kg** >> Student's t 95% UCL

Note: Student's-t or Chebychev 95% UCL may be appropriate.

*Student's t UCL is acceptable if adj'd CV for DU is "Low" (e.g., CV ≤ 1.5). The User should consult the instructions for additional guidance on which 95% UCL is recommended for specific data sets.

Notes

adj'd	= adjusted	df	= degrees of freedom	SD	= arithmetic standard deviation
calc'd	= calculated	DU	= decision unit	SE	= standard error
CV	= coefficient of variation	RSD	= relative standard deviation	95% UCL	= 95% upper confidence limit for arithmetic mean

Calculation of Weighted 95% UCLs for a Combined Decision Unit (DU) from Several Smaller DUs Having Replicate Incremental Samples

Enter information in green highlighted cells. See the "Instructions" tab for detailed instructions.

Project ID:	Fort Wingate Inner Fence
Property/Sample ID:	Inner Fence Area Grids
Date of calculations:	7/6/2024
Calculator completed by:	CMC
Analyte:	Barium
Analyte units:	mg/kg
DU metric units:	Sq feet
Notes:	

Click in green cell below to select from drop-down menu

DU size metric: area, volume, or depth interval: Area

Note: Assumes all replicates have the same number of increments

Number of increments per replicate: 50

Row #	IDs/Names of the Smaller DUs	DU Area (Sq feet)	Replicate field sample concentrations						Number of Replicates	Weight	Arithmetic Mean	SD of Replicates	calc'd SD of Increments	calc'd CV for the DU	Adj Factor	adj'd SD of Increments	adj'd CV for DU	SE of DU	95% UCL			
			Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6											Student's-t	Chebychev	CV of Increments	95% UCL
1	AA32	10000.0	150	160	150				3	0.01	153.3	5.77	40.82	0.27	1.13	45.99	0.30	3.33	163.1	167.9	Low	163.1
2	AB27	10000.0	400	370	380				3	0.01	383.3	15.28	108.01	0.28	1.13	121.68	0.32	8.82	409.1	421.8	Low	409.1
3	AB38	13378.0	320	340	320				3	0.01	326.7	11.55	81.65	0.25	1.13	91.97	0.28	6.67	346.1	355.7	Low	346.1
4	AC34	10000.0	140	150	140				3	0.01	143.3	5.77	40.82	0.28	1.13	45.99	0.32	3.33	153.1	157.9	Low	153.1
5	AD28	10000.0	300	360	340				3	0.01	333.3	30.55	216.02	0.65	1.14	245.51	0.74	17.64	384.8	410.2	Low	384.8
6	AD34	10000.0	250	300	250				3	0.01	266.7	28.87	204.12	0.77	1.14	233.39	0.88	16.67	315.3	339.3	Low	315.3
7	AE27	9999.9	260	280	250				3	0.01	263.3	15.28	108.01	0.41	1.13	121.84	0.46	8.82	289.1	301.8	Low	289.1
8	AE38	13378.0	300	370	330				3	0.01	333.3	35.12	248.33	0.74	1.14	283.60	0.85	20.28	392.5	421.7	Low	392.5
9	AF29	10000.0	220	220	200				3	0.01	213.3	11.55	81.65	0.38	1.13	92.06	0.43	6.67	232.8	242.4	Low	232.8
10	AF30	10000.0	270	280	330				3		293.3	32.15	227.30	0.77	1.14	260.03	0.89	18.56	347.5	374.2	Low	347.5
11	AF32	10000.0	140	140	150				3	0.01	143.3	5.77	40.82	0.28	1.13	45.99	0.32	3.33	153.1	157.9	Low	153.1
12	AF34	10000.0	160	140	130				3	0.01	143.3	15.28	108.01	0.75	1.14	123.41	0.86	8.82	169.1	181.8	Low	169.1
13	AH28	10000.0	120	130	110				3	0.01	120.0	10.00	70.71	0.59	1.13	80.17	0.67	5.77	136.9	145.2	Low	136.9
14	AH39	10617.1	400	390	460				3	0.01	416.7	37.86	267.71	0.64	1.14	304.17	0.73	21.86	480.5	511.9	Low	480.5
15	AI26	10000.0	140	140	120				3	0.01	133.3	11.55	81.65	0.61	1.13	92.65	0.69	6.67	152.8	162.4	Low	152.8
16	AI29	10000.0	270	290	270				3	0.01	276.7	11.55	81.65	0.30	1.13	91.98	0.33	6.67	296.1	305.7	Low	296.1
17	AI31	10000.0	310	300	330				3	0.01	313.3	15.28	108.01	0.34	1.13	121.73	0.39	8.82	339.1	351.8	Low	339.1
18	AJ26	10000.0	360	360	350				3	0.01	356.7	5.77	40.82	0.11	1.13	46.04	0.13	3.33	366.4	371.2	Low	366.4
19	AJ27	10000.0	260	210	220				3	0.01	230.0	26.46	187.08	0.81	1.15	214.52	0.93	15.28	274.6	296.6	Low	274.6
20	AJ31	10000.0	340	300	320				3	0.01	320.0	20.00	141.42	0.44	1.13	159.63	0.50	11.55	353.7	370.3	Low	353.7
21	AJ33	10000.0	220	220	190				3	0.01	210.0	17.32	122.47	0.58	1.13	138.82	0.66	10.00	239.2	253.6	Low	239.2
22	AK28	10000.0	210	210	210				3	0.01	210.0	0.00	0.00	0.00	1.13	0.00	0.00	0.00	210.0	210.0	Low	210.0
23	AK36	10000.0	260	260	270				3	0.01	263.3	5.77	40.82	0.16	1.13	46.01	0.17	3.33	273.1	277.9	Low	273.1
24	AL27	10000.0	360	360	360				3	0.01	360.0	0.00	0.00	0.00	1.13	0.00	0.00	0.00	360.0	360.0	Low	360.0
25	AL34	10000.0	210	200	210				3	0.01	206.7	5.77	40.82	0.20	1.13	46.00	0.22	3.33	216.4	221.2	Low	216.4
26	AL39	7384.7	250	240	240				3	0.00	243.3	5.77	40.82	0.17	1.13	46.01	0.19	3.33	253.1	257.9	Low	253.1
27	AM29	10000.0	280	270	280				3	0.01	276.7	5.77	40.82	0.15	1.13	46.02	0.17	3.33	286.4	291.2	Low	286.4
28	AM33	10000.0	430	460	390				3	0.01	426.7	35.12	248.33	0.58	1.13	281.46	0.66	20.28	485.9	515.0	Low	485.9
29	AN27	10000.0	440	360	420				3	0.01	406.7	41.63	294.39	0.72	1.14	335.82	0.83	24.04	476.9	511.4	Low	476.9
30	AN28	10000.0	370	410	370				3	0.01	383.3	23.09	163.30	0.43	1.13	184.26	0.48	13.33	422.3	441.5	Low	422.3
31	AN38	6980.7	280	260	270				3	0.00	270.0	10.00	70.71	0.26	1.13	79.65	0.30	5.77	286.9	295.2	Low	286.9
32	AO26	10000.0	150	130	130				3	0.01	136.7	11.55	81.65	0.60	1.13	92.60	0.68	6.67	156.1	165.7	Low	156.1
33	AP28	8819.3	530	530	480				3	0.01	513.3	28.87	204.12	0.40	1.13	230.21	0.45	16.67	562.0	586.0	Low	562.0
34	AQ15	13466.3	160	160	160				3	0.01	160.0	0.00	0.00	0.00	1.13	0.00	0.00	0.00	160.0	160.0	Low	160.0
35	AQ22	11017.2	150	160	160				3	0.01	156.7	5.77	40.82	0.26	1.13	45.99	0.29	3.33	166.4	171.2	Low	166.4
36	C27	14788.0	280	290	320				3	0.01	296.7	20.82	147.20	0.50	1.13	166.37	0.56	12.02	331.8	349.1	Low	331.8
37	C35	9243.3	260	240	240				3	0.01	246.7	11.55	81.65	0.33	1.13	92.01	0.37	6.67	266.1	275.7	Low	266.1
38	C37	7935.9	420	530	530				3	0.00	493.3	63.51	449.07	0.91	1.15	518.36	1.05	36.67	600.4	653.2	Low	600.4
39	E27	14436.0	340	350	360				3	0.01	350.0	10.00	70.71	0.20	1.13	79.66	0.23	5.77	366.9	375.2	Low	366.9
40	F32	10000.0	280	260	240				3	0.01	260.0	20.00	141.42	0.54	1.13	160.07	0.62	11.55	293.7	310.3	Low	293.7
41	G30	10000.0	200	180	200				3	0.01	193.3	11.55	81.65	0.42	1.13	92.12	0.48	6.67	212.8	222.4	Low	212.8
42	H35	10000.0	320	280	310				3	0.01	303.3	20.82	147.20	0.49	1.13	166.32	0.55	12.02	338.4	355.7	Low	338.4
43	H39	12972.6	240	300	220				3	0.01	253.3	41.63	294.39	1.16	1.18	347.29	1.37	24.04	323.5	358.1	Low	323.5

Row #	IDs/Names of the Smaller DUs	DU Area (Sq feet)	Replicate field sample concentrations						Number of Replicates	Weight	Arithmetic Mean	SD of Replicates	calc'd SD of Increments	calc'd CV for the DU	Adj Factor	adj'd SD of Increments	adj'd CV for DU	SE of DU	95% UCL			
			Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6											Student's-t	Chebychev	CV of Increments	95% UCL
44	I29	10000.0	130	150	150				3	0.01	143.3	11.55	81.65	0.57	1.13	92.50	0.65	6.67	162.8	172.4	Low	162.8
45	I30	10000.0	130	120	130				3	0.01	126.7	5.77	40.82	0.32	1.13	46.00	0.36	3.33	136.4	141.2	Low	136.4
46	I33	10000.0	180	200	190				3	0.01	190.0	10.00	70.71	0.37	1.13	79.72	0.42	5.77	206.9	215.2	Low	206.9
47	I38	12991.4	210	250	210				3	0.01	223.3	23.09	163.30	0.73	1.14	186.35	0.83	13.33	262.3	281.5	Low	262.3
48	K30	10000.0	180	180	170				3	0.01	176.7	5.77	40.82	0.23	1.13	45.99	0.26	3.33	186.4	191.2	Low	186.4
49	K34	10000.0	170	190	190				3	0.01	183.3	11.55	81.65	0.45	1.13	92.17	0.50	6.67	202.8	212.4	Low	202.8
50	L29	10000.0	120	120	110				3	0.01	116.7	5.77	40.82	0.35	1.13	46.01	0.39	3.33	126.4	131.2	Low	126.4
51	L34	10000.0	150	130	170				3	0.01	150.0	20.00	141.42	0.94	1.16	163.64	1.09	11.55	183.7	200.3	Low	183.7
52	L37	10000.0	250	250	260				3	0.01	253.3	5.77	40.82	0.16	1.13	46.01	0.18	3.33	263.1	267.9	Low	263.1
53	M28	10000.0	200	200	260				3	0.01	220.0	34.64	244.95	1.11	1.17	287.61	1.31	20.00	278.4	307.2	Low	278.4
54	M32	10000.0	100	110	110				3	0.01	106.7	5.77	40.82	0.38	1.13	46.03	0.43	3.33	116.4	121.2	Low	116.4
55	M39	13011.8	310	250	300				3	0.01	286.7	32.15	227.30	0.79	1.15	260.31	0.91	18.56	340.9	367.6	Low	340.9
56	N27	10000.0	420	370	520				3	0.01	436.7	76.38	540.06	1.24	1.19	642.04	1.47	44.10	565.4	628.9	Low	565.4
57	N28	10000.0	200	210	200				3	0.01	203.3	5.77	40.82	0.20	1.13	45.99	0.23	3.33	213.1	217.9	Low	213.1
58	N37	10000.0	200	200	210				3	0.01	203.3	5.77	40.82	0.20	1.13	45.99	0.23	3.33	213.1	217.9	Low	213.1
59	O27	10000.0	430	320	400				3	0.01	383.3	56.86	402.08	1.05	1.17	469.33	1.22	32.83	479.2	526.4	Low	479.2
60	O32	10000.0	130	120	120				3	0.01	123.3	5.77	40.82	0.33	1.13	46.00	0.37	3.33	133.1	137.9	Low	133.1
61	O37	10000.0	200	200	200				3	0.01	200.0	0.00	0.00	0.00	1.13	0.00	0.00	0.00	200.0	200.0	Low	200.0
62	P32	10000.0	120	110	80				3	0.01	103.3	20.82	147.20	1.42	1.21	178.83	1.73	12.02	138.4	155.7	Med	155.7
63	P33	10000.0	110	110	120				3	0.01	113.3	5.77	40.82	0.36	1.13	46.02	0.41	3.33	123.1	127.9	Low	123.1
64	Q26	10000.0	430	450	400				3	0.01	426.7	25.17	177.95	0.42	1.13	200.76	0.47	14.53	469.1	490.0	Low	469.1
65	Q29	10000.0	130	110	140				3	0.01	126.7	15.28	108.01	0.85	1.15	124.17	0.98	8.82	152.4	165.1	Low	152.4
66	Q38	13187.6	130	130	120				3	0.01	126.7	5.77	40.82	0.32	1.13	46.00	0.36	3.33	136.4	141.2	Low	136.4
67	Q39	13187.6	190	210	200				3	0.01	200.0	10.00	70.71	0.35	1.13	79.70	0.40	5.77	216.9	225.2	Low	216.9
68	R24	10000.0	260	280	280				3	0.01	273.3	11.55	81.65	0.30	1.13	91.99	0.34	6.67	292.8	302.4	Low	292.8
69	R32	10000.0	160	170	150				3	0.01	160.0	10.00	70.71	0.44	1.13	79.81	0.50	5.77	176.9	185.2	Low	176.9
70	S26	10000.0	270	270	280				3	0.01	273.3	5.77	40.82	0.15	1.13	46.02	0.17	3.33	283.1	287.9	Low	283.1
71	S29	10000.0	220	230	250				3	0.01	233.3	15.28	108.01	0.46	1.13	121.98	0.52	8.82	259.1	271.8	Low	259.1
72	S36	10000.0	160	170	160				3	0.01	163.3	5.77	40.82	0.25	1.13	45.99	0.28	3.33	173.1	177.9	Low	173.1
73	T23	10000.0	270	250	250				3	0.01	256.7	11.55	81.65	0.32	1.13	92.00	0.36	6.67	276.1	285.7	Low	276.1
74	T28	10000.0	340	300	320				3	0.01	320.0	20.00	141.42	0.44	1.13	159.63	0.50	11.55	353.7	370.3	Low	353.7
75	T32	10000.0	170	160	150				3	0.01	160.0	10.00	70.71	0.44	1.13	79.81	0.50	5.77	176.9	185.2	Low	176.9
76	T39	13380.2	170	180	160				3	0.01	170.0	10.00	70.71	0.42	1.13	79.77	0.47	5.77	186.9	195.2	Low	186.9
77	U28	10000.0	670	480	470				3	0.01	540.0	112.69	796.87	1.48	1.22	974.41	1.80	65.06	730.0	823.6	Med	823.6
78	U32	10000.0	150	160	140				3	0.01	150.0	10.00	70.71	0.47	1.13	79.87	0.53	5.77	166.9	175.2	Low	166.9
79	U33	10000.0	160	210	170				3	0.01	180.0	26.46	187.08	1.04	1.17	218.19	1.21	15.28	224.6	246.6	Low	224.6
80	U35	10000.0	180	180	170				3	0.01	176.7	5.77	40.82	0.23	1.13	45.99	0.26	3.33	186.4	191.2	Low	186.4
81	U37	10000.0	180	190	190				3	0.01	186.7	5.77	40.82	0.22	1.13	45.99	0.25	3.33	196.4	201.2	Low	196.4
82	V30	10000.0	210	220	230				3	0.01	220.0	10.00	70.71	0.32	1.13	79.67	0.36	5.77	236.9	245.2	Low	236.9
83	V33	10000.0	190	200	180				3	0.01	190.0	10.00	70.71	0.37	1.13	79.72	0.42	5.77	206.9	215.2	Low	206.9
84	V36	10000.0	180	200	190				3	0.01	190.0	10.00	70.71	0.37	1.13	79.72	0.42	5.77	206.9	215.2	Low	206.9
85	W26	10000.0	420	360	360				3	0.01	380.0	34.64	244.95	0.64	1.14	278.34	0.73	20.00	438.4	467.2	Low	438.4
86	W28	10000.0	620	600	790				3	0.01	670.0	104.40	738.24	1.10	1.17	865.87	1.29	60.28	846.0	932.7	Low	846.0
87	W31	10000.0	150	150	160				3	0.01	153.3	5.77	40.82	0.27	1.13	45.99	0.30	3.33	163.1	167.9	Low	163.1
88	W34	10000.0	250	270	240				3	0.01	253.3	15.28	108.01	0.43	1.13	121.88	0.48	8.82	279.1	291.8	Low	279.1
89	W39	13397.6	410	320	350				3	0.01	360.0	45.83	324.04	0.90	1.15	373.75	1.04	26.46	437.3	475.3	Low	437.3
90	X25	10000.0	430	390	420				3	0.01	413.3	20.82	147.20	0.36	1.13	165.91	0.40	12.02	448.4	465.7	Low	448.4
91	X33	10000.0	200	240	240				3	0.01	226.7	23.09	163.30	0.72	1.14	186.25	0.82	13.33	265.6	284.8	Low	265.6
92	X36	10000.0	170	170	180				3	0.01	173.3	5.77	40.82	0.24	1.13	45.99	0.27	3.33	183.1	187.9	Low	183.1
93	Z29	10000.0	560	580	610				3	0.01	583.3	25.17	177.95	0.31	1.13	200.48	0.34	14.53	625.8	646.7	Low	625.8
94	AA24	10000.0	160	170	170				3	0.01	166.7	5.77	40.82	0.24	1.13	45.99	0.28	3.33	176.4	181.2	Low	176.4
95	AB24	10000.0	170	180	170				3	0.01	173.3	5.77	40.82	0.24	1.13	45.99	0.27	3.33	183.1	187.9	Low	183.1
96	AB25	10000.0	250	330	290				3	0.01	290.0	40.00	282.84	0.98	1.16	328.12	1.13	23.09	357.4	390.7	Low	357.4
97	AC25	10000.0	270	260	250				3	0.01	260.0	10.00	70.71	0.27	1.13	79.65	0.31	5.77	276.9	285.2	Low	276.9
98	AD25	10000.0	350	360	350				3	0.01	353.3	5.77	40.82	0.12	1.13	46.04	0.13	3.33	363.1	367.9	Low	363.1
99	AE25	10000.0	490	520	470				3	0.01	493.3	25.17	177.95	0.36	1.13	200.59	0.41	14.53	535.8	556.7	Low	535.8
100	AF25	10000.0	230	201	220				3	0.01	217.0	14.73	104.16	0.48	1.13	117.68	0.54	8.50	241.8	254.1	Low	241.8

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			Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6											Student's-t	Chebychev	CV of Increments	95% UCL
101	AG25	10000.0	200	210	210				3	0.01	206.7	5.77	40.82	0.20	1.13	46.00	0.22	3.33	216.4	221.2	Low	216.4
102	AH24	10000.0	180	180	170				3	0.01	176.7	5.77	40.82	0.23	1.13	45.99	0.26	3.33	186.4	191.2	Low	186.4
103	AI23	10000.0	150	140	130				3	0.01	140.0	10.00	70.71	0.51	1.13	79.94	0.57	5.77	156.9	165.2	Low	156.9
104	AI24	10000.0	140	140	130				3	0.01	136.7	5.77	40.82	0.30	1.13	45.99	0.34	3.33	146.4	151.2	Low	146.4
105	AJ23	10000.0	130	140	120				3	0.01	130.0	10.00	70.71	0.54	1.13	80.04	0.62	5.77	146.9	155.2	Low	146.9
106	AK23	10000.0	190	180	210				3	0.01	193.3	15.28	108.01	0.56	1.13	122.32	0.63	8.82	219.1	231.8	Low	219.1
107	AL23	10000.0	120	110	140				3	0.01	123.3	15.28	108.01	0.88	1.15	124.37	1.01	8.82	149.1	161.8	Low	149.1
108	AL24	10000.0	120	130	120				3	0.01	123.3	5.77	40.82	0.33	1.13	46.00	0.37	3.33	133.1	137.9	Low	133.1
109	AL25	10000.0	130	140	140				3	0.01	136.7	5.77	40.82	0.30	1.13	45.99	0.34	3.33	146.4	151.2	Low	146.4
110	AM25	10000.0	140	140	130				3	0.01	136.7	5.77	40.82	0.30	1.13	45.99	0.34	3.33	146.4	151.2	Low	146.4
111	AN25	10000.0	120	120	110				3	0.01	116.7	5.77	40.82	0.35	1.13	46.01	0.39	3.33	126.4	131.2	Low	126.4
112	AO25	10000.0	140	110	110				3	0.01	120.0	17.32	122.47	1.02	1.16	142.61	1.19	10.00	149.2	163.6	Low	149.2
113	AP8	12741.9	120	120	120				3	0.01	120.0	0.00	0.00	0.00	1.13	0.00	0.00	0.00	120.0	120.0	Low	120.0
114	AP9	12741.9	280	230	260				3	0.01	256.7	25.17	177.95	0.69	1.14	202.67	0.79	14.53	299.1	320.0	Low	299.1
115	AP10	12742.0	230	250	250				3	0.01	243.3	11.55	81.65	0.34	1.13	92.01	0.38	6.67	262.8	272.4	Low	262.8
116	AP11	12741.9	260	320	270				3	0.01	283.3	32.15	227.30	0.80	1.15	260.46	0.92	18.56	337.5	364.2	Low	337.5
117	AP12	12742.0	230	250	230				3	0.01	236.7	11.55	81.65	0.34	1.13	92.02	0.39	6.67	256.1	265.7	Low	256.1
118	AP14	12741.6	210	210	210				3	0.01	210.0	0.00	0.00	0.00	1.13	0.00	0.00	0.00	210.0	210.0	Low	210.0
119	AP15	12742.2	190	200	200				3	0.01	196.7	5.77	40.82	0.21	1.13	45.99	0.23	3.33	206.4	211.2	Low	206.4
120	AP16	12741.9	210	210	210				3	0.01	210.0	0.00	0.00	0.00	1.13	0.00	0.00	0.00	210.0	210.0	Low	210.0
121	AP17	12741.9	180	220	230				3	0.01	210.0	26.46	187.08	0.89	1.15	215.64	1.03	15.28	254.6	276.6	Low	254.6
122	AP18	12741.9	180	210	200				3	0.01	196.7	15.28	108.01	0.55	1.13	122.28	0.62	8.82	222.4	235.1	Low	222.4
123	AP19	12741.9	170	170	170				3	0.01	170.0	0.00	0.00	0.00	1.13	0.00	0.00	0.00	170.0	170.0	Low	170.0
124	AP20	12741.9	170	170	170				3	0.01	170.0	0.00	0.00	0.00	1.13	0.00	0.00	0.00	170.0	170.0	Low	170.0
125	AP21	12741.9	170	190	190				3	0.01	183.3	11.55	81.65	0.45	1.13	92.17	0.50	6.67	202.8	212.4	Low	202.8
126	AP22	12742.0	170	200	170				3	0.01	180.0	17.32	122.47	0.68	1.14	139.40	0.77	10.00	209.2	223.6	Low	209.2
127	AP25	12741.8	110	110	110				3	0.01	110.0	0.00	0.00	0.00	1.13	0.00	0.00	0.00	110.0	110.0	Low	110.0
128	AQ23	10435.9	170	170	190				3	0.01	176.7	11.55	81.65	0.46	1.13	92.20	0.52	6.67	196.1	205.7	Low	196.1
129	AQ24	9852.5	170	190	190				3	0.01	183.3	11.55	81.65	0.45	1.13	92.17	0.50	6.67	202.8	212.4	Low	202.8
130	B8	8381.5	140	130	140				3	0.00	136.7	5.77	40.82	0.30	1.13	45.99	0.34	3.33	146.4	151.2	Low	146.4
131	B20	7901.2	310	310	300				3	0.00	306.7	5.77	40.82	0.13	1.13	46.03	0.15	3.33	316.4	321.2	Low	316.4
132	B21	7425.3	400	400	360				3	0.00	386.7	23.09	163.30	0.42	1.13	184.25	0.48	13.33	425.6	444.8	Low	425.6
133	B22	6933.6	260	250	240				3	0.00	250.0	10.00	70.71	0.28	1.13	79.66	0.32	5.77	266.9	275.2	Low	266.9
134	C8	9158.1	130	140	130				3	0.01	133.3	5.77	40.82	0.31	1.13	45.99	0.34	3.33	143.1	147.9	Low	143.1
135	C22	6929.0	210	210	230				3	0.00	216.7	11.55	81.65	0.38	1.13	92.05	0.42	6.67	236.1	245.7	Low	236.1
136	D8	9410.4	100	94	100				3	0.01	98.0	3.46	24.49	0.25	1.13	27.59	0.28	2.00	103.8	106.7	Low	103.8
137	D22	10000.0	190	200	210				3	0.01	200.0	10.00	70.71	0.35	1.13	79.70	0.40	5.77	216.9	225.2	Low	216.9
138	E22	10000.0	240	220	220				3	0.01	226.7	11.55	81.65	0.36	1.13	92.03	0.41	6.67	246.1	255.7	Low	246.1
139	E23	10000.0	160	200	190				3	0.01	183.3	20.82	147.20	0.80	1.15	168.68	0.92	12.02	218.4	235.7	Low	218.4
140	E24	10000.0	160	170	170				3	0.01	166.7	5.77	40.82	0.24	1.13	45.99	0.28	3.33	176.4	181.2	Low	176.4
141	E25	10000.0	150	170	160				3	0.01	160.0	10.00	70.71	0.44	1.13	79.81	0.50	5.77	176.9	185.2	Low	176.9
142	E26	13604.3	350	390	400				3	0.01	380.0	26.46	187.08	0.49	1.13	211.43	0.56	15.28	424.6	446.6	Low	424.6
143	F26	5258.3	220	230	260				3	0.00	236.7	20.82	147.20	0.62	1.14	167.10	0.71	12.02	271.8	289.1	Low	271.8
144	G25	8218.3	330	360	330				3	0.00	340.0	17.32	122.47	0.36	1.13	138.05	0.41	10.00	369.2	383.6	Low	369.2
145	G26	9346.7	290	340	330				3	0.01	320.0	26.46	187.08	0.58	1.13	212.06	0.66	15.28	364.6	386.6	Low	364.6
146	H25	10000.0	350	380	370				3	0.01	366.7	15.28	108.01	0.29	1.13	121.68	0.33	8.82	392.4	405.1	Low	392.4
147	I25	7781.1	320	300	350				3	0.00	323.3	25.17	177.95	0.55	1.13	201.47	0.62	14.53	365.8	386.7	Low	365.8
148	J22	10000.0	320	310	320				3	0.01	316.7	5.77	40.82	0.13	1.13	46.03	0.15	3.33	326.4	331.2	Low	326.4
149	J23	10000.4	300	290	230				3	0.01	273.3	37.86	267.71	0.98	1.16	310.66	1.14	21.86	337.2	368.6	Low	337.2
150	J24	7428.9	220	310	310				3	0.00	280.0	51.96	367.42	1.31	1.20	440.45	1.57	30.00	367.6	410.8	Med	410.8
151	J25	6743.5	350	320	310				3	0.00	326.7	20.82	147.20	0.45	1.13	166.18	0.51	12.02	361.8	379.1	Low	361.8
152	K22	10000.0	310	260	740				3	0.01	436.7	263.88	1865.92	4.27	2.17	4046.44	9.27	152.35	881.5	1100.8	High	1100.8
153	L22	10000.0	280	290	330				3	0.01	300.0	26.46	187.08	0.62	1.14	212.39	0.71	15.28	344.6	366.6	Low	344.6
154	M22	10000.0	360	340	330				3	0.01	343.3	15.28	108.01	0.31	1.13	121.70	0.35	8.82	369.1	381.8	Low	369.1
155	N22	10000.0	350	480	480				3	0.01	436.7	75.06	530.72	1.22	1.19	629.51	1.44	43.33	563.2	625.6	Low	563.2
156	O22	10000.0	290	310	290				3	0.01	296.7	11.55	81.65	0.28	1.13	91.98	0.31	6.67	316.1	325.7	Low	316.1

Row #	IDs/Names of the Smaller DUs	DU Area (Sq feet)	Replicate field sample concentrations						Number of Replicates	Weight	Arithmetic Mean	SD of Replicates	calc'd SD of Increments	calc'd CV for the DU	Adj Factor	adj'd SD of Increments	adj'd CV for DU	SE of DU	95% UCL			
			Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6											Student's-t	Chebychev	CV of Increments	95% UCL
157	P22	10000.0	210	250	260				3	0.01	240.0	26.46	187.08	0.78	1.14	214.08	0.89	15.28	284.6	306.6	Low	284.6
158	Q22	10000.0	550	510	490				3	0.01	516.7	30.55	216.02	0.42	1.13	243.72	0.47	17.64	568.2	593.6	Low	568.2
159	R22	7999.4	320	360	340				3	0.00	340.0	20.00	141.42	0.42	1.13	159.55	0.47	11.55	373.7	390.3	Low	373.7
160	S22	10000.0	200	210	250				3	0.01	220.0	26.46	187.08	0.85	1.15	215.04	0.98	15.28	264.6	286.6	Low	264.6
161	T22	9920.3	220	260	290				3	0.01	256.7	35.12	248.33	0.97	1.16	287.90	1.12	20.28	315.9	345.0	Low	315.9
162	U22	6762.1	250	230	210				3	0.00	230.0	20.00	141.42	0.61	1.13	160.50	0.70	11.55	263.7	280.3	Low	263.7
163	V22	10000.0	350	340	410				3	0.01	366.7	37.86	267.71	0.73	1.14	305.48	0.83	21.86	430.5	461.9	Low	430.5
164	W22	10000.0	470	430	440				3	0.01	446.7	20.82	147.20	0.33	1.13	165.86	0.37	12.02	481.8	499.1	Low	481.8
165	W23	10000.0	430	400	420				3	0.01	416.7	15.28	108.01	0.26	1.13	121.67	0.29	8.82	442.4	455.1	Low	442.4
166	W24	10000.0	300	260	360	390	390		5	0.01	340.0	57.88	409.27	1.20	1.09	446.98	1.31	25.88	395.2	452.8	Low	395.2
167	X24	10000.0	530	450	540				3	0.01	506.7	49.33	348.81	0.69	1.14	397.17	0.78	28.48	589.8	630.8	Low	589.8
168	Y24	10000.0	820	610	650				3	0.01	693.3	111.50	788.46	1.14	1.18	927.88	1.34	64.38	881.3	973.9	Low	881.3
169	Z24	10000.0	330	340	410				3	0.01	360.0	43.59	308.22	0.86	1.15	354.42	0.98	25.17	433.5	469.7	Low	433.5
	Sum:	1734193	--	--	--	--	--	--	509	0.99	251.4	0.13	0.92	0.00	NA	1.03	0.00	0.07	251.6	251.8	Low	251.6

df by Welch-Satterthwaite approximation: **4.5**

Recommended UCL: **252** **mg/kg** >> Student's t 95% UCL

Note: Student's-t or Chebychev 95% UCL may be appropriate.

*Student's t UCL is acceptable if adj'd CV for DU is "Low" (e.g., CV ≤ 1.5). The User should consult the instructions for additional guidance on which 95% UCL is recommended for specific data sets.

Notes

adj'd	= adjusted	df	= degrees of freedom	SD	= arithmetic standard deviation
calc'd	= calculated	DU	= decision unit	SE	= standard error
CV	= coefficient of variation	RSD	= relative standard deviation	95% UCL	= 95% upper confidence limit for arithmetic mean

Calculation of Weighted 95% UCLs for a Combined Decision Unit (DU) from Several Smaller DUs Having Replicate Incremental Samples

Enter information in green highlighted cells. See the "Instructions" tab for detailed instructions.

Project ID:	Fort Wingate Inner Fence
Property/Sample ID:	Inner Fence Area Grids
Date of calculations:	7/6/2024
Calculator completed by:	CMC
Analyte:	Beryllium
Analyte units:	mg/kg
DU metric units:	Sq feet
Notes:	

Click in green cell below to select from drop-down menu

DU size metric: area, volume, or depth interval: Area

Note: Assumes all replicates have the same number of increments

Number of increments per replicate: 50

Row #	IDs/Names of the Smaller DUs	DU Area (Sq feet)	Replicate field sample concentrations						Number of Replicates	Weight	Arithmetic Mean	SD of Replicates	calc'd SD of Increments	calc'd CV for the DU	Adj Factor	adj'd SD of Increments	adj'd CV for DU	SE of DU	95% UCL			
			Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6											Student's-t	Chebychev	CV of Increments	95% UCL
1	AA32	10000.0	0.52	0.64	0.59				3	0.01	0.6	0.06	0.43	0.73	1.14	0.49	0.83	0.03	0.7	0.7	Low	0.7
2	AB27	10000.0	0.81	0.8	0.82				3	0.01	0.8	0.01	0.07	0.09	1.13	0.08	0.10	0.01	0.8	0.8	Low	0.8
3	AB38	13378.0	0.86	0.94	0.91				3	0.01	0.9	0.04	0.29	0.32	1.13	0.32	0.36	0.02	1.0	1.0	Low	1.0
4	AC34	10000.0	0.55	0.51	0.53				3	0.01	0.5	0.02	0.14	0.27	1.13	0.16	0.30	0.01	0.6	0.6	Low	0.6
5	AD28	10000.0	0.5	0.36	0.54				3	0.01	0.5	0.09	0.67	1.43	1.22	0.81	1.74	0.05	0.6	0.7	Med	0.7
6	AD34	10000.0	0.54	0.73	0.56				3	0.01	0.6	0.10	0.74	1.21	1.19	0.88	1.43	0.06	0.8	0.9	Low	0.8
7	AE27	9999.9	0.42	0.48	0.45				3	0.01	0.5	0.03	0.21	0.47	1.13	0.24	0.53	0.02	0.5	0.5	Low	0.5
8	AE38	13378.0	0.97	1.1	0.93				3	0.01	1.0	0.09	0.63	0.63	1.14	0.71	0.71	0.05	1.1	1.2	Low	1.1
9	AF29	10000.0	0.47	0.44	0.42				3	0.01	0.4	0.03	0.18	0.40	1.13	0.20	0.45	0.01	0.5	0.5	Low	0.5
10	AF30	10000.0	0.43	0.51	0.43				3		0.5	0.05	0.33	0.72	1.14	0.37	0.82	0.03	0.5	0.6	Low	0.5
11	AF32	10000.0	0.52	0.6	0.54				3	0.01	0.6	0.04	0.29	0.53	1.13	0.33	0.60	0.02	0.6	0.7	Low	0.6
12	AF34	10000.0	0.66	0.55	0.5				3	0.01	0.6	0.08	0.58	1.02	1.16	0.67	1.18	0.05	0.7	0.8	Low	0.7
13	AH28	10000.0	0.35	0.36	0.32				3	0.01	0.3	0.02	0.15	0.43	1.13	0.17	0.48	0.01	0.4	0.4	Low	0.4
14	AH39	10617.1	1.4	1.1	1.2				3	0.01	1.2	0.15	1.08	0.88	1.15	1.24	1.01	0.09	1.5	1.6	Low	1.5
15	AI26	10000.0	0.36	0.33	0.33				3	0.01	0.3	0.02	0.12	0.36	1.13	0.14	0.41	0.01	0.4	0.4	Low	0.4
16	AI29	10000.0	0.66	1	1				3	0.01	0.9	0.20	1.39	1.57	1.24	1.72	1.94	0.11	1.2	1.4	Med	1.4
17	AI31	10000.0	0.74	0.83	0.89				3	0.01	0.8	0.08	0.53	0.65	1.14	0.61	0.74	0.04	0.9	1.0	Low	0.9
18	AJ26	10000.0	1.1	1.1	0.95				3	0.01	1.1	0.09	0.61	0.58	1.13	0.69	0.66	0.05	1.2	1.3	Low	1.2
19	AJ27	10000.0	0.66	0.51	0.55				3	0.01	0.6	0.08	0.55	0.96	1.16	0.64	1.11	0.04	0.7	0.8	Low	0.7
20	AJ31	10000.0	0.74	0.72	0.78				3	0.01	0.7	0.03	0.22	0.29	1.13	0.24	0.33	0.02	0.8	0.8	Low	0.8
21	AJ33	10000.0	0.55	0.53	0.49				3	0.01	0.5	0.03	0.22	0.41	1.13	0.24	0.47	0.02	0.6	0.6	Low	0.6
22	AK28	10000.0	0.51	0.52	0.52				3	0.01	0.5	0.01	0.04	0.08	1.13	0.05	0.09	0.00	0.5	0.5	Low	0.5
23	AK36	10000.0	0.71	0.67	0.74				3	0.01	0.7	0.04	0.25	0.35	1.13	0.28	0.40	0.02	0.8	0.8	Low	0.8
24	AL27	10000.0	0.69	0.75	0.71				3	0.01	0.7	0.03	0.22	0.30	1.13	0.24	0.34	0.02	0.8	0.8	Low	0.8
25	AL34	10000.0	0.55	0.55	0.63				3	0.01	0.6	0.05	0.33	0.57	1.13	0.37	0.64	0.03	0.7	0.7	Low	0.7
26	AL39	7384.7	0.64	0.69	0.69				3	0.00	0.7	0.03	0.20	0.30	1.13	0.23	0.34	0.02	0.7	0.7	Low	0.7
27	AM29	10000.0	0.96	0.95	1.1				3	0.01	1.0	0.08	0.59	0.59	1.13	0.67	0.67	0.05	1.1	1.2	Low	1.1
28	AM33	10000.0	0.65	0.67	0.64				3	0.01	0.7	0.02	0.11	0.17	1.13	0.12	0.19	0.01	0.7	0.7	Low	0.7
29	AN27	10000.0	1.3	1.3	1.4				3	0.01	1.3	0.06	0.41	0.31	1.13	0.46	0.34	0.03	1.4	1.5	Low	1.4
30	AN28	10000.0	0.94	1.1	0.92				3	0.01	1.0	0.10	0.70	0.71	1.14	0.80	0.81	0.06	1.2	1.2	Low	1.2
31	AN38	6980.7	0.64	0.63	0.63				3	0.00	0.6	0.01	0.04	0.06	1.13	0.05	0.07	0.00	0.6	0.6	Low	0.6
32	AO26	10000.0	0.53	0.47	0.48				3	0.01	0.5	0.03	0.23	0.46	1.13	0.26	0.52	0.02	0.5	0.6	Low	0.5
33	AP28	8819.3	1.1	1.2	0.99				3	0.01	1.1	0.11	0.74	0.68	1.14	0.85	0.77	0.06	1.3	1.4	Low	1.3
34	AQ15	13466.3	0.72	0.84	0.67				3	0.01	0.7	0.09	0.62	0.83	1.15	0.71	0.95	0.05	0.9	1.0	Low	0.9
35	AQ22	11017.2	0.33	0.39	0.4				3	0.01	0.4	0.04	0.27	0.72	1.14	0.31	0.82	0.02	0.4	0.5	Low	0.4
36	C27	14788.0	0.61	0.73	0.78				3	0.01	0.7	0.09	0.62	0.87	1.15	0.71	1.01	0.05	0.9	0.9	Low	0.9
37	C35	9243.3	0.69	0.71	0.71				3	0.01	0.7	0.01	0.08	0.12	1.13	0.09	0.13	0.01	0.7	0.7	Low	0.7
38	C37	7935.9	0.71	0.8	0.79				3	0.00	0.8	0.05	0.35	0.45	1.13	0.39	0.51	0.03	0.8	0.9	Low	0.8
39	E27	14436.0	0.58	0.67	0.71				3	0.01	0.7	0.07	0.47	0.72	1.14	0.54	0.82	0.04	0.8	0.8	Low	0.8
40	F32	10000.0	0.9	0.86	0.77				3	0.01	0.8	0.07	0.47	0.56	1.13	0.53	0.63	0.04	1.0	1.0	Low	1.0

Row #	IDs/Names of the Smaller DUs	DU Area (Sq feet)	Replicate field sample concentrations						Number of Replicates	Weight	Arithmetic Mean	SD of Replicates	calc'd SD of Increments	calc'd CV for the DU	Adj Factor	adj'd SD of Increments	adj'd CV for DU	SE of DU	95% UCL			
			Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6											Student's-t	Chebychev	CV of Increments	95% UCL
41	G30	10000.0	0.7	0.56	0.71				3	0.01	0.7	0.08	0.59	0.90	1.15	0.68	1.04	0.05	0.8	0.9	Low	0.8
42	H35	10000.0	1.1	1	1.1				3	0.01	1.1	0.06	0.41	0.38	1.13	0.46	0.43	0.03	1.2	1.2	Low	1.2
43	H39	12972.6	0.46	0.57	0.38				3	0.01	0.5	0.10	0.67	1.44	1.22	0.82	1.75	0.06	0.6	0.7	Med	0.7
44	I29	10000.0	0.34	0.37	0.38				3	0.01	0.4	0.02	0.15	0.41	1.13	0.17	0.46	0.01	0.4	0.4	Low	0.4
45	I30	10000.0	0.37	0.36	0.43				3	0.01	0.4	0.04	0.27	0.69	1.14	0.30	0.79	0.02	0.5	0.5	Low	0.5
46	I33	10000.0	0.59	0.67	0.54				3	0.01	0.6	0.07	0.46	0.77	1.14	0.53	0.88	0.04	0.7	0.8	Low	0.7
47	I38	12991.4	0.62	0.69	0.61				3	0.01	0.6	0.04	0.31	0.48	1.13	0.35	0.54	0.03	0.7	0.7	Low	0.7
48	K30	10000.0	0.63	0.71	0.62				3	0.01	0.7	0.05	0.35	0.53	1.13	0.39	0.60	0.03	0.7	0.8	Low	0.7
49	K34	10000.0	0.55	0.63	0.61				3	0.01	0.6	0.04	0.29	0.49	1.13	0.33	0.56	0.02	0.7	0.7	Low	0.7
50	L29	10000.0	0.47	0.55	0.45				3	0.01	0.5	0.05	0.37	0.76	1.14	0.43	0.87	0.03	0.6	0.6	Low	0.6
51	L34	10000.0	0.48	0.43	0.62				3	0.01	0.5	0.10	0.70	1.37	1.21	0.84	1.65	0.06	0.7	0.8	Med	0.8
52	L37	10000.0	0.73	0.78	0.81				3	0.01	0.8	0.04	0.29	0.37	1.13	0.32	0.42	0.02	0.8	0.9	Low	0.8
53	M28	10000.0	0.49	0.5	0.56				3	0.01	0.5	0.04	0.27	0.52	1.13	0.30	0.59	0.02	0.6	0.6	Low	0.6
54	M32	10000.0	0.42	0.43	0.44				3	0.01	0.4	0.01	0.07	0.16	1.13	0.08	0.19	0.01	0.4	0.5	Low	0.4
55	M39	13011.8	0.89	0.65	0.84				3	0.01	0.8	0.13	0.90	1.13	1.18	1.05	1.33	0.07	1.0	1.1	Low	1.0
56	N27	10000.0	0.81	0.79	0.74				3	0.01	0.8	0.04	0.25	0.33	1.13	0.29	0.37	0.02	0.8	0.9	Low	0.8
57	N28	10000.0	0.43	0.65	0.43				3	0.01	0.5	0.13	0.90	1.78	1.28	1.15	2.28	0.07	0.7	0.8	Med	0.8
58	N37	10000.0	0.63	0.64	0.73				3	0.01	0.7	0.06	0.39	0.58	1.13	0.44	0.66	0.03	0.8	0.8	Low	0.8
59	O27	10000.0	1	0.7	0.79				3	0.01	0.8	0.15	1.09	1.31	1.20	1.30	1.57	0.09	1.1	1.2	Med	1.2
60	O32	10000.0	0.38	0.37	0.32				3	0.01	0.4	0.03	0.23	0.64	1.14	0.26	0.72	0.02	0.4	0.4	Low	0.4
61	O37	10000.0	0.63	0.65	0.67				3	0.01	0.7	0.02	0.14	0.22	1.13	0.16	0.25	0.01	0.7	0.7	Low	0.7
62	P32	10000.0	0.32	0.28	0.32				3	0.01	0.3	0.02	0.16	0.53	1.13	0.18	0.60	0.01	0.3	0.4	Low	0.3
63	P33	10000.0	0.35	0.38	0.37				3	0.01	0.4	0.02	0.11	0.29	1.13	0.12	0.33	0.01	0.4	0.4	Low	0.4
64	Q26	10000.0	1.1	1	1				3	0.01	1.0	0.06	0.41	0.40	1.13	0.46	0.45	0.03	1.1	1.2	Low	1.1
65	Q29	10000.0	0.46	0.32	0.36				3	0.01	0.4	0.07	0.51	1.34	1.20	0.61	1.61	0.04	0.5	0.6	Med	0.6
66	Q38	13187.6	0.55	0.48	0.46				3	0.01	0.5	0.05	0.33	0.67	1.14	0.38	0.77	0.03	0.6	0.6	Low	0.6
67	Q39	13187.6	0.45	0.58	0.59				3	0.01	0.5	0.08	0.55	1.02	1.16	0.64	1.19	0.05	0.7	0.7	Low	0.7
68	R24	10000.0	0.7	0.74	0.78				3	0.01	0.7	0.04	0.28	0.38	1.13	0.32	0.43	0.02	0.8	0.8	Low	0.8
69	R32	10000.0	0.47	0.5	0.46				3	0.01	0.5	0.02	0.15	0.31	1.13	0.17	0.35	0.01	0.5	0.5	Low	0.5
70	S26	10000.0	0.82	0.74	0.83				3	0.01	0.8	0.05	0.35	0.44	1.13	0.39	0.49	0.03	0.9	0.9	Low	0.9
71	S29	10000.0	0.56	0.52	0.54				3	0.01	0.5	0.02	0.14	0.26	1.13	0.16	0.30	0.01	0.6	0.6	Low	0.6
72	S36	10000.0	0.54	0.63	0.56				3	0.01	0.6	0.05	0.33	0.58	1.13	0.38	0.66	0.03	0.7	0.7	Low	0.7
73	T23	10000.0	0.67	0.69	0.55				3	0.01	0.6	0.08	0.54	0.84	1.15	0.62	0.97	0.04	0.8	0.8	Low	0.8
74	T28	10000.0	0.88	0.8	0.91				3	0.01	0.9	0.06	0.40	0.47	1.13	0.45	0.53	0.03	1.0	1.0	Low	1.0
75	T32	10000.0	0.44	0.52	0.39				3	0.01	0.5	0.07	0.46	1.03	1.17	0.54	1.20	0.04	0.6	0.6	Low	0.6
76	T39	13380.2	0.57	0.73	0.51				3	0.01	0.6	0.11	0.80	1.33	1.20	0.97	1.60	0.07	0.8	0.9	Med	0.9
77	U28	10000.0	1.1	1.1	1				3	0.01	1.1	0.06	0.41	0.38	1.13	0.46	0.43	0.03	1.2	1.2	Low	1.2
78	U32	10000.0	0.4	0.5	0.4				3	0.01	0.4	0.06	0.41	0.94	1.16	0.47	1.09	0.03	0.5	0.6	Low	0.5
79	U33	10000.0	0.39	0.48	0.38				3	0.01	0.4	0.06	0.39	0.93	1.16	0.45	1.08	0.03	0.5	0.6	Low	0.5
80	U35	10000.0	0.65	0.63	0.56				3	0.01	0.6	0.05	0.33	0.54	1.13	0.38	0.62	0.03	0.7	0.7	Low	0.7
81	U37	10000.0	0.64	0.69	0.71				3	0.01	0.7	0.04	0.25	0.37	1.13	0.29	0.42	0.02	0.7	0.8	Low	0.7
82	V30	10000.0	0.58	0.59	0.69				3	0.01	0.6	0.06	0.43	0.69	1.14	0.49	0.79	0.04	0.7	0.8	Low	0.7
83	V33	10000.0	0.48	0.47	0.47				3	0.01	0.5	0.01	0.04	0.09	1.13	0.05	0.10	0.00	0.5	0.5	Low	0.5
84	V36	10000.0	0.6	0.7	0.6				3	0.01	0.6	0.06	0.41	0.64	1.14	0.46	0.73	0.03	0.7	0.8	Low	0.7
85	W26	10000.0	0.76	0.62	0.74				3	0.01	0.7	0.08	0.54	0.76	1.14	0.61	0.87	0.04	0.8	0.9	Low	0.8
86	W28	10000.0	0.67	0.71	0.91				3	0.01	0.8	0.13	0.91	1.19	1.18	1.08	1.41	0.07	1.0	1.1	Low	1.0
87	W31	10000.0	0.51	0.56	0.53				3	0.01	0.5	0.03	0.18	0.33	1.13	0.20	0.38	0.01	0.6	0.6	Low	0.6
88	W34	10000.0	0.65	0.67	0.54				3	0.01	0.6	0.07	0.49	0.80	1.15	0.57	0.91	0.04	0.7	0.8	Low	0.7
89	W39	13397.6	0.93	0.88	0.84				3	0.01	0.9	0.05	0.32	0.36	1.13	0.36	0.41	0.03	1.0	1.0	Low	1.0
90	X25	10000.0	0.85	0.91	1				3	0.01	0.9	0.08	0.53	0.58	1.13	0.61	0.66	0.04	1.0	1.1	Low	1.0
91	X33	10000.0	0.55	0.59	0.48				3	0.01	0.5	0.06	0.39	0.73	1.14	0.45	0.83	0.03	0.6	0.7	Low	0.6
92	X36	10000.0	0.46	0.5	0.54				3	0.01	0.5	0.04	0.28	0.57	1.13	0.32	0.64	0.02	0.6	0.6	Low	0.6
93	Z29	10000.0	0.88	1	0.96				3	0.01	0.9	0.06	0.43	0.46	1.13	0.49	0.52	0.04	1.0	1.1	Low	1.0
94	AA24	10000.0	0.48	0.49	0.52				3	0.01	0.5	0.02	0.15	0.30	1.13	0.17	0.33	0.01	0.5	0.5	Low	0.5
95	AB24	10000.0	0.38	0.44	0.47				3	0.01	0.4	0.05	0.32	0.75	1.14	0.37	0.86	0.03	0.5	0.5	Low	0.5
96	AB25	10000.0	0.47	0.84	0.68				3	0.01	0.7	0.19	1.31	1.98	1.32	1.73	2.61	0.11	1.0	1.1	Med	1.1
97	AC25	10000.0	1.4	1.3	1.3				3	0.01	1.3	0.06	0.41	0.31	1.13	0.46	0.34	0.03	1.4	1.5	Low	1.4
98	AD25	10000.0	1	0.83	0.88				3	0.01	0.9	0.09	0.62	0.68	1.14	0.70	0.78	0.05	1.1	1.1	Low	1.1
99	AE25	10000.0	0.9	0.93	0.96				3	0.01	0.9	0.03	0.21	0.23	1.13	0.24	0.26	0.02	1.0	1.0	Low	1.0
100	AF25	10000.0	0.56	0.43	0.44				3	0.01	0.5	0.07	0.51	1.07	1.17	0.60	1.26	0.04	0.6	0.7	Low	0.6
101	AG25	10000.0	0.4	0.44	0.46				3	0.01	0.4	0.03	0.22	0.50	1.13	0.24	0.56	0.02	0.5	0.5	Low	0.5
102	AH24	10000.0	0.54	0.56	0.49				3	0.01	0.5	0.04	0.25	0.48	1.13	0.29	0.54	0.02	0.6	0.6	Low	0.6
103	AI23	10000.0	0.52	0.49	0.54				3	0.01	0.5	0.03	0.18	0.34	1.13	0.20	0.39	0.01	0.6	0.6	Low	0.6

Row #	IDs/Names of the Smaller DUs	DU Area (Sq feet)	Replicate field sample concentrations						Number of Replicates	Weight	Arithmetic Mean	SD of Replicates	calc'd SD of Increments	calc'd CV for the DU	Adj Factor	adj'd SD of Increments	adj'd CV for DU	SE of DU	95% UCL			
			Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6											Student's-t	Chebychev	CV of Increments	95% UCL
104	AI24	10000.0	0.44	0.44	0.39				3	0.01	0.4	0.03	0.20	0.48	1.13	0.23	0.54	0.02	0.5	0.5	Low	0.5
105	AJ23	10000.0	0.44	0.46	0.46				3	0.01	0.5	0.01	0.08	0.18	1.13	0.09	0.20	0.01	0.5	0.5	Low	0.5
106	AK23	10000.0	0.61	0.55	0.7				3	0.01	0.6	0.08	0.53	0.86	1.15	0.61	0.99	0.04	0.7	0.8	Low	0.7
107	AL23	10000.0	0.5	0.46	0.6				3	0.01	0.5	0.07	0.51	0.98	1.16	0.59	1.14	0.04	0.6	0.7	Low	0.6
108	AL24	10000.0	0.42	0.43	0.42				3	0.01	0.4	0.01	0.04	0.10	1.13	0.05	0.11	0.00	0.4	0.4	Low	0.4
109	AL25	10000.0	0.37	0.39	0.43				3	0.01	0.4	0.03	0.22	0.54	1.13	0.24	0.62	0.02	0.4	0.5	Low	0.4
110	AM25	10000.0	0.37	0.38	0.39				3	0.01	0.4	0.01	0.07	0.19	1.13	0.08	0.21	0.01	0.4	0.4	Low	0.4
111	AN25	10000.0	0.39	0.4	0.35				3	0.01	0.4	0.03	0.19	0.49	1.13	0.21	0.56	0.02	0.4	0.4	Low	0.4
112	AO25	10000.0	0.33	0.27	0.3				3	0.01	0.3	0.03	0.21	0.71	1.14	0.24	0.81	0.02	0.4	0.4	Low	0.4
113	AP8	12741.9	0.38	0.35	0.39				3	0.01	0.4	0.02	0.15	0.39	1.13	0.17	0.44	0.01	0.4	0.4	Low	0.4
114	AP9	12741.9	0.7	0.56	0.61				3	0.01	0.6	0.07	0.50	0.80	1.15	0.57	0.92	0.04	0.7	0.8	Low	0.7
115	AP10	12742.0	0.68	0.78	0.74				3	0.01	0.7	0.05	0.36	0.49	1.13	0.40	0.55	0.03	0.8	0.9	Low	0.8
116	AP11	12741.9	0.83	1.1	1.1				3	0.01	1.0	0.16	1.10	1.09	1.17	1.29	1.28	0.09	1.3	1.4	Low	1.3
117	AP12	12742.0	0.84	0.93	0.78				3	0.01	0.9	0.08	0.53	0.63	1.14	0.61	0.71	0.04	1.0	1.0	Low	1.0
118	AP14	12741.6	0.77	0.72	0.7				3	0.01	0.7	0.04	0.25	0.35	1.13	0.29	0.39	0.02	0.8	0.8	Low	0.8
119	AP15	12742.2	0.92	0.91	0.87				3	0.01	0.9	0.03	0.19	0.21	1.13	0.21	0.23	0.02	0.9	1.0	Low	0.9
120	AP16	12741.9	0.88	0.99	0.92				3	0.01	0.9	0.06	0.39	0.42	1.13	0.44	0.48	0.03	1.0	1.1	Low	1.0
121	AP17	12741.9	0.69	0.92	1.1				3	0.01	0.9	0.21	1.45	1.61	1.24	1.81	2.00	0.12	1.2	1.4	Med	1.4
122	AP18	12741.9	0.29	0.42	0.42				3	0.01	0.4	0.08	0.53	1.41	1.21	0.64	1.71	0.04	0.5	0.6	Med	0.6
123	AP19	12741.9	0.4	0.35	0.43				3	0.01	0.4	0.04	0.29	0.73	1.14	0.33	0.83	0.02	0.5	0.5	Low	0.5
124	AP20	12741.9	0.47	0.44	0.46				3	0.01	0.5	0.02	0.11	0.24	1.13	0.12	0.27	0.01	0.5	0.5	Low	0.5
125	AP21	12741.9	0.35	0.41	0.35				3	0.01	0.4	0.03	0.24	0.66	1.14	0.28	0.75	0.02	0.4	0.5	Low	0.4
126	AP22	12742.0	0.37	0.44	0.31				3	0.01	0.4	0.07	0.46	1.23	1.19	0.55	1.46	0.04	0.5	0.5	Low	0.5
127	AP25	12741.8	0.28	0.27	0.29				3	0.01	0.3	0.01	0.07	0.25	1.13	0.08	0.28	0.01	0.3	0.3	Low	0.3
128	AQ23	10435.9	0.46	0.35	0.44				3	0.01	0.4	0.06	0.41	0.99	1.16	0.48	1.16	0.03	0.5	0.6	Low	0.5
129	AQ24	9852.5	0.37	0.42	0.46				3	0.01	0.4	0.05	0.32	0.77	1.14	0.36	0.87	0.03	0.5	0.5	Low	0.5
130	B8	8381.5	0.42	0.41	0.37				3	0.00	0.4	0.03	0.19	0.47	1.13	0.21	0.53	0.02	0.4	0.5	Low	0.4
131	B20	7901.2	0.68	0.71	0.72				3	0.00	0.7	0.02	0.15	0.21	1.13	0.17	0.24	0.01	0.7	0.8	Low	0.7
132	B21	7425.3	0.74	0.79	0.77				3	0.00	0.8	0.03	0.18	0.23	1.13	0.20	0.26	0.01	0.8	0.8	Low	0.8
133	B22	6933.6	0.84	0.84	0.78				3	0.00	0.8	0.03	0.24	0.30	1.13	0.28	0.34	0.02	0.9	0.9	Low	0.9
134	C8	9158.1	0.36	0.43	0.37				3	0.01	0.4	0.04	0.27	0.69	1.14	0.30	0.79	0.02	0.5	0.5	Low	0.5
135	C22	6929.0	0.73	0.7	0.76				3	0.00	0.7	0.03	0.21	0.29	1.13	0.24	0.33	0.02	0.8	0.8	Low	0.8
136	D8	9410.4	0.3	0.27	0.29				3	0.01	0.3	0.02	0.11	0.38	1.13	0.12	0.42	0.01	0.3	0.3	Low	0.3
137	D22	10000.0	0.58	0.65	0.63				3	0.01	0.6	0.04	0.25	0.41	1.13	0.29	0.46	0.02	0.7	0.7	Low	0.7
138	E22	10000.0	0.62	0.59	0.6				3	0.01	0.6	0.02	0.11	0.18	1.13	0.12	0.20	0.01	0.6	0.6	Low	0.6
139	E23	10000.0	0.48	0.54	0.56				3	0.01	0.5	0.04	0.29	0.56	1.13	0.33	0.63	0.02	0.6	0.6	Low	0.6
140	E24	10000.0	0.62	0.72	0.65				3	0.01	0.7	0.05	0.36	0.55	1.13	0.41	0.62	0.03	0.7	0.8	Low	0.7
141	E25	10000.0	0.48	0.6	0.57				3	0.01	0.6	0.06	0.44	0.80	1.15	0.51	0.92	0.04	0.7	0.7	Low	0.7
142	E26	13604.3	0.75	0.84	0.8				3	0.01	0.8	0.05	0.32	0.40	1.13	0.36	0.45	0.03	0.9	0.9	Low	0.9
143	F26	5258.3	0.82	0.81	0.73				3	0.00	0.8	0.05	0.35	0.44	1.13	0.39	0.50	0.03	0.9	0.9	Low	0.9
144	G25	8218.3	0.42	0.54	0.46				3	0.00	0.5	0.06	0.43	0.91	1.15	0.50	1.05	0.04	0.6	0.6	Low	0.6
145	G26	9346.7	0.65	0.75	0.67				3	0.01	0.7	0.05	0.37	0.54	1.13	0.42	0.61	0.03	0.8	0.8	Low	0.8
146	H25	10000.0	0.77	0.81	0.82				3	0.01	0.8	0.03	0.19	0.23	1.13	0.21	0.26	0.02	0.8	0.9	Low	0.8
147	I25	7781.1	0.89	0.79	0.85				3	0.00	0.8	0.05	0.36	0.42	1.13	0.40	0.48	0.03	0.9	1.0	Low	0.9
148	J22	10000.0	0.78	0.75	0.87				3	0.01	0.8	0.06	0.44	0.55	1.13	0.50	0.62	0.04	0.9	1.0	Low	0.9
149	J23	10000.4	0.94	0.95	0.93				3	0.01	0.9	0.01	0.07	0.08	1.13	0.08	0.08	0.01	1.0	1.0	Low	1.0
150	J24	7428.9	1.3	0.95	1				3	0.00	1.1	0.19	1.34	1.24	1.19	1.59	1.47	0.11	1.4	1.6	Low	1.4
151	J25	6743.5	0.98	0.88	0.92				3	0.00	0.9	0.05	0.36	0.38	1.13	0.40	0.43	0.03	1.0	1.1	Low	1.0
152	K22	10000.0	0.96	0.92	1.7				3	0.01	1.2	0.44	3.11	2.60	1.48	4.60	3.86	0.25	1.9	2.3	High	2.3
153	L22	10000.0	1	0.99	1				3	0.01	1.0	0.01	0.04	0.04	1.13	0.05	0.05	0.00	1.0	1.0	Low	1.0
154	M22	10000.0	0.81	0.77	0.75				3	0.01	0.8	0.03	0.22	0.28	1.13	0.24	0.31	0.02	0.8	0.9	Low	0.8
155	N22	10000.0	1	1.5	1.3				3	0.01	1.3	0.25	1.78	1.40	1.21	2.16	1.70	0.15	1.7	1.9	Med	1.9
156	O22	10000.0	0.81	0.81	0.76				3	0.01	0.8	0.03	0.20	0.26	1.13	0.23	0.29	0.02	0.8	0.9	Low	0.8
157	P22	10000.0	1.7	1.8	1.7				3	0.01	1.7	0.06	0.41	0.24	1.13	0.46	0.27	0.03	1.8	1.9	Low	1.8
158	Q22	10000.0	1.1	1.1	1.1				3	0.01	1.1	0.00	0.00	0.00	1.13	0.00	0.00	0.00	1.1	1.1	Low	1.1
159	R22	7999.4	0.92	1.1	1.1				3	0.00	1.0	0.10	0.73	0.71	1.14	0.84	0.81	0.06	1.2	1.3	Low	1.2
160	S22	10000.0	0.56	0.63	0.69				3	0.01	0.6	0.07	0.46	0.73	1.14	0.53	0.84	0.04	0.7	0.8	Low	0.7

Row #	IDs/Names of the Smaller DUs	DU Area (Sq feet)	Replicate field sample concentrations						Number of Replicates	Weight	Arithmetic Mean	SD of Replicates	calc'd SD of Increments	calc'd CV for the DU	Adj Factor	adj'd SD of Increments	adj'd CV for DU	SE of DU	95% UCL			
			Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6											Student's-t	Chebychev	CV of Increments	95% UCL
161	T22	9920.3	0.52	0.73	0.7				3	0.01	0.7	0.11	0.80	1.24	1.19	0.95	1.47	0.07	0.8	0.9	Low	0.8
162	U22	6762.1	0.56	0.59	0.54				3	0.00	0.6	0.03	0.18	0.32	1.13	0.20	0.36	0.01	0.6	0.6	Low	0.6
163	V22	10000.0	0.93	0.85	1				3	0.01	0.9	0.08	0.53	0.57	1.13	0.60	0.65	0.04	1.1	1.1	Low	1.1
164	W22	10000.0	1	1	1				3	0.01	1.0	0.00	0.00	0.00	1.13	0.00	0.00	0.00	1.0	1.0	Low	1.0
165	W23	10000.0	0.94	0.97	1				3	0.01	1.0	0.03	0.21	0.22	1.13	0.24	0.25	0.02	1.0	1.0	Low	1.0
166	W24	10000.0	0.57	0.59	0.84	0.83	0.86		5	0.01	0.7	0.14	1.02	1.39	1.11	1.13	1.54	0.06	0.9	1.0	Med	1.0
167	X24	10000.0	1.1	1.1	1.3				3	0.01	1.2	0.12	0.82	0.70	1.14	0.93	0.80	0.07	1.4	1.5	Low	1.4
168	Y24	10000.0	1.2	1.2	1.1				3	0.01	1.2	0.06	0.41	0.35	1.13	0.46	0.39	0.03	1.3	1.3	Low	1.3
169	Z24	10000.0	0.75	0.86	0.9				3	0.01	0.8	0.08	0.55	0.66	1.14	0.62	0.75	0.04	1.0	1.0	Low	1.0
	Sum:	1734193	--	--	--	--	--	--	509	0.99	0.672	0.00	0.00	0.00	NA	0.00	0.01	0.00	0.7	0.7	Low	0.67

df by Welch-Satterthwaite approximation:	**4.1**

Recommended UCL: **0.673** **mg/kg** >> Student's t 95% UCL

Note: Student's-t or Chebychev 95% UCL may be appropriate.

*Student's t UCL is acceptable if adj'd CV for DU is "Low" (e.g., CV ≤ 1.5). The User should consult the instructions for additional guidance on which 95% UCL is recommended for specific data sets.

Notes

adj'd	= adjusted	df	= degrees of freedom	SD	= arithmetic standard deviation
calc'd	= calculated	DU	= decision unit	SE	= standard error
CV	= coefficient of variation	RSD	= relative standard deviation	95% UCL	= 95% upper confidence limit for arithmetic mean

Calculation of Weighted 95% UCLs for a Combined Decision Unit (DU) from Several Smaller DUs Having Replicate Incremental Samples

Enter information in green highlighted cells. See the "Instructions" tab for detailed instructions.

Project ID:	Fort Wingate Inner Fence
Property/Sample ID:	Inner Fence Area Grids
Date of calculations:	9/17/2025
Calculator completed by:	CMC
Analyte:	Cadmium
Analyte units:	mg/kg
DU metric units:	Sq feet
Notes:	

Click in green cell below to select from drop-down menu

DU size metric: area, volume, or depth interval: **Area**

Note: Assumes all replicates have the same number of increments

Number of increments per replicate: **50**

Row #	IDs/Names of the Smaller DUs	DU Area (Sq feet)	Replicate field sample concentrations						Number of Replicates	Weight	Arithmetic Mean	SD of Replicates	calc'd SD of Increments	calc'd CV for the DU	Adj Factor	adj'd SD of Increments	adj'd CV for DU	SE of DU	95% UCL			
			Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6											Student's-t	Chebychev	CV of Increments	95% UCL
1	AA32	10000.0	0.3	0.15	0.21				3	0.01	0.2	0.08	0.53	2.43	1.43	0.76	3.47	0.04	0.3	0.4	High	0.4
2	AB27	10000.0	0.49	0.29	0.34				3	0.01	0.4	0.10	0.74	1.97	1.32	0.97	2.60	0.06	0.5	0.6	Med	0.6
3	AB38	13378.0	0.22	0.17	0.22				3	0.01	0.2	0.03	0.20	1.00	1.16	0.24	1.17	0.02	0.3	0.3	Low	0.3
4	AC34	10000.0	0.16	0.14	0.14				3	0.01	0.1	0.01	0.08	0.56	1.13	0.09	0.63	0.01	0.2	0.2	Low	0.2
5	AD28	10000.0	0.31	1.1	0.2				3	0.01	0.5	0.49	3.47	6.47	3.62	12.56	23.40	0.28	1.4	1.8	High	1.8
6	AD34	10000.0	0.25	0.14	0.23				3	0.01	0.2	0.06	0.41	2.00	1.32	0.55	2.65	0.03	0.3	0.4	Med	0.4
7	AE27	9999.9	0.42	0.33	0.37				3	0.01	0.4	0.05	0.32	0.85	1.15	0.37	0.98	0.03	0.4	0.5	Low	0.4
8	AE38	13378.0	0.16	0.18	0.16				3	0.01	0.2	0.01	0.08	0.49	1.13	0.09	0.55	0.01	0.2	0.2	Low	0.2
9	AF29	10000.0	0.29	0.21	0.29				3	0.01	0.3	0.05	0.33	1.24	1.19	0.39	1.47	0.03	0.3	0.4	Low	0.3
10	AF30	10000.0	0.43	0.42	0.58				3		0.5	0.09	0.63	1.33	1.20	0.76	1.60	0.05	0.6	0.7	Med	0.7
11	AF32	10000.0	0.42	0.19	0.66				3	0.01	0.4	0.24	1.66	3.93	2.00	3.32	7.84	0.14	0.8	1.0	High	1.0
12	AF34	10000.0	0.28	0.19	0.28				3	0.01	0.3	0.05	0.37	1.47	1.22	0.45	1.80	0.03	0.3	0.4	Med	0.4
13	AH28	10000.0	0.33	0.74	0.49				3	0.01	0.5	0.21	1.46	2.81	1.55	2.26	4.35	0.12	0.9	1.0	High	1.0
14	AH39	10617.1	0.2	0.13	0.085				3	0.01	0.1	0.06	0.41	2.96	1.60	0.66	4.74	0.03	0.2	0.3	High	0.3
15	AI26	10000.0	0.55	0.75	1.1				3	0.01	0.8	0.28	1.97	2.46	1.44	2.84	3.54	0.16	1.3	1.5	High	1.5
16	AI29	10000.0	0.24	0.29	0.33				3	0.01	0.3	0.05	0.32	1.11	1.17	0.37	1.31	0.03	0.4	0.4	Low	0.4
17	AI31	10000.0	0.34	0.23	0.15				3	0.01	0.2	0.10	0.67	2.81	1.55	1.04	4.35	0.06	0.4	0.5	High	0.5
18	AJ26	10000.0	0.35	0.71	0.39				3	0.01	0.5	0.20	1.40	2.89	1.57	2.20	4.54	0.11	0.8	1.0	High	1.0
19	AJ27	10000.0	0.21	0.22	0.18				3	0.01	0.2	0.02	0.15	0.72	1.14	0.17	0.83	0.01	0.2	0.3	Low	0.2
20	AJ31	10000.0	0.21	0.27	0.26				3	0.01	0.2	0.03	0.23	0.92	1.16	0.26	1.06	0.02	0.3	0.3	Low	0.3
21	AJ33	10000.0	0.28	0.33	0.33				3	0.01	0.3	0.03	0.20	0.65	1.14	0.23	0.74	0.02	0.4	0.4	Low	0.4
22	AK28	10000.0	0.33	0.33	0.33				3	0.01	0.3	0.00	0.00	0.00	1.13	0.00	0.00	0.00	0.3	0.3	Low	0.3
23	AK36	10000.0	0.33	0.32	0.33				3	0.01	0.3	0.01	0.04	0.12	1.13	0.05	0.14	0.00	0.3	0.3	Low	0.3
24	AL27	10000.0	0.23	0.22	0.28				3	0.01	0.2	0.03	0.23	0.93	1.16	0.26	1.08	0.02	0.3	0.3	Low	0.3
25	AL34	10000.0	0.23	0.21	0.19				3	0.01	0.2	0.02	0.14	0.67	1.14	0.16	0.77	0.01	0.2	0.3	Low	0.2
26	AL39	7384.7	0.25	0.17	0.2				3	0.00	0.2	0.04	0.29	1.38	1.21	0.35	1.67	0.02	0.3	0.3	Med	0.3
27	AM29	10000.0	0.15	0.14	0.13				3	0.01	0.1	0.01	0.07	0.51	1.13	0.08	0.57	0.01	0.2	0.2	Low	0.2
28	AM33	10000.0	0.36	0.33	0.41				3	0.01	0.4	0.04	0.29	0.78	1.14	0.33	0.89	0.02	0.4	0.5	Low	0.4
29	AN27	10000.0	0.2	0.14	0.16				3	0.01	0.2	0.03	0.22	1.30	1.20	0.26	1.55	0.02	0.2	0.2	Med	0.2
30	AN28	10000.0	0.21	0.21	0.19				3	0.01	0.2	0.01	0.08	0.40	1.13	0.09	0.45	0.01	0.2	0.2	Low	0.2
31	AN38	6980.7	0.15	0.13	0.14				3	0.00	0.1	0.01	0.07	0.51	1.13	0.08	0.57	0.01	0.2	0.2	Low	0.2
32	AO26	10000.0	0.25	0.25	3.6				3	0.01	1.4	1.93	13.68	10.01	7.26	99.32	72.68	1.12	4.6	6.2	High	6.2
33	AP28	8819.3	0.3	0.23	0.33				3	0.01	0.3	0.05	0.36	1.27	1.19	0.43	1.51	0.03	0.4	0.4	Med	0.4
34	AQ15	13466.3	0.3	0.3	0.97				3	0.01	0.5	0.39	2.74	5.23	2.72	7.44	14.23	0.22	1.2	1.5	High	1.5
35	AQ22	11017.2	0.22	0.21	0.2				3	0.01	0.2	0.01	0.07	0.34	1.13	0.08	0.38	0.01	0.2	0.2	Low	0.2
36	C27	14788.0	0.2	0.19	0.16				3	0.01	0.2	0.02	0.15	0.80	1.15	0.17	0.92	0.01	0.2	0.2	Low	0.2
37	C35	9243.3	0.28	0.21	0.27				3	0.01	0.3	0.04	0.27	1.06	1.17	0.31	1.23	0.02	0.3	0.3	Low	0.3
38	C37	7935.9	0.23	0.24	0.23				3	0.00	0.2	0.01	0.04	0.17	1.13	0.05	0.20	0.00	0.2	0.2	Low	0.2
39	E27	14436.0	0.28	0.24	0.25				3	0.01	0.3	0.02	0.15	0.57	1.13	0.17	0.65	0.01	0.3	0.3	Low	0.3
40	F32	10000.0	0.23	0.21	0.2				3	0.01	0.2	0.02	0.11	0.51	1.13	0.12	0.57	0.01	0.2	0.3	Low	0.2
41	G30	10000.0	0.33	0.33	0.31				3	0.01	0.3	0.01	0.08	0.25	1.13	0.09	0.28	0.01	0.3	0.4	Low	0.3
42	H35	10000.0	0.3	0.32	0.27				3	0.01	0.3	0.03	0.18	0.60	1.13	0.20	0.68	0.01	0.3	0.4	Low	0.3
43	H39	12972.6	0.16	0.18	0.22				3	0.01	0.2	0.03	0.22	1.16	1.18	0.25	1.36	0.02	0.2	0.3	Low	0.2
44	I29	10000.0	0.41	0.46	0.44				3	0.01	0.4	0.03	0.18	0.41	1.13	0.20	0.46	0.01	0.5	0.5	Low	0.5
45	I30	10000.0	0.4	0.2	0.32				3	0.01	0.3	0.10	0.71	2.32	1.40	1.00	3.25	0.06	0.5	0.6	High	0.6
46	I33	10000.0	0.22	0.17	0.27				3	0.01	0.2	0.05	0.35	1.61	1.24	0.44	2.00	0.03	0.3	0.3	Med	0.3
47	I38	12991.4	0.18	0.24	0.14				3	0.01	0.2	0.05	0.36	1.91	1.30	0.46	2.48	0.03	0.3	0.3	Med	0.3
48	K30	10000.0	0.33	0.23	0.27				3	0.01	0.3	0.05	0.36	1.29	1.20	0.43	1.54	0.03	0.4	0.4	Med	0.4
49	K34	10000.0	0.25	0.19	0.23				3	0.01	0.2	0.03	0.22	0.97	1.16	0.25	1.12	0.02	0.3	0.3	Low	0.3
50	L29	10000.0	0.31	0.33	0.39				3	0.01	0.3	0.04	0.29	0.86	1.15	0.34	0.99	0.02	0.4	0.4	Low	0.4
51	L34	10000.0	0.27	0.26	0.32				3	0.01	0.3	0.03	0.23	0.80	1.15	0.26	0.92	0.02	0.3	0.4	Low	0.3
52	L37	10000.0	0.26	0.23	0.24				3	0.01	0.2	0.02	0.11	0.44	1.13	0.12	0.50	0.01	0.3	0.3	Low	0.3
53	M28	10000.0	0.56	2.8	0.5				3	0.01	1.3	1.31	9.27	7.20	4.24	39.33	30.57	0.76	3.5	4.6	High	4.6

Row #	IDs/Names of the Smaller DUs	DU Area (Sq feet)	Replicate field sample concentrations						Number of Replicates	Weight	Arithmetic Mean	SD of Replicates	calc'd SD of Increments	calc'd CV for the DU	Adj Factor	adj'd SD of Increments	adj'd CV for DU	SE of DU	95% UCL			
			Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6											Student's-t	Chebychev	CV of Increments	95% UCL
54	M32	10000.0	0.29	0.25	0.28				3	0.01	0.3	0.02	0.15	0.54	1.13	0.17	0.61	0.01	0.3	0.3	Low	0.3
55	M39	13011.8	0.18	0.14	0.15				3	0.01	0.2	0.02	0.15	0.94	1.16	0.17	1.09	0.01	0.2	0.2	Low	0.2
56	N27	10000.0	0.44	0.3	0.37				3	0.01	0.4	0.07	0.49	1.34	1.20	0.60	1.61	0.04	0.5	0.5	Med	0.5
57	N28	10000.0	0.47	0.36	0.46				3	0.01	0.4	0.06	0.43	1.00	1.16	0.50	1.16	0.04	0.5	0.6	Low	0.5
58	N37	10000.0	0.23	0.19	0.24				3	0.01	0.2	0.03	0.19	0.85	1.15	0.22	0.98	0.02	0.3	0.3	Low	0.3
59	O27	10000.0	0.22	0.21	0.32				3	0.01	0.3	0.06	0.43	1.72	1.27	0.54	2.18	0.04	0.4	0.4	Med	0.4
60	O32	10000.0	0.43	0.27	0.29				3	0.01	0.3	0.09	0.62	1.87	1.29	0.80	2.42	0.05	0.5	0.5	Med	0.5
61	O37	10000.0	0.21	0.21	0.21				3	0.01	0.2	0.00	0.00	0.00	1.13	0.00	0.00	0.00	0.2	0.2	Low	0.2
62	P32	10000.0	0.4	0.28	0.32				3	0.01	0.3	0.06	0.43	1.30	1.20	0.52	1.55	0.04	0.4	0.5	Med	0.5
63	P33	10000.0	0.44	0.3	0.39				3	0.01	0.4	0.07	0.50	1.33	1.20	0.60	1.60	0.04	0.5	0.6	Med	0.6
64	Q26	10000.0	0.49	0.65	0.57				3	0.01	0.6	0.08	0.57	0.99	1.16	0.66	1.15	0.05	0.7	0.8	Low	0.7
65	Q29	10000.0	0.32	0.61	0.53				3	0.01	0.5	0.15	1.06	2.18	1.36	1.45	2.97	0.09	0.7	0.9	Med	0.9
66	Q38	13187.6	0.22	0.15	0.16				3	0.01	0.2	0.04	0.27	1.52	1.23	0.33	1.86	0.02	0.2	0.3	Med	0.3
67	Q39	13187.6	0.18	0.16	0.17				3	0.01	0.2	0.01	0.07	0.42	1.13	0.08	0.47	0.01	0.2	0.2	Low	0.2
68	R24	10000.0	0.39	0.36	0.47				3	0.01	0.4	0.06	0.40	0.99	1.16	0.47	1.15	0.03	0.5	0.5	Low	0.5
69	R32	10000.0	0.35	0.28	0.24				3	0.01	0.3	0.06	0.39	1.36	1.21	0.47	1.64	0.03	0.4	0.4	Med	0.4
70	S26	10000.0	0.38	0.71	0.55				3	0.01	0.5	0.17	1.17	2.13	1.35	1.58	2.89	0.10	0.8	1.0	Med	1.0
71	S29	10000.0	0.36	0.54	0.47				3	0.01	0.5	0.09	0.64	1.40	1.21	0.78	1.70	0.05	0.6	0.7	Med	0.7
72	S36	10000.0	0.21	0.15	0.17				3	0.01	0.2	0.03	0.22	1.22	1.19	0.26	1.45	0.02	0.2	0.3	Low	0.2
73	T23	10000.0	0.93	0.61	1.1				3	0.01	0.9	0.25	1.76	2.00	1.32	2.33	2.64	0.14	1.3	1.5	Med	1.5
74	T28	10000.0	0.19	0.66	0.4				3	0.01	0.4	0.24	1.66	4.00	2.03	3.38	8.11	0.14	0.8	1.0	High	1.0
75	T32	10000.0	0.45	0.19	0.28				3	0.01	0.3	0.13	0.93	3.04	1.63	1.52	4.96	0.08	0.5	0.6	High	0.6
76	T39	13380.2	0.19	0.18	0.16				3	0.01	0.2	0.02	0.11	0.61	1.13	0.12	0.69	0.01	0.2	0.2	Low	0.2
77	U28	10000.0	0.13	0.2	0.17				3	0.01	0.2	0.04	0.25	1.49	1.23	0.30	1.83	0.02	0.2	0.3	Med	0.3
78	U32	10000.0	0.47	0.29	0.27				3	0.01	0.3	0.11	0.78	2.27	1.39	1.08	3.15	0.06	0.5	0.6	High	0.6
79	U33	10000.0	0.32	0.24	0.32				3	0.01	0.3	0.05	0.33	1.11	1.17	0.38	1.31	0.03	0.4	0.4	Low	0.4
80	U35	10000.0	0.35	0.35	0.39				3	0.01	0.4	0.02	0.16	0.45	1.13	0.18	0.51	0.01	0.4	0.4	Low	0.4
81	U37	10000.0	0.21	0.26	0.3				3	0.01	0.3	0.05	0.32	1.24	1.19	0.38	1.48	0.03	0.3	0.4	Low	0.3
82	V30	10000.0	0.55	0.45	0.4				3	0.01	0.5	0.08	0.54	1.16	1.18	0.64	1.36	0.04	0.6	0.7	Low	0.6
83	V33	10000.0	0.36	0.36	0.23				3	0.01	0.3	0.08	0.53	1.68	1.26	0.67	2.11	0.04	0.4	0.5	Med	0.5
84	V36	10000.0	0.28	0.28	0.25				3	0.01	0.3	0.02	0.12	0.45	1.13	0.14	0.51	0.01	0.3	0.3	Low	0.3
85	W26	10000.0	0.56	0.59	0.47				3	0.01	0.5	0.06	0.44	0.82	1.15	0.51	0.94	0.04	0.6	0.7	Low	0.6
86	W28	10000.0	0.44	0.51	0.52				3	0.01	0.5	0.04	0.31	0.63	1.14	0.35	0.71	0.03	0.6	0.6	Low	0.6
87	W31	10000.0	0.33	0.26	0.41				3	0.01	0.3	0.08	0.53	1.59	1.24	0.66	1.98	0.04	0.5	0.5	Med	0.5
88	W34	10000.0	0.29	0.21	0.37				3	0.01	0.3	0.08	0.57	1.95	1.31	0.74	2.56	0.05	0.4	0.5	Med	0.5
89	W39	13397.6	0.075	0.1	0.097				3	0.01	0.1	0.01	0.10	1.06	1.17	0.11	1.24	0.01	0.1	0.1	Low	0.1
90	X25	10000.0	0.49	0.51	0.52				3	0.01	0.5	0.02	0.11	0.21	1.13	0.12	0.24	0.01	0.5	0.5	Low	0.5
91	X33	10000.0	0.4	0.28	0.33				3	0.01	0.3	0.06	0.43	1.27	1.19	0.51	1.51	0.03	0.4	0.5	Med	0.5
92	X36	10000.0	0.23	0.27	0.3				3	0.01	0.3	0.04	0.25	0.93	1.16	0.29	1.08	0.02	0.3	0.4	Low	0.3
93	Z29	10000.0	0.28	0.24	0.27				3	0.01	0.3	0.02	0.15	0.56	1.13	0.17	0.63	0.01	0.3	0.3	Low	0.3
94	AA24	10000.0	0.71	0.52	0.56				3	0.01	0.6	0.10	0.71	1.19	1.18	0.84	1.40	0.06	0.8	0.8	Low	0.8
95	AB24	10000.0	0.57	0.55	0.55				3	0.01	0.6	0.01	0.08	0.15	1.13	0.09	0.17	0.01	0.6	0.6	Low	0.6
96	AB25	10000.0	1.2	0.52	0.85				3	0.01	0.9	0.34	2.40	2.81	1.55	3.72	4.34	0.20	1.4	1.7	High	1.7

Row #	IDs/Names of the Smaller DUs	DU Area (Sq feet)	Replicate field sample concentrations						Number of Replicates	Weight	Arithmetic Mean	SD of Replicates	calc'd SD of Increments	calc'd CV for the DU	Adj Factor	adj'd SD of Increments	adj'd CV for DU	SE of DU	95% UCL			
			Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6											Student's-t	Chebychev	CV of Increments	95% UCL
97	AC25	10000.0	0.83	0.6	0.59				3	0.01	0.7	0.14	0.96	1.43	1.22	1.17	1.73	0.08	0.9	1.0	Med	1.0
98	AD25	10000.0	0.63	0.34	0.3				3	0.01	0.4	0.18	1.27	3.01	1.62	2.06	4.86	0.10	0.7	0.9	High	0.9
99	AE25	10000.0	0.35	0.3	0.38				3	0.01	0.3	0.04	0.29	0.83	1.15	0.33	0.96	0.02	0.4	0.4	Low	0.4
100	AF25	10000.0	0.4	0.61	0.68				3	0.01	0.6	0.15	1.03	1.83	1.29	1.33	2.35	0.08	0.8	0.9	Med	0.9
101	AG25	10000.0	0.58	0.4	0.47				3	0.01	0.5	0.09	0.64	1.33	1.20	0.77	1.59	0.05	0.6	0.7	Med	0.7
102	AH24	10000.0	0.44	0.33	0.39				3	0.01	0.4	0.06	0.39	1.01	1.16	0.45	1.17	0.03	0.5	0.5	Low	0.5
103	AI23	10000.0	1	0.44	0.3				3	0.01	0.6	0.37	2.62	4.52	2.30	6.02	10.38	0.21	1.2	1.5	High	1.5
104	AI24	10000.0	0.6	0.47	0.49				3	0.01	0.5	0.07	0.49	0.95	1.16	0.57	1.10	0.04	0.6	0.7	Low	0.6
105	AJ23	10000.0	0.74	0.5	0.57				3	0.01	0.6	0.12	0.87	1.45	1.22	1.06	1.76	0.07	0.8	0.9	Med	0.9
106	AK23	10000.0	0.57	0.44	0.8				3	0.01	0.6	0.18	1.29	2.14	1.36	1.75	2.90	0.11	0.9	1.1	Med	1.1
107	AL23	10000.0	0.52	0.51	0.66				3	0.01	0.6	0.08	0.59	1.05	1.17	0.69	1.23	0.05	0.7	0.8	Low	0.7
108	AL24	10000.0	0.55	0.43	0.5				3	0.01	0.5	0.06	0.43	0.86	1.15	0.49	0.99	0.03	0.6	0.6	Low	0.6
109	AL25	10000.0	0.45	0.66	0.49				3	0.01	0.5	0.11	0.79	1.48	1.22	0.96	1.81	0.06	0.7	0.8	Med	0.8
110	AM25	10000.0	0.66	0.47	0.53				3	0.01	0.6	0.10	0.69	1.24	1.19	0.82	1.48	0.06	0.7	0.8	Low	0.7
111	AN25	10000.0	0.78	0.44	0.46				3	0.01	0.6	0.19	1.35	2.41	1.43	1.92	3.44	0.11	0.9	1.0	High	1.0
112	AO25	10000.0	0.4	0.39	0.33				3	0.01	0.4	0.04	0.27	0.72	1.14	0.31	0.82	0.02	0.4	0.5	Low	0.4
113	AP8	12741.9	0.14	0.13	0.15				3	0.01	0.1	0.01	0.07	0.51	1.13	0.08	0.57	0.01	0.2	0.2	Low	0.2
114	AP9	12741.9	0.44	0.36	0.41				3	0.01	0.4	0.04	0.29	0.71	1.14	0.33	0.81	0.02	0.5	0.5	Low	0.5
115	AP10	12742.0	0.52	0.51	0.46				3	0.01	0.5	0.03	0.23	0.46	1.13	0.26	0.52	0.02	0.6	0.6	Low	0.6
116	AP11	12741.9	1.5	0.42	0.35				3	0.01	0.8	0.64	4.56	6.02	3.27	14.93	19.73	0.37	1.8	2.4	High	2.4
117	AP12	12742.0	0.37	0.28	0.23				3	0.01	0.3	0.07	0.50	1.71	1.26	0.63	2.16	0.04	0.4	0.5	Med	0.5
118	AP14	12741.6	0.5	0.5	0.58				3	0.01	0.5	0.05	0.33	0.62	1.14	0.37	0.70	0.03	0.6	0.6	Low	0.6
119	AP15	12742.2	0.44	0.52	0.47				3	0.01	0.5	0.04	0.29	0.60	1.13	0.32	0.68	0.02	0.5	0.6	Low	0.5
120	AP16	12741.9	0.46	0.59	0.58				3	0.01	0.5	0.07	0.51	0.94	1.16	0.59	1.09	0.04	0.7	0.7	Low	0.7
121	AP17	12741.9	0.5	0.39	0.34				3	0.01	0.4	0.08	0.58	1.41	1.21	0.70	1.71	0.05	0.5	0.6	Med	0.6
122	AP18	12741.9	0.43	0.49	0.4				3	0.01	0.4	0.05	0.32	0.74	1.14	0.37	0.84	0.03	0.5	0.6	Low	0.5
123	AP19	12741.9	0.44	0.4	0.43				3	0.01	0.4	0.02	0.15	0.35	1.13	0.17	0.39	0.01	0.5	0.5	Low	0.5
124	AP20	12741.9	0.59	0.37	0.32				3	0.01	0.4	0.14	1.02	2.38	1.42	1.44	3.38	0.08	0.7	0.8	High	0.8
125	AP21	12741.9	0.43	0.39	0.37				3	0.01	0.4	0.03	0.22	0.54	1.13	0.24	0.62	0.02	0.4	0.5	Low	0.4
126	AP22	12742.0	0.39	0.4	0.33				3	0.01	0.4	0.04	0.27	0.72	1.14	0.31	0.82	0.02	0.4	0.5	Low	0.4
127	AP25	12741.8	0.34	0.32	0.29				3	0.01	0.3	0.03	0.18	0.56	1.13	0.20	0.64	0.01	0.4	0.4	Low	0.4
128	AQ23	10435.9	0.32	0.27	0.24				3	0.01	0.3	0.04	0.29	1.03	1.17	0.33	1.20	0.02	0.3	0.4	Low	0.3
129	AQ24	9852.5	0.33	0.22	0.28				3	0.01	0.3	0.06	0.39	1.41	1.21	0.47	1.71	0.03	0.4	0.4	Med	0.4
130	B8	8381.5	0.2	0.18	0.18				3	0.00	0.2	0.01	0.08	0.44	1.13	0.09	0.49	0.01	0.2	0.2	Low	0.2
131	B20	7901.2	0.24	0.31	0.24				3	0.00	0.3	0.04	0.29	1.09	1.17	0.33	1.27	0.02	0.3	0.4	Low	0.3
132	B21	7425.3	0.19	0.48	0.22				3	0.00	0.3	0.16	1.13	3.80	1.94	2.19	7.37	0.09	0.6	0.7	High	0.7
133	B22	6933.6	0.36	0.3	0.41				3	0.00	0.4	0.06	0.39	1.09	1.17	0.46	1.28	0.03	0.4	0.5	Low	0.4
134	C8	9158.1	0.36	0.38	0.54				3	0.01	0.4	0.10	0.70	1.64	1.25	0.87	2.04	0.06	0.6	0.7	Med	0.7
135	C22	6929.0	0.34	0.24	0.4				3	0.00	0.3	0.08	0.57	1.75	1.27	0.73	2.22	0.05	0.5	0.5	Med	0.5
136	D8	9410.4	0.38	0.34	0.33				3	0.01	0.4	0.03	0.19	0.53	1.13	0.21	0.60	0.02	0.4	0.4	Low	0.4
137	D22	10000.0	0.56	0.24	0.59				3	0.01	0.5	0.19	1.37	2.96	1.60	2.19	4.73	0.11	0.8	1.0	High	1.0
138	E22	10000.0	0.77	0.61	0.67				3	0.01	0.7	0.08	0.57	0.84	1.15	0.66	0.96	0.05	0.8	0.9	Low	0.8
139	E23	10000.0	0.38	0.36	0.37				3	0.01	0.4	0.01	0.07	0.19	1.13	0.08	0.22	0.01	0.4	0.4	Low	0.4
140	E24	10000.0	0.3	0.29	0.29				3	0.01	0.3	0.01	0.04	0.14	1.13	0.05	0.16	0.00	0.3	0.3	Low	0.3
141	E25	10000.0	0.31	0.35	0.34				3	0.01	0.3	0.02	0.15	0.44	1.13	0.17	0.50	0.01	0.4	0.4	Low	0.4
142	E26	13604.3	0.33	0.29	0.34				3	0.01	0.3	0.03	0.19	0.58	1.13	0.21	0.66	0.02	0.4	0.4	Low	0.4
143	F26	5258.3	0.16	0.19	0.26				3	0.00	0.2	0.05	0.36	1.78	1.28	0.46	2.28	0.03	0.3	0.3	Med	0.3
144	G25	8218.3	0.75	0.63	0.58				3	0.00	0.7	0.09	0.62	0.95	1.16	0.72	1.09	0.05	0.8	0.9	Low	0.8
145	G26	9346.7	0.45	0.48	0.54				3	0.01	0.5	0.05	0.32	0.66	1.14	0.37	0.75	0.03	0.6	0.6	Low	0.6
146	H25	10000.0	0.83	0.66	0.76				3	0.01	0.8	0.09	0.60	0.81	1.15	0.69	0.92	0.05	0.9	1.0	Low	0.9
147	I25	7781.1	0.52	0.36	0.5				3	0.00	0.5	0.09	0.62	1.34	1.20	0.74	1.61	0.05	0.6	0.7	Med	0.7
148	J22	10000.0	1.6	1.1	1.3				3	0.01	1.3	0.25	1.78	1.33	1.20	2.14	1.60	0.15	1.8	2.0	Med	2.0
149	J23	10000.4	0.7	0.39	0.69				3	0.01	0.6	0.18	1.25	2.10	1.35	1.68	2.83	0.10	0.9	1.0	Med	1.0
150	J24	7428.9	0.074	0.36	0.39				3	0.00	0.3	0.17	1.23	4.49	2.28	2.82	10.26	0.10	0.6	0.7	High	0.7
151	J25	6743.5	0.57	0.39	0.57				3	0.00	0.5	0.10	0.73	1.44	1.22	0.89	1.75	0.06	0.7	0.8	Med	0.8
152	K22	10000.0	0.66	0.76	0.99				3	0.01	0.8	0.17	1.20	1.49	1.22	1.47	1.82	0.10	1.1	1.2	Med	1.2

Row #	IDs/Names of the Smaller DUs	DU Area (Sq feet)	Replicate field sample concentrations						Number of Replicates	Weight	Arithmetic Mean	SD of Replicates	calc'd SD of Increments	calc'd CV for the DU	Adj Factor	adj'd SD of Increments	adj'd CV for DU	SE of DU	95% UCL			
			Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6											Student's-t	Chebychev	CV of Increments	95% UCL
153	L22	10000.0	0.31	0.36	0.46				3	0.01	0.4	0.08	0.54	1.43	1.22	0.66	1.74	0.04	0.5	0.6	Med	0.6
154	M22	10000.0	0.64	0.73	0.57				3	0.01	0.6	0.08	0.57	0.88	1.15	0.65	1.01	0.05	0.8	0.8	Low	0.8
155	N22	10000.0	0.64	0.53	0.46				3	0.01	0.5	0.09	0.64	1.18	1.18	0.76	1.40	0.05	0.7	0.8	Low	0.7
156	O22	10000.0	1.8	1.5	1.5				3	0.01	1.6	0.17	1.22	0.77	1.14	1.40	0.88	0.10	1.9	2.0	Low	1.9
157	P22	10000.0	0.3	0.29	0.32				3	0.01	0.3	0.02	0.11	0.36	1.13	0.12	0.40	0.01	0.3	0.3	Low	0.3
158	Q22	10000.0	0.44	0.36	0.58				3	0.01	0.5	0.11	0.79	1.71	1.26	0.99	2.16	0.06	0.6	0.7	Med	0.7
159	R22	7999.4	1.9	0.56	0.45				3	0.00	1.0	0.81	5.71	5.88	3.17	18.11	18.67	0.47	2.3	3.0	High	3.0
160	S22	10000.0	1.1	0.86	0.78				3	0.01	0.9	0.17	1.18	1.29	1.20	1.41	1.54	0.10	1.2	1.3	Med	1.3
161	T22	9920.3	1.2	1.3	0.85				3	0.01	1.1	0.24	1.67	1.50	1.23	2.05	1.83	0.14	1.5	1.7	Med	1.7
162	U22	6762.1	1.8	1.2	1.3				3	0.00	1.4	0.32	2.27	1.59	1.24	2.82	1.97	0.19	2.0	2.2	Med	2.2
163	V22	10000.0	0.79	0.79	0.76				3	0.01	0.8	0.02	0.12	0.16	1.13	0.14	0.18	0.01	0.8	0.8	Low	0.8
164	W22	10000.0	0.81	0.77	0.69				3	0.01	0.8	0.06	0.43	0.57	1.13	0.49	0.65	0.04	0.9	0.9	Low	0.9
165	W23	10000.0	0.87	0.6	0.62				3	0.01	0.7	0.15	1.06	1.53	1.23	1.31	1.88	0.09	1.0	1.1	Med	1.1
166	W24	10000.0	1.7	0.96	0.53	0.5	0.56		5	0.01	0.9	0.51	3.61	4.25	2.00	7.22	8.50	0.23	1.3	1.8	High	1.8
167	X24	10000.0	0.89	0.61	0.81				3	0.01	0.8	0.14	1.02	1.32	1.20	1.22	1.59	0.08	1.0	1.1	Med	1.1
168	Y24	10000.0	0.42	0.41	0.51				3	0.01	0.4	0.06	0.39	0.87	1.15	0.45	1.00	0.03	0.5	0.6	Low	0.5
169	Z24	10000.0	0.84	0.81	1.1				3	0.01	0.9	0.16	1.13	1.23	1.19	1.34	1.46	0.09	1.2	1.3	Low	1.2
	Sum:	1734193	--	--	--	--	--	--	509	0.99	0.421	0.00	0.01	0.01	NA	0.01	0.02	0.00	0.4	0.4	Low	0.42

df by Welch-Satterthwaite approximation:	**4.3**

Recommended UCL: **0.422** **mg/kg** >> Student's t 95% UCL

Note: Student's-t or Chebychev 95% UCL may be appropriate.

*Student's t UCL is acceptable if adj'd CV for DU is "Low" (e.g., CV ≤ 1.5). The User should consult the instructions for additional guidance on which 95% UCL is recommended for specific data sets.

Notes

adj'd	= adjusted	df	= degrees of freedom	SD	= arithmetic standard deviation
calc'd	= calculated	DU	= decision unit	SE	= standard error
CV	= coefficient of variation	RSD	= relative standard deviation	95% UCL	= 95% upper confidence limit for arithmetic mean

Calculation of Weighted 95% UCLs for a Combined Decision Unit (DU) from Several Smaller DUs Having Replicate Incremental Samples

Enter information in green highlighted cells. See the "Instructions" tab for detailed instructions.

Project ID:	Fort Wingate Inner Fence
Property/Sample ID:	Inner Fence Area Grids
Date of calculations:	7/6/2024
Calculator completed by:	CMC
Analyte:	Chromium
Analyte units:	mg/kg
DU metric units:	Sq feet
Notes:	

Click in green cell below to select from drop-down menu

DU size metric: area, volume, or depth interval: Area

Note: Assumes all replicates have the same number of increments

Number of increments per replicate: 50

Row #	IDs/Names of the Smaller DUs	DU Area (Sq feet)	Replicate field sample concentrations						Number of Replicates	Weight	Arithmetic Mean	SD of Replicates	calc'd SD of Increments	calc'd CV for the DU	Adj Factor	adj'd SD of Increments	adj'd CV for DU	SE of DU	95% UCL			
			Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6											Student's-t	Chebychev	CV of Increments	95% UCL
1	AA32	10000.0	13	15	14				3	0.01	14.0	1.00	7.07	0.51	1.13	7.99	0.57	0.58	15.7	16.5	Low	15.7
2	AB27	10000.0	15	15	14				3	0.01	14.7	0.58	4.08	0.28	1.13	4.60	0.31	0.33	15.6	16.1	Low	15.6
3	AB38	13378.0	10	9.2	9.9				3	0.01	9.7	0.44	3.08	0.32	1.13	3.47	0.36	0.25	10.4	10.8	Low	10.4
4	AC34	10000.0	11	9.4	10				3	0.01	10.1	0.81	5.72	0.56	1.13	6.47	0.64	0.47	11.5	12.2	Low	11.5
5	AD28	10000.0	12	11	11				3	0.01	11.3	0.58	4.08	0.36	1.13	4.60	0.41	0.33	12.3	12.8	Low	12.3
6	AD34	10000.0	10	10	8.9				3	0.01	9.6	0.64	4.49	0.47	1.13	5.07	0.53	0.37	10.7	11.2	Low	10.7
7	AE27	9999.9	9.4	11	10				3	0.01	10.1	0.81	5.72	0.56	1.13	6.47	0.64	0.47	11.5	12.2	Low	11.5
8	AE38	13378.0	11	11	9.9				3	0.01	10.6	0.64	4.49	0.42	1.13	5.07	0.48	0.37	11.7	12.2	Low	11.7
9	AF29	10000.0	12	10	12				3	0.01	11.3	1.15	8.16	0.72	1.14	9.31	0.82	0.67	13.3	14.2	Low	13.3
10	AF30	10000.0	12	16	12				3	0.01	13.3	2.31	16.33	1.22	1.19	19.39	1.45	1.33	17.2	19.1	Low	17.2
11	AF32	10000.0	13	11	10				3	0.01	11.3	1.53	10.80	0.95	1.16	12.51	1.10	0.88	13.9	15.2	Low	13.9
12	AF34	10000.0	14	13	13				3	0.01	13.3	0.58	4.08	0.31	1.13	4.60	0.34	0.33	14.3	14.8	Low	14.3
13	AH28	10000.0	9	12	8.3				3	0.01	9.8	1.97	13.90	1.42	1.21	16.88	1.73	1.13	13.1	14.7	Med	14.7
14	AH39	10617.1	11	11	9.4				3	0.01	10.5	0.92	6.53	0.62	1.14	7.42	0.71	0.53	12.0	12.8	Low	12.0
15	AI26	10000.0	13	13	14				3	0.01	13.3	0.58	4.08	0.31	1.13	4.60	0.34	0.33	14.3	14.8	Low	14.3
16	AI29	10000.0	15	14	13				3	0.01	14.0	1.00	7.07	0.51	1.13	7.99	0.57	0.58	15.7	16.5	Low	15.7
17	AI31	10000.0	16	15	16				3	0.01	15.7	0.58	4.08	0.26	1.13	4.60	0.29	0.33	16.6	17.1	Low	16.6
18	AJ26	10000.0	14	13	11				3	0.01	12.7	1.53	10.80	0.85	1.15	12.42	0.98	0.88	15.2	16.5	Low	15.2
19	AJ27	10000.0	15	15	14				3	0.01	14.7	0.58	4.08	0.28	1.13	4.60	0.31	0.33	15.6	16.1	Low	15.6
20	AJ31	10000.0	14	16	17				3	0.01	15.7	1.53	10.80	0.69	1.14	12.30	0.79	0.88	18.2	19.5	Low	18.2
21	AJ33	10000.0	13	13	13				3	0.01	13.0	0.00	0.00	0.00	1.13	0.00	0.00	0.00	13.0	13.0	Low	13.0
22	AK28	10000.0	14	15	15				3	0.01	14.7	0.58	4.08	0.28	1.13	4.60	0.31	0.33	15.6	16.1	Low	15.6
23	AK36	10000.0	14	15	14				3	0.01	14.3	0.58	4.08	0.28	1.13	4.60	0.32	0.33	15.3	15.8	Low	15.3
24	AL27	10000.0	14	13	13				3	0.01	13.3	0.58	4.08	0.31	1.13	4.60	0.34	0.33	14.3	14.8	Low	14.3
25	AL34	10000.0	13	13	13				3	0.01	13.0	0.00	0.00	0.00	1.13	0.00	0.00	0.00	13.0	13.0	Low	13.0
26	AL39	7384.7	12	11	11				3	0.00	11.3	0.58	4.08	0.36	1.13	4.60	0.41	0.33	12.3	12.8	Low	12.3
27	AM29	10000.0	13	12	13				3	0.01	12.7	0.58	4.08	0.32	1.13	4.60	0.36	0.33	13.6	14.1	Low	13.6
28	AM33	10000.0	16	17	17				3	0.01	16.7	0.58	4.08	0.24	1.13	4.60	0.28	0.33	17.6	18.1	Low	17.6
29	AN27	10000.0	16	16	16				3	0.01	16.0	0.00	0.00	0.00	1.13	0.00	0.00	0.00	16.0	16.0	Low	16.0
30	AN28	10000.0	11	11	9.3				3	0.01	10.4	0.98	6.94	0.67	1.14	7.89	0.76	0.57	12.1	12.9	Low	12.1
31	AN38	6980.7	15	15	15				3	0.00	15.0	0.00	0.00	0.00	1.13	0.00	0.00	0.00	15.0	15.0	Low	15.0
32	AO26	10000.0	14	13	12				3	0.01	13.0	1.00	7.07	0.54	1.13	8.00	0.62	0.58	14.7	15.5	Low	14.7
33	AP28	8819.3	17	17	16				3	0.01	16.7	0.58	4.08	0.24	1.13	4.60	0.28	0.33	17.6	18.1	Low	17.6
34	AQ15	13466.3	12	13	9.5				3	0.01	11.5	1.80	12.75	1.11	1.17	14.96	1.30	1.04	14.5	16.0	Low	14.5
35	AQ22	11017.2	7.8	8	8.9				3	0.01	8.2	0.59	4.14	0.50	1.13	4.68	0.57	0.34	9.2	9.7	Low	9.2
36	C27	14788.0	5.3	6.2	6.2				3	0.01	5.9	0.52	3.67	0.62	1.14	4.17	0.71	0.30	6.8	7.2	Low	6.8
37	C35	9243.3	11	8.1	10				3	0.01	9.7	1.47	10.42	1.07	1.17	12.19	1.26	0.85	12.2	13.4	Low	12.2
38	C37	7935.9	8.7	9	7.4				3	0.00	8.4	0.85	6.01	0.72	1.14	6.86	0.82	0.49	9.8	10.5	Low	9.8
39	E27	14436.0	8.4	9.6	12				3	0.01	10.0	1.83	12.96	1.30	1.20	15.51	1.55	1.06	13.1	14.6	Med	14.6
40	F32	10000.0	12	11	11				3	0.01	11.3	0.58	4.08	0.36	1.13	4.60	0.41	0.33	12.3	12.8	Low	12.3
41	G30	10000.0	12	9.9	12				3	0.01	11.3	1.21	8.57	0.76	1.14	9.80	0.87	0.70	13.3	14.4	Low	13.3
42	H35	10000.0	14	13	13				3	0.01	13.3	0.58	4.08	0.31	1.13	4.60	0.34	0.33	14.3	14.8	Low	14.3
43	H39	12972.6	8.9	8.8	7.4				3	0.01	8.4	0.84	5.93	0.71	1.14	6.76	0.81	0.48	9.8	10.5	Low	9.8

Row #	IDs/Names of the Smaller DUs	DU Area (Sq feet)	Replicate field sample concentrations						Number of Replicates	Weight	Arithmetic Mean	SD of Replicates	calc'd SD of Increments	calc'd CV for the DU	Adj Factor	adj'd SD of Increments	adj'd CV for DU	SE of DU	95% UCL			
			Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6											Student's-t	Chebychev	CV of Increments	95% UCL
44	I29	10000.0	9.3	8.9	9.7				3	0.01	9.3	0.40	2.83	0.30	1.13	3.19	0.34	0.23	10.0	10.3	Low	10.0
45	I30	10000.0	7.9	7.4	9				3	0.01	8.1	0.82	5.79	0.71	1.14	6.60	0.81	0.47	9.5	10.2	Low	9.5
46	I33	10000.0	11	11	9.1				3	0.01	10.4	1.10	7.76	0.75	1.14	8.86	0.85	0.63	12.2	13.1	Low	12.2
47	I38	12991.4	9.3	9.2	100				3	0.01	39.5	52.39	370.49	9.38	6.50	2407.47	60.95	30.25	127.8	171.4	High	171.4
48	K30	10000.0	9.2	11	8.2				3	0.01	9.5	1.42	10.03	1.06	1.17	11.72	1.24	0.82	11.9	13.0	Low	11.9
49	K34	10000.0	11	10	11				3	0.01	10.7	0.58	4.08	0.38	1.13	4.60	0.43	0.33	11.6	12.1	Low	11.6
50	L29	10000.0	9.5	11	11				3	0.01	10.5	0.87	6.12	0.58	1.13	6.94	0.66	0.50	12.0	12.7	Low	12.0
51	L34	10000.0	9.5	8.1	11				3	0.01	9.5	1.45	10.26	1.08	1.17	12.00	1.26	0.84	12.0	13.2	Low	12.0
52	L37	10000.0	13	14	16				3	0.01	14.3	1.53	10.80	0.75	1.14	12.34	0.86	0.88	16.9	18.2	Low	16.9
53	M28	10000.0	13	11	13				3	0.01	12.3	1.15	8.16	0.66	1.14	9.29	0.75	0.67	14.3	15.2	Low	14.3
54	M32	10000.0	10	9.9	9.4				3	0.01	9.8	0.32	2.27	0.23	1.13	2.56	0.26	0.19	10.3	10.6	Low	10.3
55	M39	13011.8	14	9.3	11				3	0.01	11.4	2.38	16.83	1.47	1.22	20.57	1.80	1.37	15.4	17.4	Med	17.4
56	N27	10000.0	14	12	11				3	0.01	12.3	1.53	10.80	0.88	1.15	12.44	1.01	0.88	14.9	16.2	Low	14.9
57	N28	10000.0	15	13	12				3	0.01	13.3	1.53	10.80	0.81	1.15	12.38	0.93	0.88	15.9	17.2	Low	15.9
58	N37	10000.0	11	11	13				3	0.01	11.7	1.15	8.16	0.70	1.14	9.30	0.80	0.67	13.6	14.6	Low	13.6
59	O27	10000.0	10	7.8	11				3	0.01	9.6	1.64	11.58	1.21	1.18	13.72	1.43	0.95	12.4	13.7	Low	12.4
60	O32	10000.0	9.4	8.1	8.2				3	0.01	8.6	0.72	5.12	0.60	1.13	5.80	0.68	0.42	9.8	10.4	Low	9.8
61	O37	10000.0	11	12	11				3	0.01	11.3	0.58	4.08	0.36	1.13	4.60	0.41	0.33	12.3	12.8	Low	12.3
62	P32	10000.0	9.4	6.9	8.5				3	0.01	8.3	1.27	8.95	1.08	1.17	10.48	1.27	0.73	10.4	11.5	Low	10.4
63	P33	10000.0	11	7.3	11				3	0.01	9.8	2.14	15.11	1.55	1.23	18.64	1.91	1.23	13.4	15.1	Med	15.1
64	Q26	10000.0	13	13	13				3	0.01	13.0	0.00	0.00	0.00	1.13	0.00	0.00	0.00	13.0	13.0	Low	13.0
65	Q29	10000.0	10	12	11				3	0.01	11.0	1.00	7.07	0.64	1.14	8.03	0.73	0.58	12.7	13.5	Low	12.7
66	Q38	13187.6	9.7	8.6	7.5				3	0.01	8.6	1.10	7.78	0.90	1.15	8.97	1.04	0.64	10.5	11.4	Low	10.5
67	Q39	13187.6	9.5	11	12				3	0.01	10.8	1.26	8.90	0.82	1.15	10.21	0.94	0.73	13.0	14.0	Low	13.0
68	R24	10000.0	10	9.7	11				3	0.01	10.2	0.68	4.81	0.47	1.13	5.44	0.53	0.39	11.4	11.9	Low	11.4
69	R32	10000.0	11	8.6	8.8				3	0.01	9.5	1.33	9.42	0.99	1.16	10.94	1.16	0.77	11.7	12.8	Low	11.7
70	S26	10000.0	14	17	19				3	0.01	16.7	2.52	17.80	1.07	1.17	20.81	1.25	1.45	20.9	23.0	Low	20.9
71	S29	10000.0	12	13	12				3	0.01	12.3	0.58	4.08	0.33	1.13	4.60	0.37	0.33	13.3	13.8	Low	13.3
72	S36	10000.0	10	10	10				3	0.01	10.0	0.00	0.00	0.00	1.13	0.00	0.00	0.00	10.0	10.0	Low	10.0
73	T23	10000.0	22	15	14				3	0.01	17.0	4.36	30.82	1.81	1.28	39.56	2.33	2.52	24.3	28.0	Med	28.0
74	T28	10000.0	12	14	15				3	0.01	13.7	1.53	10.80	0.79	1.15	12.37	0.90	0.88	16.2	17.5	Low	16.2
75	T32	10000.0	11	10	9.5				3	0.01	10.2	0.76	5.40	0.53	1.13	6.11	0.60	0.44	11.5	12.1	Low	11.5
76	T39	13380.2	11	12	12				3	0.01	11.7	0.58	4.08	0.35	1.13	4.60	0.39	0.33	12.6	13.1	Low	12.6
77	U28	10000.0	13	14	14				3	0.01	13.7	0.58	4.08	0.30	1.13	4.60	0.34	0.33	14.6	15.1	Low	14.6
78	U32	10000.0	11	11	8.8				3	0.01	10.3	1.27	8.98	0.87	1.15	10.34	1.01	0.73	12.4	13.5	Low	12.4
79	U33	10000.0	8.8	8	8.5				3	0.01	8.4	0.40	2.86	0.34	1.13	3.22	0.38	0.23	9.1	9.5	Low	9.1
80	U35	10000.0	11	10	9.3				3	0.01	10.1	0.85	6.04	0.60	1.13	6.85	0.68	0.49	11.5	12.3	Low	11.5
81	U37	10000.0	9.7	10	10				3	0.01	9.9	0.17	1.22	0.12	1.13	1.38	0.14	0.10	10.2	10.3	Low	10.2
82	V30	10000.0	13	13	13				3	0.01	13.0	0.00	0.00	0.00	1.13	0.00	0.00	0.00	13.0	13.0	Low	13.0
83	V33	10000.0	11	9.9	9.3				3	0.01	10.1	0.86	6.10	0.61	1.13	6.92	0.69	0.50	11.5	12.2	Low	11.5
84	V36	10000.0	8.7	9.5	9.7				3	0.01	9.3	0.53	3.74	0.40	1.13	4.22	0.45	0.31	10.2	10.6	Low	10.2
85	W26	10000.0	19	18	18				3	0.01	18.3	0.58	4.08	0.22	1.13	4.60	0.25	0.33	19.3	19.8	Low	19.3
86	W28	10000.0	17	16	20				3	0.01	17.7	2.08	14.72	0.83	1.15	16.90	0.96	1.20	21.2	22.9	Low	21.2
87	W31	10000.0	13	11	12				3	0.01	12.0	1.00	7.07	0.59	1.13	8.02	0.67	0.58	13.7	14.5	Low	13.7
88	W34	10000.0	13	14	11				3	0.01	12.7	1.53	10.80	0.85	1.15	12.42	0.98	0.88	15.2	16.5	Low	15.2
89	W39	13397.6	11	9.6	9.7				3	0.01	10.1	0.78	5.52	0.55	1.13	6.25	0.62	0.45	11.4	12.1	Low	11.4
90	X25	10000.0	13	13	13				3	0.01	13.0	0.00	0.00	0.00	1.13	0.00	0.00	0.00	13.0	13.0	Low	13.0
91	X33	10000.0	11	11	9.8				3	0.01	10.6	0.69	4.90	0.46	1.13	5.53	0.52	0.40	11.8	12.3	Low	11.8
92	X36	10000.0	8.2	9	8.9				3	0.01	8.7	0.44	3.08	0.35	1.13	3.47	0.40	0.25	9.4	9.8	Low	9.4
93	Z29	10000.0	15	15	16				3	0.01	15.3	0.58	4.08	0.27	1.13	4.60	0.30	0.33	16.3	16.8	Low	16.3
94	AA24	10000.0	14	13	13				3	0.01	13.3	0.58	4.08	0.31	1.13	4.60	0.34	0.33	14.3	14.8	Low	14.3
95	AB24	10000.0	9	10	10				3	0.01	9.7	0.58	4.08	0.42	1.13	4.61	0.48	0.33	10.6	11.1	Low	10.6
96	AB25	10000.0	13	11	12				3	0.01	12.0	1.00	7.07	0.59	1.13	8.02	0.67	0.58	13.7	14.5	Low	13.7
97	AC25	10000.0	14	14	15				3	0.01	14.3	0.58	4.08	0.28	1.13	4.60	0.32	0.33	15.3	15.8	Low	15.3
98	AD25	10000.0	11	10	12				3	0.01	11.0	1.00	7.07	0.64	1.14	8.03	0.73	0.58	12.7	13.5	Low	12.7
99	AE25	10000.0	8.3	8.7	8.8				3	0.01	8.6	0.26	1.87	0.22	1.13	2.11	0.25	0.15	9.0	9.3	Low	9.0
100	AF25	10000.0	11	10	10				3	0.01	10.3	0.58	4.08	0.40	1.13	4.60	0.45	0.33	11.3	11.8	Low	11.3

Row #	IDs/Names of the Smaller DUs	DU Area (Sq feet)	Replicate field sample concentrations						Number of Replicates	Weight	Arithmetic Mean	SD of Replicates	calc'd SD of Increments	calc'd CV for the DU	Adj Factor	adj'd SD of Increments	adj'd CV for DU	SE of DU	95% UCL			
			Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6											Student's-t	Chebychev	CV of Increments	95% UCL
101	AG25	10000.0	15	14	15				3	0.01	14.7	0.58	4.08	0.28	1.13	4.60	0.31	0.33	15.6	16.1	Low	15.6
102	AH24	10000.0	11	10	8.7				3	0.01	9.9	1.15	8.15	0.82	1.15	9.36	0.95	0.67	11.8	12.8	Low	11.8
103	AI23	10000.0	15	14	14				3	0.01	14.3	0.58	4.08	0.28	1.13	4.60	0.32	0.33	15.3	15.8	Low	15.3
104	AI24	10000.0	10	9.2	8.9				3	0.01	9.4	0.57	4.02	0.43	1.13	4.54	0.48	0.33	10.3	10.8	Low	10.3
105	AJ23	10000.0	13	12	13				3	0.01	12.7	0.58	4.08	0.32	1.13	4.60	0.36	0.33	13.6	14.1	Low	13.6
106	AK23	10000.0	14	12	18				3	0.01	14.7	3.06	21.60	1.47	1.22	26.41	1.80	1.76	19.8	22.4	Med	22.4
107	AL23	10000.0	15	12	17				3	0.01	14.7	2.52	17.80	1.21	1.19	21.10	1.44	1.45	18.9	21.0	Low	18.9
108	AL24	10000.0	15	13	15				3	0.01	14.3	1.15	8.16	0.57	1.13	9.25	0.65	0.67	16.3	17.2	Low	16.3
109	AL25	10000.0	13	14	14				3	0.01	13.7	0.58	4.08	0.30	1.13	4.60	0.34	0.33	14.6	15.1	Low	14.6
110	AM25	10000.0	14	13	14				3	0.01	13.7	0.58	4.08	0.30	1.13	4.60	0.34	0.33	14.6	15.1	Low	14.6
111	AN25	10000.0	15	14	12				3	0.01	13.7	1.53	10.80	0.79	1.15	12.37	0.90	0.88	16.2	17.5	Low	16.2
112	AO25	10000.0	14	12	14				3	0.01	13.3	1.15	8.16	0.61	1.13	9.27	0.69	0.67	15.3	16.2	Low	15.3
113	AP8	12741.9	5.4	5	5.2				3	0.01	5.2	0.20	1.41	0.27	1.13	1.59	0.31	0.12	5.5	5.7	Low	5.5
114	AP9	12741.9	10	8.5	8.9				3	0.01	9.1	0.78	5.49	0.60	1.13	6.23	0.68	0.45	10.4	11.1	Low	10.4
115	AP10	12742.0	11	12	12				3	0.01	11.7	0.58	4.08	0.35	1.13	4.60	0.39	0.33	12.6	13.1	Low	12.6
116	AP11	12741.9	12	17	18				3	0.01	15.7	3.21	22.73	1.45	1.22	27.71	1.77	1.86	21.1	23.8	Med	23.8
117	AP12	12742.0	14	15	13				3	0.01	14.0	1.00	7.07	0.51	1.13	7.99	0.57	0.58	15.7	16.5	Low	15.7
118	AP14	12741.6	13	13	8.8				3	0.01	11.6	2.42	17.15	1.48	1.22	20.97	1.81	1.40	15.7	17.7	Med	17.7
119	AP15	12742.2	15	15	15				3	0.01	15.0	0.00	0.00	0.00	1.13	0.00	0.00	0.00	15.0	15.0	Low	15.0
120	AP16	12741.9	11	12	10				3	0.01	11.0	1.00	7.07	0.64	1.14	8.03	0.73	0.58	12.7	13.5	Low	12.7
121	AP17	12741.9	11	12	13				3	0.01	12.0	1.00	7.07	0.59	1.13	8.02	0.67	0.58	13.7	14.5	Low	13.7
122	AP18	12741.9	7	9.6	8.7				3	0.01	8.4	1.32	9.34	1.11	1.17	10.96	1.30	0.76	10.7	11.8	Low	10.7
123	AP19	12741.9	10	8.1	9				3	0.01	9.0	0.95	6.72	0.74	1.14	7.67	0.85	0.55	10.6	11.4	Low	10.6
124	AP20	12741.9	10	10	11				3	0.01	10.3	0.58	4.08	0.40	1.13	4.60	0.45	0.33	11.3	11.8	Low	11.3
125	AP21	12741.9	9.4	10	8.3				3	0.01	9.2	0.86	6.10	0.66	1.14	6.93	0.75	0.50	10.7	11.4	Low	10.7
126	AP22	12742.0	9	9.9	7.7				3	0.01	8.9	1.11	7.82	0.88	1.15	9.01	1.02	0.64	10.7	11.7	Low	10.7
127	AP25	12741.8	11	11	10				3	0.01	10.7	0.58	4.08	0.38	1.13	4.60	0.43	0.33	11.6	12.1	Low	11.6
128	AQ23	10435.9	11	10	10				3	0.01	10.3	0.58	4.08	0.40	1.13	4.60	0.45	0.33	11.3	11.8	Low	11.3
129	AQ24	9852.5	9.1	9.3	11				3	0.01	9.8	1.04	7.38	0.75	1.14	8.43	0.86	0.60	11.6	12.4	Low	11.6
130	B8	8381.5	9.7	9.1	8.7				3	0.00	9.2	0.50	3.56	0.39	1.13	4.01	0.44	0.29	10.0	10.4	Low	10.0
131	B20	7901.2	9.2	8.4	10				3	0.00	9.2	0.80	5.66	0.61	1.13	6.42	0.70	0.46	10.5	11.2	Low	10.5
132	B21	7425.3	9.8	11	10				3	0.00	10.3	0.64	4.55	0.44	1.13	5.13	0.50	0.37	11.4	11.9	Low	11.4
133	B22	6933.6	11	10	9.6				3	0.00	10.2	0.72	5.10	0.50	1.13	5.76	0.57	0.42	11.4	12.0	Low	11.4
134	C8	9158.1	9.7	11	11				3	0.01	10.6	0.75	5.31	0.50	1.13	6.00	0.57	0.43	11.8	12.5	Low	11.8
135	C22	6929.0	9.5	9.5	11				3	0.00	10.0	0.87	6.12	0.61	1.13	6.95	0.69	0.50	11.5	12.2	Low	11.5
136	D8	9410.4	7	6.4	7.3				3	0.01	6.9	0.46	3.24	0.47	1.13	3.66	0.53	0.26	7.7	8.1	Low	7.7
137	D22	10000.0	11	9.5	11				3	0.01	10.5	0.87	6.12	0.58	1.13	6.94	0.66	0.50	12.0	12.7	Low	12.0
138	E22	10000.0	13	12	14				3	0.01	13.0	1.00	7.07	0.54	1.13	8.00	0.62	0.58	14.7	15.5	Low	14.7
139	E23	10000.0	8	9.8	11				3	0.01	9.6	1.51	10.68	1.11	1.17	12.54	1.31	0.87	12.1	13.4	Low	12.1
140	E24	10000.0	10	10	11				3	0.01	10.3	0.58	4.08	0.40	1.13	4.60	0.45	0.33	11.3	11.8	Low	11.3
141	E25	10000.0	11	10	11				3	0.01	10.7	0.58	4.08	0.38	1.13	4.60	0.43	0.33	11.6	12.1	Low	11.6
142	E26	13604.3	10	10	11				3	0.01	10.3	0.58	4.08	0.40	1.13	4.60	0.45	0.33	11.3	11.8	Low	11.3
143	F26	5258.3	7.2	7.3	8.6				3	0.00	7.7	0.78	5.52	0.72	1.14	6.30	0.82	0.45	9.0	9.7	Low	9.0
144	G25	8218.3	12	14	13				3	0.00	13.0	1.00	7.07	0.54	1.13	8.00	0.62	0.58	14.7	15.5	Low	14.7
145	G26	9346.7	9.8	12	12				3	0.01	11.3	1.27	8.98	0.80	1.15	10.29	0.91	0.73	13.4	14.5	Low	13.4
146	H25	10000.0	15	12	15				3	0.01	14.0	1.73	12.25	0.87	1.15	14.10	1.01	1.00	16.9	18.4	Low	16.9
147	I25	7781.1	12	9.4	12				3	0.00	11.1	1.50	10.61	0.95	1.16	12.29	1.10	0.87	13.7	14.9	Low	13.7
148	J22	10000.0	19	17	18				3	0.01	18.0	1.00	7.07	0.39	1.13	7.97	0.44	0.58	19.7	20.5	Low	19.7
149	J23	10000.4	13	11	14				3	0.01	12.7	1.53	10.80	0.85	1.15	12.42	0.98	0.88	15.2	16.5	Low	15.2
150	J24	7428.9	6.8	8.7	10				3	0.00	8.5	1.61	11.38	1.34	1.20	13.68	1.61	0.93	11.2	12.6	Med	12.6
151	J25	6743.5	14	12	13				3	0.00	13.0	1.00	7.07	0.54	1.13	8.00	0.62	0.58	14.7	15.5	Low	14.7
152	K22	10000.0	11	12	19				3	0.01	14.0	4.36	30.82	2.20	1.37	42.26	3.02	2.52	21.3	25.0	High	25.0
153	L22	10000.0	9.5	9.5	13				3	0.01	10.7	2.02	14.29	1.34	1.20	17.18	1.61	1.17	14.1	15.8	Med	15.8
154	M22	10000.0	15	16	12				3	0.01	14.3	2.08	14.72	1.03	1.17	17.15	1.20	1.20	17.8	19.6	Low	17.8
155	N22	10000.0	12	14	11				3	0.01	12.3	1.53	10.80	0.88	1.15	12.44	1.01	0.88	14.9	16.2	Low	14.9
156	O22	10000.0	23	21	20				3	0.01	21.3	1.53	10.80	0.51	1.13	12.21	0.57	0.88	23.9	25.2	Low	23.9
157	P22	10000.0	14	13	14				3	0.01	13.7	0.58	4.08	0.30	1.13	4.60	0.34	0.33	14.6	15.1	Low	14.6

Row #	IDs/Names of the Smaller DUs	DU Area (Sq feet)	Replicate field sample concentrations						Number of Replicates	Weight	Arithmetic Mean	SD of Replicates	calc'd SD of Increments	calc'd CV for the DU	Adj Factor	adj'd SD of Increments	adj'd CV for DU	SE of DU	95% UCL			
			Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6											Student's-t	Chebychev	CV of Increments	95% UCL
158	Q22	10000.0	23	17	17				3	0.01	19.0	3.46	24.49	1.29	1.20	29.29	1.54	2.00	24.8	27.7	Med	27.7
159	R22	7999.4	32	17	15				3	0.00	21.3	9.29	65.70	3.08	1.64	107.86	5.06	5.36	37.0	44.7	High	44.7
160	S22	10000.0	16	12	15				3	0.01	14.3	2.08	14.72	1.03	1.17	17.15	1.20	1.20	17.8	19.6	Low	17.8
161	T22	9920.3	15	19	14				3	0.01	16.0	2.65	18.71	1.17	1.18	22.09	1.38	1.53	20.5	22.7	Low	20.5
162	U22	6762.1	24	22	62				3	0.00	36.0	22.54	159.37	4.43	2.25	358.58	9.96	13.01	74.0	92.7	High	92.7
163	V22	10000.0	11	13	14				3	0.01	12.7	1.53	10.80	0.85	1.15	12.42	0.98	0.88	15.2	16.5	Low	15.2
164	W22	10000.0	12	14	13				3	0.01	13.0	1.00	7.07	0.54	1.13	8.00	0.62	0.58	14.7	15.5	Low	14.7
165	W23	10000.0	16	14	14				3	0.01	14.7	1.15	8.16	0.56	1.13	9.25	0.63	0.67	16.6	17.6	Low	16.6
166	W24	10000.0	19	16	12	12	12		5	0.01	14.2	3.19	22.58	1.59	1.13	25.53	1.80	1.43	17.2	20.4	Med	20.4
167	X24	10000.0	16	16	16				3	0.01	16.0	0.00	0.00	0.00	1.13	0.00	0.00	0.00	16.0	16.0	Low	16.0
168	Y24	10000.0	12	12	13				3	0.01	12.3	0.58	4.08	0.33	1.13	4.60	0.37	0.33	13.3	13.8	Low	13.3
169	Z24	10000.0	14	13	17				3	0.01	14.7	2.08	14.72	1.00	1.16	17.12	1.17	1.20	18.2	19.9	Low	18.2
	Sum:	1734193	--	--	--	--	--	--	509	1.00	12.19	0.01	0.05	0.00	NA	0.06	0.00	0.00	12.2	12.2	Low	12.2

df by Welch-Satterthwaite approximation:	**4.6**

Recommended UCL: **12.2** **mg/kg** >> Student's t 95% UCL

Note: Student's-t or Chebychev 95% UCL may be appropriate.

*Student's t UCL is acceptable if adj'd CV for DU is "Low" (e.g., CV ≤ 1.5). The User should consult the instructions for additional guidance on which 95% UCL is recommended for specific data sets.

Notes

adj'd	= adjusted	df	= degrees of freedom	SD	= arithmetic standard deviation
calc'd	= calculated	DU	= decision unit	SE	= standard error
CV	= coefficient of variation	RSD	= relative standard deviation	95% UCL	= 95% upper confidence limit for arithmetic mean

Calculation of Weighted 95% UCLs for a Combined Decision Unit (DU) from Several Smaller DUs Having Replicate Incremental Samples

Enter information in green highlighted cells. See the "Instructions" tab for detailed instructions.

Project ID:	Fort Wingate Inner Fence
Property/Sample ID:	Inner Fence Area Grids
Date of calculations:	7/6/2024
Calculator completed by:	CMC
Analyte:	Cobalt
Analyte units:	mg/kg
DU metric units:	Sq feet
Notes:	

Click in green cell below to select from drop-down menu

DU size metric: area, volume, or depth interval: Area

Note: Assumes all replicates have the same number of increments

Number of increments per replicate: 50

Row #	IDs/Names of the Smaller DUs	DU Area (Sq feet)	Replicate field sample concentrations						Number of Replicates	Weight	Arithmetic Mean	SD of Replicates	calc'd SD of Increments	calc'd CV for the DU	Adj Factor	adj'd SD of Increments	adj'd CV for DU	SE of DU	95% UCL			
			Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6											Student's-t	Chebychev	CV of Increments	95% UCL
1	AA32	10000.0	5.4	6.3	6.2				3	0.01	6.0	0.49	3.49	0.58	1.13	3.95	0.66	0.28	6.8	7.2	Low	6.8
2	AB27	10000.0	5.2	5.7	5.4				3	0.01	5.4	0.25	1.78	0.33	1.13	2.01	0.37	0.15	5.9	6.1	Low	5.9
3	AB38	13378.0	5.3	5.5	5.2				3	0.01	5.3	0.15	1.08	0.20	1.13	1.22	0.23	0.09	5.6	5.7	Low	5.6
4	AC34	10000.0	5.2	5	4.9				3	0.01	5.0	0.15	1.08	0.21	1.13	1.22	0.24	0.09	5.3	5.4	Low	5.3
5	AD28	10000.0	5.2	5.1	5.3				3	0.01	5.2	0.10	0.71	0.14	1.13	0.80	0.15	0.06	5.4	5.5	Low	5.4
6	AD34	10000.0	4.5	4.8	4.2				3	0.01	4.5	0.30	2.12	0.47	1.13	2.40	0.53	0.17	5.0	5.3	Low	5.0
7	AE27	9999.9	4.3	5	4.6				3	0.01	4.6	0.35	2.48	0.54	1.13	2.81	0.61	0.20	5.2	5.5	Low	5.2
8	AE38	13378.0	5.6	5.8	5.3				3	0.01	5.6	0.25	1.78	0.32	1.13	2.01	0.36	0.15	6.0	6.2	Low	6.0
9	AF29	10000.0	4.9	4.6	4.8				3	0.01	4.8	0.15	1.08	0.23	1.13	1.22	0.26	0.09	5.0	5.2	Low	5.0
10	AF30	10000.0	4.9	5.3	5.2				3	0.01	5.1	0.21	1.47	0.29	1.13	1.66	0.32	0.12	5.5	5.7	Low	5.5
11	AF32	10000.0	5.1	4.7	4.5				3	0.01	4.8	0.31	2.16	0.45	1.13	2.44	0.51	0.18	5.3	5.5	Low	5.3
12	AF34	10000.0	5.5	5.4	5.2				3	0.01	5.4	0.15	1.08	0.20	1.13	1.22	0.23	0.09	5.6	5.8	Low	5.6
13	AH28	10000.0	3.8	4	3.2				3	0.01	3.7	0.42	2.94	0.80	1.15	3.37	0.92	0.24	4.4	4.7	Low	4.4
14	AH39	10617.1	5.6	5.6	5.4				3	0.01	5.5	0.12	0.82	0.15	1.13	0.92	0.17	0.07	5.7	5.8	Low	5.7
15	AI26	10000.0	5.1	5.1	4.9				3	0.01	5.0	0.12	0.82	0.16	1.13	0.92	0.18	0.07	5.2	5.3	Low	5.2
16	AI29	10000.0	6	6	6				3	0.01	6.0	0.00	0.00	0.00	1.13	0.00	0.00	0.00	6.0	6.0	Low	6.0
17	AI31	10000.0	6	6.1	5.9				3	0.01	6.0	0.10	0.71	0.12	1.13	0.80	0.13	0.06	6.2	6.3	Low	6.2
18	AJ26	10000.0	5.7	5.4	5				3	0.01	5.4	0.35	2.48	0.46	1.13	2.80	0.52	0.20	6.0	6.3	Low	6.0
19	AJ27	10000.0	5.8	5.7	5.6				3	0.01	5.7	0.10	0.71	0.12	1.13	0.80	0.14	0.06	5.9	6.0	Low	5.9
20	AJ31	10000.0	6.5	6.5	6.9				3	0.01	6.6	0.23	1.63	0.25	1.13	1.84	0.28	0.13	7.0	7.2	Low	7.0
21	AJ33	10000.0	5.3	5	4.9				3	0.01	5.1	0.21	1.47	0.29	1.13	1.66	0.33	0.12	5.4	5.6	Low	5.4
22	AK28	10000.0	5.5	5.6	5.5				3	0.01	5.5	0.06	0.41	0.07	1.13	0.46	0.08	0.03	5.6	5.7	Low	5.6
23	AK36	10000.0	5.7	5.8	5.8				3	0.01	5.8	0.06	0.41	0.07	1.13	0.46	0.08	0.03	5.9	5.9	Low	5.9
24	AL27	10000.0	6.1	5.5	5.8				3	0.01	5.8	0.30	2.12	0.37	1.13	2.39	0.41	0.17	6.3	6.6	Low	6.3
25	AL34	10000.0	4.8	4.7	4.9				3	0.01	4.8	0.10	0.71	0.15	1.13	0.80	0.17	0.06	5.0	5.1	Low	5.0
26	AL39	7384.7	5.5	5.5	5.6				3	0.00	5.5	0.06	0.41	0.07	1.13	0.46	0.08	0.03	5.6	5.7	Low	5.6
27	AM29	10000.0	5.6	5.4	5.8				3	0.01	5.6	0.20	1.41	0.25	1.13	1.59	0.28	0.12	5.9	6.1	Low	5.9
28	AM33	10000.0	6.3	6.3	6.3				3	0.01	6.3	0.00	0.00	0.00	1.13	0.00	0.00	0.00	6.3	6.3	Low	6.3
29	AN27	10000.0	6.2	6.1	6.2				3	0.01	6.2	0.06	0.41	0.07	1.13	0.46	0.07	0.03	6.3	6.3	Low	6.3
30	AN28	10000.0	5.2	5.7	4.8				3	0.01	5.2	0.45	3.19	0.61	1.13	3.62	0.69	0.26	6.0	6.4	Low	6.0
31	AN38	6980.7	5.7	5.6	5.8				3	0.00	5.7	0.10	0.71	0.12	1.13	0.80	0.14	0.06	5.9	6.0	Low	5.9
32	AO26	10000.0	5	4.6	4.6				3	0.01	4.7	0.23	1.63	0.34	1.13	1.84	0.39	0.13	5.1	5.3	Low	5.1
33	AP28	8819.3	6.1	6.3	6				3	0.01	6.1	0.15	1.08	0.18	1.13	1.22	0.20	0.09	6.4	6.5	Low	6.4
34	AQ15	13466.3	4.5	4.7	3.9				3	0.01	4.4	0.42	2.94	0.67	1.14	3.35	0.77	0.24	5.1	5.4	Low	5.1
35	AQ22	11017.2	3.2	3.4	3.7				3	0.01	3.4	0.25	1.78	0.52	1.13	2.01	0.59	0.15	3.9	4.1	Low	3.9
36	C27	14788.0	2.5	3	3.1				3	0.01	2.9	0.32	2.27	0.79	1.15	2.60	0.91	0.19	3.4	3.7	Low	3.4
37	C35	9243.3	4.4	3.8	4.3				3	0.01	4.2	0.32	2.27	0.55	1.13	2.57	0.62	0.19	4.7	5.0	Low	4.7
38	C37	7935.9	3.4	3.7	3.7				3	0.00	3.6	0.17	1.22	0.34	1.13	1.38	0.38	0.10	3.9	4.0	Low	3.9
39	E27	14436.0	3.4	3.7	4.1				3	0.01	3.7	0.35	2.48	0.67	1.14	2.82	0.76	0.20	4.3	4.6	Low	4.3
40	F32	10000.0	5.2	5	4.9				3	0.01	5.0	0.15	1.08	0.21	1.13	1.22	0.24	0.09	5.3	5.4	Low	5.3
41	G30	10000.0	5.3	4.3	4.9				3	0.01	4.8	0.50	3.56	0.74	1.14	4.06	0.84	0.29	5.7	6.1	Low	5.7
42	H35	10000.0	6.1	5.7	5.8				3	0.01	5.9	0.21	1.47	0.25	1.13	1.66	0.28	0.12	6.2	6.4	Low	6.2

Row #	IDs/Names of the Smaller DUs	DU Area (Sq feet)	Replicate field sample concentrations						Number of Replicates	Weight	Arithmetic Mean	SD of Replicates	calc'd SD of Increments	calc'd CV for the DU	Adj Factor	adj'd SD of Increments	adj'd CV for DU	SE of DU	95% UCL			
			Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6											Student's-t	Chebychev	CV of Increments	95% UCL
43	H39	12972.6	4.9	5.1	4.4				3	0.01	4.8	0.36	2.55	0.53	1.13	2.88	0.60	0.21	5.4	5.7	Low	5.4
44	I29	10000.0	4	4.7	4.3				3	0.01	4.3	0.35	2.48	0.57	1.13	2.81	0.65	0.20	4.9	5.2	Low	4.9
45	I30	10000.0	3.8	4	4.4				3	0.01	4.1	0.31	2.16	0.53	1.13	2.44	0.60	0.18	4.6	4.8	Low	4.6
46	I33	10000.0	5.2	5.3	4.4				3	0.01	5.0	0.49	3.49	0.70	1.14	3.97	0.80	0.28	5.8	6.2	Low	5.8
47	I38	12991.4	4.6	4.9	4.8				3	0.01	4.8	0.15	1.08	0.23	1.13	1.22	0.26	0.09	5.0	5.2	Low	5.0
48	K30	10000.0	4.7	5.3	4.4				3	0.01	4.8	0.46	3.24	0.68	1.14	3.69	0.77	0.26	5.6	6.0	Low	5.6
49	K34	10000.0	5.2	5.2	5.3				3	0.01	5.2	0.06	0.41	0.08	1.13	0.46	0.09	0.03	5.3	5.4	Low	5.3
50	L29	10000.0	4.3	4.6	4.5				3	0.01	4.5	0.15	1.08	0.24	1.13	1.22	0.27	0.09	4.7	4.9	Low	4.7
51	L34	10000.0	4.6	4.1	5.1				3	0.01	4.6	0.50	3.54	0.77	1.14	4.04	0.88	0.29	5.4	5.9	Low	5.4
52	L37	10000.0	6.2	6.6	7.2				3	0.01	6.7	0.50	3.56	0.53	1.13	4.03	0.60	0.29	7.5	7.9	Low	7.5
53	M28	10000.0	5	4.6	5.7				3	0.01	5.1	0.56	3.94	0.77	1.14	4.50	0.88	0.32	6.0	6.5	Low	6.0
54	M32	10000.0	3.9	4.2	4				3	0.01	4.0	0.15	1.08	0.27	1.13	1.22	0.30	0.09	4.3	4.4	Low	4.3
55	M39	13011.8	5.5	4.1	4.8				3	0.01	4.8	0.70	4.95	1.03	1.17	5.77	1.20	0.40	6.0	6.6	Low	6.0
56	N27	10000.0	5.9	5.7	5.4				3	0.01	5.7	0.25	1.78	0.31	1.13	2.00	0.35	0.15	6.1	6.3	Low	6.1
57	N28	10000.0	6	5.9	5				3	0.01	5.6	0.55	3.89	0.69	1.14	4.44	0.79	0.32	6.6	7.0	Low	6.6
58	N37	10000.0	5.1	5.3	5.5				3	0.01	5.3	0.20	1.41	0.27	1.13	1.59	0.30	0.12	5.6	5.8	Low	5.6
59	O27	10000.0	5.7	4.3	5.2				3	0.01	5.1	0.71	5.02	0.99	1.16	5.83	1.15	0.41	6.3	6.9	Low	6.3
60	O32	10000.0	4	4.3	3.9				3	0.01	4.1	0.21	1.47	0.36	1.13	1.66	0.41	0.12	4.4	4.6	Low	4.4
61	O37	10000.0	5.3	5.6	5.2				3	0.01	5.4	0.21	1.47	0.27	1.13	1.66	0.31	0.12	5.7	5.9	Low	5.7
62	P32	10000.0	4.2	3.6	3.6				3	0.01	3.8	0.35	2.45	0.64	1.14	2.78	0.73	0.20	4.4	4.7	Low	4.4
63	P33	10000.0	4.6	3.8	5.1				3	0.01	4.5	0.66	4.64	1.03	1.17	5.40	1.20	0.38	5.6	6.2	Low	5.6
64	Q26	10000.0	5.2	5.1	4.9				3	0.01	5.1	0.15	1.08	0.21	1.13	1.22	0.24	0.09	5.3	5.5	Low	5.3
65	Q29	10000.0	4.6	3.8	4.2				3	0.01	4.2	0.40	2.83	0.67	1.14	3.22	0.77	0.23	4.9	5.2	Low	4.9
66	Q38	13187.6	4.3	4.1	4.1				3	0.01	4.2	0.12	0.82	0.20	1.13	0.92	0.22	0.07	4.4	4.5	Low	4.4
67	Q39	13187.6	4.7	5.2	5.6				3	0.01	5.2	0.45	3.19	0.62	1.13	3.62	0.70	0.26	5.9	6.3	Low	5.9
68	R24	10000.0	3.7	4	4.5				3	0.01	4.1	0.40	2.86	0.70	1.14	3.26	0.80	0.23	4.7	5.1	Low	4.7
69	R32	10000.0	4.9	4.6	4.6				3	0.01	4.7	0.17	1.22	0.26	1.13	1.38	0.29	0.10	5.0	5.1	Low	5.0
70	S26	10000.0	5.7	5.7	6.2				3	0.01	5.9	0.29	2.04	0.35	1.13	2.30	0.39	0.17	6.4	6.6	Low	6.4
71	S29	10000.0	5	4.8	4.9				3	0.01	4.9	0.10	0.71	0.14	1.13	0.80	0.16	0.06	5.1	5.2	Low	5.1
72	S36	10000.0	5.6	5.5	5.4				3	0.01	5.5	0.10	0.71	0.13	1.13	0.80	0.14	0.06	5.7	5.8	Low	5.7
73	T23	10000.0	5.3	5.1	4.3				3	0.01	4.9	0.53	3.74	0.76	1.14	4.28	0.87	0.31	5.8	6.2	Low	5.8
74	T28	10000.0	5.8	5.6	6.4				3	0.01	5.9	0.42	2.94	0.50	1.13	3.33	0.56	0.24	6.6	7.0	Low	6.6
75	T32	10000.0	4.4	4.8	4.1				3	0.01	4.4	0.35	2.48	0.56	1.13	2.81	0.63	0.20	5.0	5.3	Low	5.0
76	T39	13380.2	5.2	5.6	5.4				3	0.01	5.4	0.20	1.41	0.26	1.13	1.59	0.30	0.12	5.7	5.9	Low	5.7
77	U28	10000.0	6.5	6.4	6.6				3	0.01	6.5	0.10	0.71	0.11	1.13	0.80	0.12	0.06	6.7	6.8	Low	6.7
78	U32	10000.0	4.2	5	4				3	0.01	4.4	0.53	3.74	0.85	1.15	4.30	0.98	0.31	5.3	5.7	Low	5.3
79	U33	10000.0	3.9	4.3	3.8				3	0.01	4.0	0.26	1.87	0.47	1.13	2.11	0.53	0.15	4.4	4.7	Low	4.4
80	U35	10000.0	5.6	5.2	5.1				3	0.01	5.3	0.26	1.87	0.35	1.13	2.11	0.40	0.15	5.7	6.0	Low	5.7
81	U37	10000.0	5	5.1	5.1				3	0.01	5.1	0.06	0.41	0.08	1.13	0.46	0.09	0.03	5.2	5.2	Low	5.2
82	V30	10000.0	4.6	5	5				3	0.01	4.9	0.23	1.63	0.34	1.13	1.84	0.38	0.13	5.3	5.4	Low	5.3
83	V33	10000.0	4.8	4.8	4.7				3	0.01	4.8	0.06	0.41	0.09	1.13	0.46	0.10	0.03	4.9	4.9	Low	4.9
84	V36	10000.0	4.9	5.2	5.3				3	0.01	5.1	0.21	1.47	0.29	1.13	1.66	0.32	0.12	5.5	5.7	Low	5.5
85	W26	10000.0	6.8	5.8	6.3				3	0.01	6.3	0.50	3.54	0.56	1.13	4.00	0.64	0.29	7.1	7.6	Low	7.1
86	W28	10000.0	5.9	5.8	7				3	0.01	6.2	0.67	4.71	0.76	1.14	5.38	0.86	0.38	7.4	7.9	Low	7.4
87	W31	10000.0	5.6	5	5.2				3	0.01	5.3	0.31	2.16	0.41	1.13	2.44	0.46	0.18	5.8	6.0	Low	5.8
88	W34	10000.0	5.8	6.1	5.3				3	0.01	5.7	0.40	2.86	0.50	1.13	3.23	0.56	0.23	6.4	6.8	Low	6.4
89	W39	13397.6	6	5.8	5.5				3	0.01	5.8	0.25	1.78	0.31	1.13	2.00	0.35	0.15	6.2	6.4	Low	6.2
90	X25	10000.0	4.8	5	5				3	0.01	4.9	0.12	0.82	0.17	1.13	0.92	0.19	0.07	5.1	5.2	Low	5.1
91	X33	10000.0	4.8	5.2	4.7				3	0.01	4.9	0.26	1.87	0.38	1.13	2.11	0.43	0.15	5.3	5.6	Low	5.3
92	X36	10000.0	4.6	4.8	4.6				3	0.01	4.7	0.12	0.82	0.17	1.13	0.92	0.20	0.07	4.9	5.0	Low	4.9
93	Z29	10000.0	5.6	5.9	5.8				3	0.01	5.8	0.15	1.08	0.19	1.13	1.22	0.21	0.09	6.0	6.2	Low	6.0
94	AA24	10000.0	4.7	5	5.1				3	0.01	4.9	0.21	1.47	0.30	1.13	1.66	0.34	0.12	5.3	5.5	Low	5.3
95	AB24	10000.0	3.4	4	4				3	0.01	3.8	0.35	2.45	0.64	1.14	2.78	0.73	0.20	4.4	4.7	Low	4.4
96	AB25	10000.0	4.1	4.5	4.3				3	0.01	4.3	0.20	1.41	0.33	1.13	1.59	0.37	0.12	4.6	4.8	Low	4.6
97	AC25	10000.0	4.9	5	4.9				3	0.01	4.9	0.06	0.41	0.08	1.13	0.46	0.09	0.03	5.0	5.1	Low	5.0
98	AD25	10000.0	4.8	4.6	4.9				3	0.01	4.8	0.15	1.08	0.23	1.13	1.22	0.26	0.09	5.0	5.2	Low	5.0

Row #	IDs/Names of the Smaller DUs	DU Area (Sq feet)	Replicate field sample concentrations						Number of Replicates	Weight	Arithmetic Mean	SD of Replicates	calc'd SD of Increments	calc'd CV for the DU	Adj Factor	adj'd SD of Increments	adj'd CV for DU	SE of DU	95% UCL			
			Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6											Student's-t	Chebychev	CV of Increments	95% UCL
99	AE25	10000.0	3.7	3.8	4.1				3	0.01	3.9	0.21	1.47	0.38	1.13	1.66	0.43	0.12	4.2	4.4	Low	4.2
100	AF25	10000.0	5	4.3	4.4				3	0.01	4.6	0.38	2.68	0.59	1.13	3.03	0.66	0.22	5.2	5.5	Low	5.2
101	AG25	10000.0	5.6	5.4	5.7				3	0.01	5.6	0.15	1.08	0.19	1.13	1.22	0.22	0.09	5.8	6.0	Low	5.8
102	AH24	10000.0	4.7	4.6	4.1				3	0.01	4.5	0.32	2.27	0.51	1.13	2.57	0.58	0.19	5.0	5.3	Low	5.0
103	AI23	10000.0	6	5.6	5.7				3	0.01	5.8	0.21	1.47	0.26	1.13	1.66	0.29	0.12	6.1	6.3	Low	6.1
104	AI24	10000.0	4.5	4.4	3.9				3	0.01	4.3	0.32	2.27	0.53	1.13	2.57	0.60	0.19	4.8	5.1	Low	4.8
105	AJ23	10000.0	4.6	4.7	4.5				3	0.01	4.6	0.10	0.71	0.15	1.13	0.80	0.17	0.06	4.8	4.9	Low	4.8
106	AK23	10000.0	5.4	5.1	6.3				3	0.01	5.6	0.62	4.42	0.79	1.14	5.06	0.90	0.36	6.7	7.2	Low	6.7
107	AL23	10000.0	5.5	4.7	6.3				3	0.01	5.5	0.80	5.66	1.03	1.17	6.59	1.20	0.46	6.8	7.5	Low	6.8
108	AL24	10000.0	5.7	5.3	5.5				3	0.01	5.5	0.20	1.41	0.26	1.13	1.59	0.29	0.12	5.8	6.0	Low	5.8
109	AL25	10000.0	5.2	5.4	5.4				3	0.01	5.3	0.12	0.82	0.15	1.13	0.92	0.17	0.07	5.5	5.6	Low	5.5
110	AM25	10000.0	5.3	5.1	5.1				3	0.01	5.2	0.12	0.82	0.16	1.13	0.92	0.18	0.07	5.4	5.5	Low	5.4
111	AN25	10000.0	5.5	5.6	56				3	0.01	22.4	29.13	205.96	9.21	6.30	1297.30	58.00	16.82	71.5	95.7	High	95.7
112	AO25	10000.0	5.2	4.5	4.8				3	0.01	4.8	0.35	2.48	0.51	1.13	2.81	0.58	0.20	5.4	5.7	Low	5.4
113	AP8	12741.9	2.8	2.5	2.8				3	0.01	2.7	0.17	1.22	0.45	1.13	1.38	0.51	0.10	3.0	3.1	Low	3.0
114	AP9	12741.9	4.1	3.6	3.8				3	0.01	3.8	0.25	1.78	0.46	1.13	2.01	0.52	0.15	4.3	4.5	Low	4.3
115	AP10	12742.0	4.1	4.4	4.3				3	0.01	4.3	0.15	1.08	0.25	1.13	1.22	0.29	0.09	4.5	4.7	Low	4.5
116	AP11	12741.9	4.5	5.6	5.6				3	0.01	5.2	0.64	4.49	0.86	1.15	5.16	0.99	0.37	6.3	6.8	Low	6.3
117	AP12	12742.0	5.2	5.2	4.8				3	0.01	5.1	0.23	1.63	0.32	1.13	1.84	0.36	0.13	5.5	5.6	Low	5.5
118	AP14	12741.6	4.3	4.3	3.5				3	0.01	4.0	0.46	3.27	0.81	1.15	3.74	0.93	0.27	4.8	5.2	Low	4.8
119	AP15	12742.2	4.9	5	5				3	0.01	5.0	0.06	0.41	0.08	1.13	0.46	0.09	0.03	5.1	5.1	Low	5.1
120	AP16	12741.9	3.8	4	3.6				3	0.01	3.8	0.20	1.41	0.37	1.13	1.59	0.42	0.12	4.1	4.3	Low	4.1
121	AP17	12741.9	3.8	4	4.1				3	0.01	4.0	0.15	1.08	0.27	1.13	1.22	0.31	0.09	4.2	4.4	Low	4.2
122	AP18	12741.9	2.8	3.7	3.5				3	0.01	3.3	0.47	3.34	1.00	1.16	3.89	1.17	0.27	4.1	4.5	Low	4.1
123	AP19	12741.9	4	3.4	3.8				3	0.01	3.7	0.31	2.16	0.58	1.13	2.45	0.66	0.18	4.2	4.5	Low	4.2
124	AP20	12741.9	4.3	4.2	4.3				3	0.01	4.3	0.06	0.41	0.10	1.13	0.46	0.11	0.03	4.4	4.4	Low	4.4
125	AP21	12741.9	3.6	3.7	3.4				3	0.01	3.6	0.15	1.08	0.30	1.13	1.22	0.34	0.09	3.8	4.0	Low	3.8
126	AP22	12742.0	3.4	3.8	3.1				3	0.01	3.4	0.35	2.48	0.72	1.14	2.83	0.83	0.20	4.0	4.3	Low	4.0
127	AP25	12741.8	4.2	4.1	4.1				3	0.01	4.1	0.06	0.41	0.10	1.13	0.46	0.11	0.03	4.2	4.3	Low	4.2
128	AQ23	10435.9	4	3.7	4				3	0.01	3.9	0.17	1.22	0.31	1.13	1.38	0.35	0.10	4.2	4.3	Low	4.2
129	AQ24	9852.5	3.4	3.8	4.1				3	0.01	3.8	0.35	2.48	0.66	1.14	2.82	0.75	0.20	4.4	4.7	Low	4.4
130	B8	8381.5	3.9	3.9	3.6				3	0.00	3.8	0.17	1.22	0.32	1.13	1.38	0.36	0.10	4.1	4.2	Low	4.1
131	B20	7901.2	3.8	3.7	4.1				3	0.00	3.9	0.21	1.47	0.38	1.13	1.66	0.43	0.12	4.2	4.4	Low	4.2
132	B21	7425.3	4.5	4.7	4.6				3	0.00	4.6	0.10	0.71	0.15	1.13	0.80	0.17	0.06	4.8	4.9	Low	4.8
133	B22	6933.6	4.6	4.2	3.9				3	0.00	4.2	0.35	2.48	0.59	1.13	2.82	0.66	0.20	4.8	5.1	Low	4.8
134	C8	9158.1	3.5	3.9	3.6				3	0.01	3.7	0.21	1.47	0.40	1.13	1.66	0.45	0.12	4.0	4.2	Low	4.0
135	C22	6929.0	3.5	3.6	3.9				3	0.00	3.7	0.21	1.47	0.40	1.13	1.66	0.45	0.12	4.0	4.2	Low	4.0
136	D8	9410.4	2.4	2.4	2.5				3	0.01	2.4	0.06	0.41	0.17	1.13	0.46	0.19	0.03	2.5	2.6	Low	2.5
137	D22	10000.0	3.6	3.7	3.6				3	0.01	3.6	0.06	0.41	0.11	1.13	0.46	0.13	0.03	3.7	3.8	Low	3.7
138	E22	10000.0	3.4	3.6	3.7				3	0.01	3.6	0.15	1.08	0.30	1.13	1.22	0.34	0.09	3.8	4.0	Low	3.8
139	E23	10000.0	3.1	3.6	3.7				3	0.01	3.5	0.32	2.27	0.66	1.14	2.58	0.75	0.19	4.0	4.3	Low	4.0
140	E24	10000.0	3.7	4	4				3	0.01	3.9	0.17	1.22	0.31	1.13	1.38	0.35	0.10	4.2	4.3	Low	4.2
141	E25	10000.0	3.5	3.7	3.8				3	0.01	3.7	0.15	1.08	0.29	1.13	1.22	0.33	0.09	3.9	4.1	Low	3.9
142	E26	13604.3	3.5	3.7	4.2				3	0.01	3.8	0.36	2.55	0.67	1.14	2.90	0.76	0.21	4.4	4.7	Low	4.4
143	F26	5258.3	3.5	3.3	3.9				3	0.00	3.6	0.31	2.16	0.61	1.13	2.45	0.69	0.18	4.1	4.3	Low	4.1
144	G25	8218.3	3.4	4.1	3.7				3	0.00	3.7	0.35	2.48	0.67	1.14	2.82	0.76	0.20	4.3	4.6	Low	4.3
145	G26	9346.7	3.7	3.8	3.8				3	0.01	3.8	0.06	0.41	0.11	1.13	0.46	0.12	0.03	3.9	3.9	Low	3.9
146	H25	10000.0	4.6	3.9	4.7				3	0.01	4.4	0.44	3.08	0.70	1.14	3.51	0.80	0.25	5.1	5.5	Low	5.1
147	I25	7781.1	4	3.3	3.9				3	0.00	3.7	0.38	2.68	0.72	1.14	3.05	0.82	0.22	4.4	4.7	Low	4.4
148	J22	10000.0	4.3	4.2	4.4				3	0.01	4.3	0.10	0.71	0.16	1.13	0.80	0.19	0.06	4.5	4.6	Low	4.5
149	J23	10000.4	4.5	4.1	4.5				3	0.01	4.4	0.23	1.63	0.37	1.13	1.84	0.42	0.13	4.8	4.9	Low	4.8
150	J24	7428.9	2.6	3.6	4.2				3	0.00	3.5	0.81	5.72	1.65	1.25	7.16	2.06	0.47	4.8	5.5	Med	5.5
151	J25	6743.5	4.9	4.4	4.7				3	0.00	4.7	0.25	1.78	0.38	1.13	2.01	0.43	0.15	5.1	5.3	Low	5.1
152	K22	10000.0	4	4.2	8.2				3	0.01	5.5	2.37	16.75	3.06	1.64	27.41	5.01	1.37	9.5	11.4	High	11.4
153	L22	10000.0	4.1	4	4.3				3	0.01	4.1	0.15	1.08	0.26	1.13	1.22	0.29	0.09	4.4	4.5	Low	4.4

Row #	IDs/Names of the Smaller DUs	DU Area (Sq feet)	Replicate field sample concentrations						Number of Replicates	Weight	Arithmetic Mean	SD of Replicates	calc'd SD of Increments	calc'd CV for the DU	Adj Factor	adj'd SD of Increments	adj'd CV for DU	SE of DU	95% UCL			
			Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6											Student's-t	Chebychev	CV of Increments	95% UCL
154	M22	10000.0	4.9	4.8	3.7				3	0.01	4.5	0.67	4.71	1.05	1.17	5.50	1.23	0.38	5.6	6.1	Low	5.6
155	N22	10000.0	4.1	4.8	4.2				3	0.01	4.4	0.38	2.68	0.61	1.13	3.04	0.70	0.22	5.0	5.3	Low	5.0
156	O22	10000.0	4.7	4.6	4.4				3	0.01	4.6	0.15	1.08	0.24	1.13	1.22	0.27	0.09	4.8	5.0	Low	4.8
157	P22	10000.0	6.4	6.2	6.5				3	0.01	6.4	0.15	1.08	0.17	1.13	1.22	0.19	0.09	6.6	6.8	Low	6.6
158	Q22	10000.0	3.4	3.6	3.3				3	0.01	3.4	0.15	1.08	0.31	1.13	1.22	0.35	0.09	3.7	3.8	Low	3.7
159	R22	7999.4	5.2	5.2	5.2				3	0.00	5.2	0.00	0.00	0.00	1.13	0.00	0.00	0.00	5.2	5.2	Low	5.2
160	S22	10000.0	3.9	4	4.1				3	0.01	4.0	0.10	0.71	0.18	1.13	0.80	0.20	0.06	4.2	4.3	Low	4.2
161	T22	9920.3	3.9	4.8	4.7				3	0.01	4.5	0.49	3.49	0.78	1.14	3.99	0.89	0.28	5.3	5.7	Low	5.3
162	U22	6762.1	4.7	4.9	5				3	0.00	4.9	0.15	1.08	0.22	1.13	1.22	0.25	0.09	5.1	5.3	Low	5.1
163	V22	10000.0	4.3	4.1	4.4				3	0.01	4.3	0.15	1.08	0.25	1.13	1.22	0.29	0.09	4.5	4.7	Low	4.5
164	W22	10000.0	4.4	4.9	4.5				3	0.01	4.6	0.26	1.87	0.41	1.13	2.11	0.46	0.15	5.0	5.3	Low	5.0
165	W23	10000.0	5	4.9	4.9				3	0.01	4.9	0.06	0.41	0.08	1.13	0.46	0.09	0.03	5.0	5.1	Low	5.0
166	W24	10000.0	4.4	4.5	4.3	4.3	4.2		5	0.01	4.3	0.11	0.81	0.19	1.10	0.89	0.20	0.05	4.4	4.6	Low	4.4
167	X24	10000.0	5.4	5.1	5.6				3	0.01	5.4	0.25	1.78	0.33	1.13	2.01	0.37	0.15	5.8	6.0	Low	5.8
168	Y24	10000.0	5.8	6	6.1				3	0.01	6.0	0.15	1.08	0.18	1.13	1.22	0.20	0.09	6.2	6.4	Low	6.2
169	Z24	10000.0	5	5.3	5.4				3	0.01	5.2	0.21	1.47	0.28	1.13	1.66	0.32	0.12	5.6	5.8	Low	5.6
	Sum:	1734193	--	--	--	--	--	--	509	1.00	4.84	0.00	0.02	0.00	NA	0.03	0.01	0.00	4.8	4.8	Low	4.84

df by Welch-Satterthwaite approximation:	**3.7**

Recommended UCL: **4.84** **mg/kg** >> Student's t 95% UCL

Note: Student's-t or Chebychev 95% UCL may be appropriate.

*Student's t UCL is acceptable if adj'd CV for DU is "Low" (e.g., CV ≤ 1.5). The User should consult the instructions for additional guidance on which 95% UCL is recommended for specific data sets.

Notes

adj'd	= adjusted	df	= degrees of freedom	SD	= arithmetic standard deviation
calc'd	= calculated	DU	= decision unit	SE	= standard error
CV	= coefficient of variation	RSD	= relative standard deviation	95% UCL	= 95% upper confidence limit for arithmetic mean

Calculation of Weighted 95% UCLs for a Combined Decision Unit (DU) from Several Smaller DUs Having Replicate Incremental Samples

Enter information in green highlighted cells. See the "Instructions" tab for detailed instructions.

Project ID:	Fort Wingate Inner Fence
Property/Sample ID:	Inner Fence Area Grids
Date of calculations:	7/6/2024
Calculator completed by:	CMC
Analyte:	Copper
Analyte units:	mg/kg
DU metric units:	Sq feet
Notes:	

Click in green cell below to select from drop-down menu

DU size metric: area, volume, or depth interval: Area

Note: Assumes all replicates have the same number of increments

Number of increments per replicate: 50

Row #	IDs/Names of the Smaller DUs	DU Area (Sq feet)	Replicate field sample concentrations						Number of Replicates	Weight	Arithmetic Mean	SD of Replicates	calc'd SD of Increments	calc'd CV for the DU	Adj Factor	adj'd SD of Increments	adj'd CV for DU	SE of DU	95% UCL			
			Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6											Student's-t	Chebychev	CV of Increments	95% UCL
1	AA32	10000.0	62	31	42				3	0.01	45.0	15.72	111.13	2.47	1.44	160.39	3.56	9.07	71.5	84.6	High	84.6
2	AB27	10000.0	79	43	50				3	0.01	57.3	19.09	134.97	2.35	1.41	190.45	3.32	11.02	89.5	105.4	High	105.4
3	AB38	13378.0	47	25	54				3	0.01	42.0	15.13	107.00	2.55	1.47	156.86	3.73	8.74	67.5	80.1	High	80.1
4	AC34	10000.0	31	19	25				3	0.01	25.0	6.00	42.43	1.70	1.26	53.49	2.14	3.46	35.1	40.1	Med	40.1
5	AD28	10000.0	69	48	35				3	0.01	50.7	17.16	121.31	2.39	1.42	172.51	3.40	9.91	79.6	93.8	High	93.8
6	AD34	10000.0	41	20	40				3	0.01	33.7	11.85	83.77	2.49	1.45	121.34	3.60	6.84	53.6	63.5	High	63.5
7	AE27	9999.9	60	57	69				3	0.01	62.0	6.24	44.16	0.71	1.14	50.34	0.81	3.61	72.5	77.7	Low	72.5
8	AE38	13378.0	18	23	22				3	0.01	21.0	2.65	18.71	0.89	1.15	21.56	1.03	1.53	25.5	27.7	Low	25.5
9	AF29	10000.0	60	37	54				3	0.01	50.3	11.93	84.36	1.68	1.26	106.04	2.11	6.89	70.4	80.4	Med	80.4
10	AF30	10000.0	43	84	69				3	0.01	65.3	20.74	146.69	2.25	1.38	202.77	3.10	11.98	100.3	117.5	High	117.5
11	AF32	10000.0	67	31	48				3	0.01	48.7	18.01	127.34	2.62	1.49	189.32	3.89	10.40	79.0	94.0	High	94.0
12	AF34	10000.0	52	31	49				3	0.01	44.0	11.36	80.31	1.83	1.29	103.27	2.35	6.56	63.1	72.6	Med	72.6
13	AH28	10000.0	64	110	80				3	0.01	84.7	23.35	165.13	1.95	1.31	216.67	2.56	13.48	124.0	143.4	Med	143.4
14	AH39	10617.1	26	21	14				3	0.01	20.3	6.03	42.62	2.10	1.35	57.35	2.82	3.48	30.5	35.5	Med	35.5
15	AI26	10000.0	100	98	92				3	0.01	96.7	4.16	29.44	0.30	1.13	33.17	0.34	2.40	103.7	107.1	Low	103.7
16	AI29	10000.0	35	33	54				3	0.01	40.7	11.59	81.96	2.02	1.33	108.73	2.67	6.69	60.2	69.8	Med	69.8
17	AI31	10000.0	52	36	24				3	0.01	37.3	14.05	99.33	2.66	1.50	149.02	3.99	8.11	61.0	72.7	High	72.7
18	AJ26	10000.0	47	65	49				3	0.01	53.7	9.87	69.76	1.30	1.20	83.51	1.56	5.70	70.3	78.5	Med	78.5
19	AJ27	10000.0	30	37	30				3	0.01	32.3	4.04	28.58	0.88	1.15	32.92	1.02	2.33	39.1	42.5	Low	39.1
20	AJ31	10000.0	30	47	41				3	0.01	39.3	8.62	60.96	1.55	1.23	75.28	1.91	4.98	53.9	61.0	Med	61.0
21	AJ33	10000.0	43	49	54				3	0.01	48.7	5.51	38.94	0.80	1.15	44.62	0.92	3.18	58.0	62.5	Low	58.0
22	AK28	10000.0	62	55	62				3	0.01	59.7	4.04	28.58	0.48	1.13	32.28	0.54	2.33	66.5	69.8	Low	66.5
23	AK36	10000.0	52	48	50				3	0.01	50.0	2.00	14.14	0.28	1.13	15.93	0.32	1.15	53.4	55.0	Low	53.4
24	AL27	10000.0	32	31	35				3	0.01	32.7	2.08	14.72	0.45	1.13	16.62	0.51	1.20	36.2	37.9	Low	36.2
25	AL34	10000.0	36	32	27				3	0.01	31.7	4.51	31.89	1.01	1.16	37.08	1.17	2.60	39.3	43.0	Low	39.3
26	AL39	7384.7	32	17	20				3	0.00	23.0	7.94	56.12	2.44	1.43	80.53	3.50	4.58	36.4	43.0	High	43.0
27	AM29	10000.0	18	17	12				3	0.01	15.7	3.21	22.73	1.45	1.22	27.71	1.77	1.86	21.1	23.8	Med	23.8
28	AM33	10000.0	65	60	66				3	0.01	63.7	3.21	22.73	0.36	1.13	25.62	0.40	1.86	69.1	71.8	Low	69.1
29	AN27	10000.0	23	15	19				3	0.01	19.0	4.00	28.28	1.49	1.22	34.64	1.82	2.31	25.7	29.1	Med	29.1
30	AN28	10000.0	24	25	22				3	0.01	23.7	1.53	10.80	0.46	1.13	12.20	0.52	0.88	26.2	27.5	Low	26.2
31	AN38	6980.7	27	17	17				3	0.00	20.3	5.77	40.82	2.01	1.32	54.09	2.66	3.33	30.1	34.9	Med	34.9
32	AO26	10000.0	33	34	25				3	0.01	30.7	4.93	34.88	1.14	1.18	41.05	1.34	2.85	39.0	43.1	Low	39.0
33	AP28	8819.3	29	23	32				3	0.01	28.0	4.58	32.40	1.16	1.18	38.21	1.36	2.65	35.7	39.5	Low	35.7
34	AQ15	13466.3	40	38	38				3	0.01	38.7	1.15	8.16	0.21	1.13	9.20	0.24	0.67	40.6	41.6	Low	40.6
35	AQ22	11017.2	28	30	29				3	0.01	29.0	1.00	7.07	0.24	1.13	7.97	0.27	0.58	30.7	31.5	Low	30.7
36	C27	14788.0	31	36	20				3	0.01	29.0	8.19	57.88	2.00	1.32	76.53	2.64	4.73	42.8	49.6	Med	49.6
37	C35	9243.3	52	34	59				3	0.01	48.3	12.90	91.20	1.89	1.30	118.42	2.45	7.45	70.1	80.8	Med	80.8
38	C37	7935.9	23	21	19				3	0.00	21.0	2.00	14.14	0.67	1.14	16.09	0.77	1.15	24.4	26.0	Low	24.4
39	E27	14436.0	56	59	55				3	0.01	56.7	2.08	14.72	0.26	1.13	16.58	0.29	1.20	60.2	61.9	Low	60.2
40	F32	10000.0	34	24	35				3	0.01	31.0	6.08	43.01	1.39	1.21	52.02	1.68	3.51	41.3	46.3	Med	46.3
41	G30	10000.0	64	63	77				3	0.01	68.0	7.81	55.23	0.81	1.15	63.32	0.93	4.51	81.2	87.7	Low	81.2

Row #	IDs/Names of the Smaller DUs	DU Area (Sq feet)	Replicate field sample concentrations						Number of Replicates	Weight	Arithmetic Mean	SD of Replicates	calc'd SD of Increments	calc'd CV for the DU	Adj Factor	adj'd SD of Increments	adj'd CV for DU	SE of DU	95% UCL			
			Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6											Student's-t	Chebychev	CV of Increments	95% UCL
42	H35	10000.0	30	35	21				3	0.01	28.7	7.09	50.17	1.75	1.27	63.76	2.22	4.10	40.6	46.5	Med	46.5
43	H39	12972.6	14	17	23				3	0.01	18.0	4.58	32.40	1.80	1.28	41.50	2.31	2.65	25.7	29.5	Med	29.5
44	I29	10000.0	81	44	67				3	0.01	64.0	18.68	132.10	2.06	1.34	176.73	2.76	10.79	95.5	111.0	Med	111.0
45	I30	10000.0	67	28	49				3	0.01	48.0	19.52	138.02	2.88	1.57	216.68	4.51	11.27	80.9	97.1	High	97.1
46	I33	10000.0	25	18	45				3	0.01	29.3	14.01	99.08	3.38	1.76	173.98	5.93	8.09	53.0	64.6	High	64.6
47	I38	12991.4	20	24	21				3	0.01	21.7	2.08	14.72	0.68	1.14	16.75	0.77	1.20	25.2	26.9	Low	25.2
48	K30	10000.0	41	28	44				3	0.01	37.7	8.50	60.14	1.60	1.24	74.74	1.98	4.91	52.0	59.1	Med	59.1
49	K34	10000.0	48	33	35				3	0.01	38.7	8.14	57.59	1.49	1.22	70.55	1.82	4.70	52.4	59.2	Med	59.2
50	L29	10000.0	44	52	60				3	0.01	52.0	8.00	56.57	1.09	1.17	66.26	1.27	4.62	65.5	72.1	Low	65.5
51	L34	10000.0	46	40	56				3	0.01	47.3	8.08	57.15	1.21	1.19	67.74	1.43	4.67	61.0	67.7	Low	61.0
52	L37	10000.0	34	32	39				3	0.01	35.0	3.61	25.50	0.73	1.14	29.09	0.83	2.08	41.1	44.1	Low	41.1
53	M28	10000.0	120	80	77				3	0.01	92.3	24.01	169.75	1.84	1.29	218.73	2.37	13.86	132.8	152.7	Med	152.7
54	M32	10000.0	66	47	56				3	0.01	56.3	9.50	67.21	1.19	1.18	79.53	1.41	5.49	72.4	80.3	Low	72.4
55	M39	13011.8	25	15	19				3	0.01	19.7	5.03	35.59	1.81	1.28	45.65	2.32	2.91	28.2	32.3	Med	32.3
56	N27	10000.0	75	54	62				3	0.01	63.7	10.60	74.94	1.18	1.18	88.55	1.39	6.12	81.5	90.3	Low	81.5
57	N28	10000.0	120	77	110				3	0.01	102.3	22.50	159.11	1.55	1.24	196.61	1.92	12.99	140.3	159.0	Med	159.0
58	N37	10000.0	36	37	48				3	0.01	40.3	6.66	47.08	1.17	1.18	55.57	1.38	3.84	51.6	57.1	Low	51.6
59	O27	10000.0	35	32	59				3	0.01	42.0	14.80	104.64	2.49	1.45	151.68	3.61	8.54	66.9	79.2	High	79.2
60	O32	10000.0	87	48	62				3	0.01	65.7	19.76	139.70	2.13	1.35	189.01	2.88	11.41	99.0	115.4	Med	115.4
61	O37	10000.0	38	40	44				3	0.01	40.7	3.06	21.60	0.53	1.13	24.44	0.60	1.76	45.8	48.4	Low	45.8
62	P32	10000.0	82	48	62				3	0.01	64.0	17.09	120.83	1.89	1.30	156.93	2.45	9.87	92.8	107.0	Med	107.0
63	P33	10000.0	110	60	85				3	0.01	85.0	25.00	176.78	2.08	1.34	237.16	2.79	14.43	127.1	147.9	Med	147.9
64	Q26	10000.0	87	120	110				3	0.01	105.7	16.92	119.65	1.13	1.18	140.74	1.33	9.77	134.2	148.3	Low	134.2
65	Q29	10000.0	62	140	110				3	0.01	104.0	39.34	278.21	2.68	1.50	418.62	4.03	22.72	170.3	203.0	High	203.0
66	Q38	13187.6	40	20	20				3	0.01	26.7	11.55	81.65	3.06	1.64	133.51	5.01	6.67	46.1	55.7	High	55.7
67	Q39	13187.6	25	25	27				3	0.01	25.7	1.15	8.16	0.32	1.13	9.20	0.36	0.67	27.6	28.6	Low	27.6
68	R24	10000.0	93	78	72				3	0.01	81.0	10.82	76.49	0.94	1.16	88.51	1.09	6.24	99.2	108.2	Low	99.2
69	R32	10000.0	68	46	39				3	0.01	51.0	15.13	107.00	2.10	1.35	144.02	2.82	8.74	76.5	89.1	Med	89.1
70	S26	10000.0	90	170	180				3	0.01	146.7	49.33	348.81	2.38	1.42	494.48	3.37	28.48	229.8	270.8	High	270.8
71	S29	10000.0	76	140	120				3	0.01	112.0	32.74	231.52	2.07	1.34	309.91	2.77	18.90	167.2	194.4	Med	194.4
72	S36	10000.0	30	22	29				3	0.01	27.0	4.36	30.82	1.14	1.18	36.29	1.34	2.52	34.3	38.0	Low	34.3
73	T23	10000.0	220	150	220				3	0.01	196.7	40.41	285.77	1.45	1.22	348.44	1.77	23.33	264.8	298.4	Med	298.4
74	T28	10000.0	46	130	87				3	0.01	87.7	42.00	297.01	3.39	1.76	522.79	5.96	24.25	158.5	193.4	High	193.4
75	T32	10000.0	79	32	54				3	0.01	55.0	23.52	166.28	3.02	1.62	269.59	4.90	13.58	94.6	114.2	High	114.2
76	T39	13380.2	27	28	22				3	0.01	25.7	3.21	22.73	0.89	1.15	26.19	1.02	1.86	31.1	33.8	Low	31.1
77	U28	10000.0	27	48	32				3	0.01	35.7	10.97	77.57	2.17	1.36	105.84	2.97	6.33	54.2	63.3	Med	63.3
78	U32	10000.0	96	44	52				3	0.01	64.0	28.00	197.99	3.09	1.65	326.03	5.09	16.17	111.2	134.5	High	134.5
79	U33	10000.0	69	41	62				3	0.01	57.3	14.57	103.04	1.80	1.28	131.90	2.30	8.41	81.9	94.0	Med	94.0
80	U35	10000.0	55	67	62				3	0.01	61.3	6.03	42.62	0.69	1.14	48.55	0.79	3.48	71.5	76.5	Low	71.5
81	U37	10000.0	28	36	37				3	0.01	33.7	4.93	34.88	1.04	1.17	40.67	1.21	2.85	42.0	46.1	Low	42.0
82	V30	10000.0	140	100	89				3	0.01	109.7	26.84	189.78	1.73	1.27	240.48	2.19	15.50	154.9	177.2	Med	177.2
83	V33	10000.0	80	72	44				3	0.01	65.3	18.90	133.67	2.05	1.33	178.27	2.73	10.91	97.2	112.9	Med	112.9
84	V36	10000.0	41	40	41				3	0.01	40.7	0.58	4.08	0.10	1.13	4.60	0.11	0.33	41.6	42.1	Low	41.6
85	W26	10000.0	100	120	80				3	0.01	100.0	20.00	141.42	1.41	1.21	171.59	1.72	11.55	133.7	150.3	Med	150.3
86	W28	10000.0	80	95	120				3	0.01	98.3	20.21	142.89	1.45	1.22	174.22	1.77	11.67	132.4	149.2	Med	149.2
87	W31	10000.0	59	54	95				3	0.01	69.3	22.37	158.17	2.28	1.39	220.12	3.17	12.91	107.0	125.6	High	125.6
88	W34	10000.0	50	39	64				3	0.01	51.0	12.53	88.60	1.74	1.27	112.39	2.20	7.23	72.1	82.5	Med	82.5
89	W39	13397.6	9.6	9.9	14				3	0.01	11.2	2.46	17.38	1.56	1.24	21.49	1.92	1.42	15.3	17.4	Med	17.4
90	X25	10000.0	99	89	100				3	0.01	96.0	6.08	43.01	0.45	1.13	48.56	0.51	3.51	106.3	111.3	Low	106.3
91	X33	10000.0	84	58	69				3	0.01	70.3	13.05	92.29	1.31	1.20	110.63	1.57	7.54	92.3	103.2	Med	103.2
92	X36	10000.0	32	46	47				3	0.01	41.7	8.39	59.30	1.42	1.21	72.03	1.73	4.84	55.8	62.8	Med	62.8
93	Z29	10000.0	72	48	72				3	0.01	64.0	13.86	97.98	1.53	1.23	120.68	1.89	8.00	87.4	98.9	Med	98.9
94	AA24	10000.0	170	110	100				3	0.01	126.7	37.86	267.71	2.11	1.35	361.30	2.85	21.86	190.5	221.9	Med	221.9
95	AB24	10000.0	96	87	91				3	0.01	91.3	4.51	31.89	0.35	1.13	35.94	0.39	2.60	98.9	102.7	Low	98.9
96	AB25	10000.0	220	97	150				3	0.01	155.7	61.70	436.25	2.80	1.55	674.24	4.33	35.62	259.7	310.9	High	310.9
97	AC25	10000.0	77	73	80				3	0.01	76.7	3.51	24.83	0.32	1.13	27.98	0.36	2.03	82.6	85.5	Low	82.6
98	AD25	10000.0	45	52	48				3	0.01	48.3	3.51	24.83	0.51	1.13	28.08	0.58	2.03	54.3	57.2	Low	54.3

Row #	IDs/Names of the Smaller DUs	DU Area (Sq feet)	Replicate field sample concentrations						Number of Replicates	Weight	Arithmetic Mean	SD of Replicates	calc'd SD of Increments	calc'd CV for the DU	Adj Factor	adj'd SD of Increments	adj'd CV for DU	SE of DU	95% UCL			
			Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6											Student's-t	Chebychev	CV of Increments	95% UCL
99	AE25	10000.0	59	50	89				3	0.01	66.0	20.42	144.40	2.19	1.37	197.50	2.99	11.79	100.4	117.4	Med	117.4
100	AF25	10000.0	68	100	110				3	0.01	92.7	21.94	155.13	1.67	1.26	194.95	2.10	12.67	129.7	147.9	Med	147.9
101	AG25	10000.0	72	69	79				3	0.01	73.3	5.13	36.29	0.49	1.13	41.01	0.56	2.96	82.0	86.2	Low	82.0
102	AH24	10000.0	74	58	66				3	0.01	66.0	8.00	56.57	0.86	1.15	65.05	0.99	4.62	79.5	86.1	Low	79.5
103	AI23	10000.0	70	63	48				3	0.01	60.3	11.24	79.48	1.32	1.20	95.33	1.58	6.49	79.3	88.6	Med	88.6
104	AI24	10000.0	99	80	89				3	0.01	89.3	9.50	67.21	0.75	1.14	76.78	0.86	5.49	105.4	113.3	Low	105.4
105	AJ23	10000.0	92	77	87				3	0.01	85.3	7.64	54.01	0.63	1.14	61.34	0.72	4.41	98.2	104.6	Low	98.2
106	AK23	10000.0	95	62	120				3	0.01	92.3	29.09	205.71	2.23	1.38	283.45	3.07	16.80	141.4	165.5	High	165.5
107	AL23	10000.0	90	89	96				3	0.01	91.7	3.79	26.77	0.29	1.13	30.16	0.33	2.19	98.0	101.2	Low	98.0
108	AL24	10000.0	63	53	58				3	0.01	58.0	5.00	35.36	0.61	1.13	40.12	0.69	2.89	66.4	70.6	Low	66.4
109	AL25	10000.0	57	64	60				3	0.01	60.3	3.51	24.83	0.41	1.13	28.01	0.46	2.03	66.3	69.2	Low	66.3
110	AM25	10000.0	84	64	70				3	0.01	72.7	10.26	72.57	1.00	1.16	84.35	1.16	5.93	90.0	98.5	Low	90.0
111	AN25	10000.0	65	58	56				3	0.01	59.7	4.73	33.42	0.56	1.13	37.84	0.63	2.73	67.6	71.6	Low	67.6
112	AO25	10000.0	58	60	51				3	0.01	56.3	4.73	33.42	0.59	1.13	37.89	0.67	2.73	64.3	68.2	Low	64.3
113	AP8	12741.9	16	15	13				3	0.01	14.7	1.53	10.80	0.74	1.14	12.33	0.84	0.88	17.2	18.5	Low	17.2
114	AP9	12741.9	46	50	40				3	0.01	45.3	5.03	35.59	0.79	1.14	40.74	0.90	2.91	53.8	58.0	Low	53.8
115	AP10	12742.0	64	67	70				3	0.01	67.0	3.00	21.21	0.32	1.13	23.90	0.36	1.73	72.1	74.5	Low	72.1
116	AP11	12741.9	52	46	40				3	0.01	46.0	6.00	42.43	0.92	1.16	49.02	1.07	3.46	56.1	61.1	Low	56.1
117	AP12	12742.0	42	33	25				3	0.01	33.3	8.50	60.14	1.80	1.28	77.07	2.31	4.91	47.7	54.7	Med	54.7
118	AP14	12741.6	64	60	65				3	0.01	63.0	2.65	18.71	0.30	1.13	21.08	0.33	1.53	67.5	69.7	Low	67.5
119	AP15	12742.2	51	56	61				3	0.01	56.0	5.00	35.36	0.63	1.14	40.15	0.72	2.89	64.4	68.6	Low	64.4
120	AP16	12741.9	50	63	56				3	0.01	56.3	6.51	46.01	0.82	1.15	52.77	0.94	3.76	67.3	72.7	Low	67.3
121	AP17	12741.9	58	51	47				3	0.01	52.0	5.57	39.37	0.76	1.14	44.99	0.87	3.21	61.4	66.0	Low	61.4
122	AP18	12741.9	61	72	61				3	0.01	64.7	6.35	44.91	0.69	1.14	51.15	0.79	3.67	75.4	80.6	Low	75.4
123	AP19	12741.9	62	57	57				3	0.01	58.7	2.89	20.41	0.35	1.13	23.01	0.39	1.67	63.5	65.9	Low	63.5
124	AP20	12741.9	55	53	52				3	0.01	53.3	1.53	10.80	0.20	1.13	12.17	0.23	0.88	55.9	57.2	Low	55.9
125	AP21	12741.9	57	59	50				3	0.01	55.3	4.73	33.42	0.60	1.13	37.91	0.69	2.73	63.3	67.2	Low	63.3
126	AP22	12742.0	56	58	49				3	0.01	54.3	4.73	33.42	0.62	1.13	37.92	0.70	2.73	62.3	66.2	Low	62.3
127	AP25	12741.8	50	51	45				3	0.01	48.7	3.21	22.73	0.47	1.13	25.67	0.53	1.86	54.1	56.8	Low	54.1
128	AQ23	10435.9	47	41	34				3	0.01	40.7	6.51	46.01	1.13	1.18	54.11	1.33	3.76	51.6	57.0	Low	51.6
129	AQ24	9852.5	50	31	40				3	0.01	40.3	9.50	67.21	1.67	1.26	84.36	2.09	5.49	56.4	64.3	Med	64.3
130	B8	8381.5	45	33	31				3	0.00	36.3	7.57	53.54	1.47	1.22	65.45	1.80	4.37	49.1	55.4	Med	55.4
131	B20	7901.2	36	28	38				3	0.00	34.0	5.29	37.42	1.10	1.17	43.88	1.29	3.06	42.9	47.3	Low	42.9
132	B21	7425.3	27	39	30				3	0.00	32.0	6.24	44.16	1.38	1.21	53.36	1.67	3.61	42.5	47.7	Med	47.7
133	B22	6933.6	49	33	55				3	0.00	45.7	11.37	80.42	1.76	1.27	102.37	2.24	6.57	64.8	74.3	Med	74.3
134	C8	9158.1	72	75	83				3	0.01	76.7	5.69	40.21	0.52	1.13	45.48	0.59	3.28	86.3	91.0	Low	86.3
135	C22	6929.0	76	42	66				3	0.00	61.3	17.47	123.56	2.01	1.33	163.90	2.67	10.09	90.8	105.3	Med	105.3
136	D8	9410.4	76	68	76				3	0.01	73.3	4.62	32.66	0.45	1.13	36.87	0.50	2.67	81.1	85.0	Low	81.1
137	D22	10000.0	74	40	98				3	0.01	70.7	29.14	206.07	2.92	1.58	326.37	4.62	16.83	119.8	144.0	High	144.0
138	E22	10000.0	180	130	160				3	0.01	156.7	25.17	177.95	1.14	1.18	209.39	1.34	14.53	199.1	220.0	Low	199.1
139	E23	10000.0	62	75	77				3	0.01	71.3	8.14	57.59	0.81	1.15	66.01	0.93	4.70	85.1	91.8	Low	85.1
140	E24	10000.0	59	56	53				3	0.01	56.0	3.00	21.21	0.38	1.13	23.92	0.43	1.73	61.1	63.5	Low	61.1
141	E25	10000.0	85	72	82				3	0.01	79.7	6.81	48.13	0.60	1.13	54.60	0.69	3.93	91.1	96.8	Low	91.1
142	E26	13604.3	88	57	67				3	0.01	70.7	15.82	111.88	1.58	1.24	138.78	1.96	9.13	97.3	110.5	Med	110.5
143	F26	5258.3	35	33	42				3	0.00	36.7	4.73	33.42	0.91	1.15	38.58	1.05	2.73	44.6	48.6	Low	44.6
144	G25	8218.3	180	130	150				3	0.00	153.3	25.17	177.95	1.16	1.18	209.90	1.37	14.53	195.8	216.7	Low	195.8
145	G26	9346.7	91	110	110				3	0.01	103.7	10.97	77.57	0.75	1.14	88.60	0.85	6.33	122.2	131.3	Low	122.2
146	H25	10000.0	120	99	130				3	0.01	116.3	15.82	111.88	0.96	1.16	129.64	1.11	9.13	143.0	156.2	Low	143.0
147	I25	7781.1	64	54	75				3	0.00	64.3	10.50	74.27	1.15	1.18	87.56	1.36	6.06	82.0	90.8	Low	82.0
148	J22	10000.0	190	160	160				3	0.01	170.0	17.32	122.47	0.72	1.14	139.68	0.82	10.00	199.2	213.6	Low	199.2
149	J23	10000.4	80	54	110				3	0.01	81.3	28.02	198.16	2.44	1.43	284.12	3.49	16.18	128.6	151.9	High	151.9
150	J24	7428.9	7.5	37	53				3	0.00	32.5	23.08	163.21	5.02	2.59	423.20	13.02	13.33	71.4	90.6	High	90.6
151	J25	6743.5	86	68	92				3	0.00	82.0	12.49	88.32	1.08	1.17	103.35	1.26	7.21	103.1	113.4	Low	103.1
152	K22	10000.0	110	140	140				3	0.01	130.0	17.32	122.47	0.94	1.16	141.71	1.09	10.00	159.2	173.6	Low	159.2

Row #	IDs/Names of the Smaller DUs	DU Area (Sq feet)	Replicate field sample concentrations						Number of Replicates	Weight	Arithmetic Mean	SD of Replicates	calc'd SD of Increments	calc'd CV for the DU	Adj Factor	adj'd SD of Increments	adj'd CV for DU	SE of DU	95% UCL			
			Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6											Student's-t	Chebychev	CV of Increments	95% UCL
153	L22	10000.0	57	62	50				3	0.01	56.3	6.03	42.62	0.76	1.14	48.71	0.86	3.48	66.5	71.5	Low	66.5
154	M22	10000.0	110	150	120				3	0.01	126.7	20.82	147.20	1.16	1.18	173.65	1.37	12.02	161.8	179.1	Low	161.8
155	N22	10000.0	96	98	76				3	0.01	90.0	12.17	86.02	0.96	1.16	99.64	1.11	7.02	110.5	120.6	Low	110.5
156	O22	10000.0	320	310	310				3	0.01	313.3	5.77	40.82	0.13	1.13	46.03	0.15	3.33	323.1	327.9	Low	323.1
157	P22	10000.0	62	55	72				3	0.01	63.0	8.54	60.42	0.96	1.16	69.99	1.11	4.93	77.4	84.5	Low	77.4
158	Q22	10000.0	110	85	110				3	0.01	101.7	14.43	102.06	1.00	1.16	118.68	1.17	8.33	126.0	138.0	Low	126.0
159	R22	7999.4	670	160	120				3	0.00	316.7	306.65	2168.33	6.85	3.93	8523.42	26.92	177.04	833.6	1088.4	High	1088.4
160	S22	10000.0	280	170	220				3	0.01	223.3	55.08	389.44	1.74	1.27	494.48	2.21	31.80	316.2	361.9	Med	361.9
161	T22	9920.3	240	270	170				3	0.01	226.7	51.32	362.86	1.60	1.24	451.23	1.99	29.63	313.2	355.8	Med	355.8
162	U22	6762.1	410	290	320				3	0.00	340.0	62.45	441.59	1.30	1.20	528.55	1.55	36.06	445.3	497.2	Med	497.2
163	V22	10000.0	140	170	180				3	0.01	163.3	20.82	147.20	0.90	1.15	169.79	1.04	12.02	198.4	215.7	Low	198.4
164	W22	10000.0	120	130	120				3	0.01	123.3	5.77	40.82	0.33	1.13	46.00	0.37	3.33	133.1	137.9	Low	133.1
165	W23	10000.0	180	100	120				3	0.01	133.3	41.63	294.39	2.21	1.37	404.15	3.03	24.04	203.5	238.1	High	238.1
166	W24	10000.0	350	210	110	96	120		5	0.01	177.2	106.44	752.64	4.25	2.00	1504.17	8.49	47.60	278.7	384.7	High	384.7
167	X24	10000.0	140	140	170				3	0.01	150.0	17.32	122.47	0.82	1.15	140.47	0.94	10.00	179.2	193.6	Low	179.2
168	Y24	10000.0	93	67	87				3	0.01	82.3	13.61	96.26	1.17	1.18	113.64	1.38	7.86	105.3	116.6	Low	105.3
169	Z24	10000.0	150	130	240				3	0.01	173.3	58.59	414.33	2.39	1.42	588.75	3.40	33.83	272.1	320.8	High	320.8
	Sum:	1734193	--	--	--	--	--	--	509	1.00	69.1	0.18	1.30	0.02	NA	1.88	0.03	0.11	69.4	69.6	Low	69.4

df by Welch-Satterthwaite approximation:	5.8

Recommended UCL: **69.4** **mg/kg** >> Student's t 95% UCL

Note: Student's-t or Chebychev 95% UCL may be appropriate.

*Student's t UCL is acceptable if adj'd CV for DU is "Low" (e.g., CV ≤ 1.5). The User should consult the instructions for additional guidance on which 95% UCL is recommended for specific data sets.

Notes

adj'd	= adjusted	df	= degrees of freedom	SD	= arithmetic standard deviation
calc'd	= calculated	DU	= decision unit	SE	= standard error
CV	= coefficient of variation	RSD	= relative standard deviation	95% UCL	= 95% upper confidence limit for arithmetic mean

Calculation of Weighted 95% UCLs for a Combined Decision Unit (DU) from Several Smaller DUs Having Replicate Incremental Samples

Enter information in green highlighted cells. See the "Instructions" tab for detailed instructions.

Project ID:	Fort Wingate Inner Fence
Property/Sample ID:	Inner Fence Area Grids
Date of calculations:	7/6/2024
Calculator completed by:	CMC
Analyte:	Lead
Analyte units:	mg/kg
DU metric units:	Sq feet
Notes:	

Click in green cell below to select from drop-down menu

DU size metric: area, volume, or depth interval: Area

Note: Assumes all replicates have the same number of increments

Number of increments per replicate: 50

Row #	IDs/Names of the Smaller DUs	DU Area (Sq feet)	Replicate field sample concentrations						Number of Replicates	Weight	Arithmetic Mean	SD of Replicates	calc'd SD of Increments	calc'd CV for the DU	Adj Factor	adj'd SD of Increments	adj'd CV for DU	SE of DU	95% UCL			
			Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6											Student's-t	Chebychev	CV of Increments	95% UCL
1	AA32	10000.0	9.8	8.7	9.5				3	0.01	9.3	0.57	4.02	0.43	1.13	4.54	0.49	0.33	10.3	10.8	Low	10.3
2	AB27	10000.0	13	11	11				3	0.01	11.7	1.15	8.16	0.70	1.14	9.30	0.80	0.67	13.6	14.6	Low	13.6
3	AB38	13378.0	11	9.5	10				3	0.01	10.2	0.76	5.40	0.53	1.13	6.11	0.60	0.44	11.5	12.1	Low	11.5
4	AC34	10000.0	8.3	8.4	8				3	0.01	8.2	0.21	1.47	0.18	1.13	1.66	0.20	0.12	8.6	8.8	Low	8.6
5	AD28	10000.0	9.7	9.5	8.4				3	0.01	9.2	0.70	4.95	0.54	1.13	5.60	0.61	0.40	10.4	11.0	Low	10.4
6	AD34	10000.0	9.9	9.4	9.5				3	0.01	9.6	0.26	1.87	0.19	1.13	2.11	0.22	0.15	10.0	10.3	Low	10.0
7	AE27	9999.9	10	11	11				3	0.01	10.7	0.58	4.08	0.38	1.13	4.60	0.43	0.33	11.6	12.1	Low	11.6
8	AE38	13378.0	8.4	10	8.3				3	0.01	8.9	0.95	6.75	0.76	1.14	7.71	0.87	0.55	10.5	11.3	Low	10.5
9	AF29	10000.0	11	8.9	9.9				3	0.01	9.9	1.05	7.43	0.75	1.14	8.48	0.85	0.61	11.7	12.6	Low	11.7
10	AF30	10000.0	13	18	16				3	0.01	15.7	2.52	17.80	1.14	1.18	20.94	1.34	1.45	19.9	22.0	Low	19.9
11	AF32	10000.0	13	9.3	11				3	0.01	11.1	1.85	13.10	1.18	1.18	15.48	1.39	1.07	14.2	15.8	Low	14.2
12	AF34	10000.0	11	9.6	11				3	0.01	10.5	0.81	5.72	0.54	1.13	6.47	0.61	0.47	11.9	12.6	Low	11.9
13	AH28	10000.0	10	16	11				3	0.01	12.3	3.21	22.73	1.84	1.29	29.31	2.38	1.86	17.8	20.4	Med	20.4
14	AH39	10617.1	10	8.8	9.2				3	0.01	9.3	0.61	4.32	0.46	1.13	4.88	0.52	0.35	10.4	10.9	Low	10.4
15	AI26	10000.0	17	17	15				3	0.01	16.3	1.15	8.16	0.50	1.13	9.23	0.57	0.67	18.3	19.2	Low	18.3
16	AI29	10000.0	12	12	13				3	0.01	12.3	0.58	4.08	0.33	1.13	4.60	0.37	0.33	13.3	13.8	Low	13.3
17	AI31	10000.0	17	14	14				3	0.01	15.0	1.73	12.25	0.82	1.15	14.05	0.94	1.00	17.9	19.4	Low	17.9
18	AJ26	10000.0	12	13	11				3	0.01	12.0	1.00	7.07	0.59	1.13	8.02	0.67	0.58	13.7	14.5	Low	13.7
19	AJ27	10000.0	12	11	11				3	0.01	11.3	0.58	4.08	0.36	1.13	4.60	0.41	0.33	12.3	12.8	Low	12.3
20	AJ31	10000.0	12	13	13				3	0.01	12.7	0.58	4.08	0.32	1.13	4.60	0.36	0.33	13.6	14.1	Low	13.6
21	AJ33	10000.0	13	13	14				3	0.01	13.3	0.58	4.08	0.31	1.13	4.60	0.34	0.33	14.3	14.8	Low	14.3
22	AK28	10000.0	12	12	12				3	0.01	12.0	0.00	0.00	0.00	1.13	0.00	0.00	0.00	12.0	12.0	Low	12.0
23	AK36	10000.0	14	14	14				3	0.01	14.0	0.00	0.00	0.00	1.13	0.00	0.00	0.00	14.0	14.0	Low	14.0
24	AL27	10000.0	13	13	14				3	0.01	13.3	0.58	4.08	0.31	1.13	4.60	0.34	0.33	14.3	14.8	Low	14.3
25	AL34	10000.0	12	11	11				3	0.01	11.3	0.58	4.08	0.36	1.13	4.60	0.41	0.33	12.3	12.8	Low	12.3
26	AL39	7384.7	11	8.8	9.8				3	0.00	9.9	1.10	7.79	0.79	1.14	8.92	0.90	0.64	11.7	12.6	Low	11.7
27	AM29	10000.0	11	10	10				3	0.01	10.3	0.58	4.08	0.40	1.13	4.60	0.45	0.33	11.3	11.8	Low	11.3
28	AM33	10000.0	13	14	14				3	0.01	13.7	0.58	4.08	0.30	1.13	4.60	0.34	0.33	14.6	15.1	Low	14.6
29	AN27	10000.0	13	13	13				3	0.01	13.0	0.00	0.00	0.00	1.13	0.00	0.00	0.00	13.0	13.0	Low	13.0
30	AN28	10000.0	11	12	10				3	0.01	11.0	1.00	7.07	0.64	1.14	8.03	0.73	0.58	12.7	13.5	Low	12.7
31	AN38	6980.7	11	10	10				3	0.00	10.3	0.58	4.08	0.40	1.13	4.60	0.45	0.33	11.3	11.8	Low	11.3
32	AO26	10000.0	11	11	9.6				3	0.01	10.5	0.81	5.72	0.54	1.13	6.47	0.61	0.47	11.9	12.6	Low	11.9
33	AP28	8819.3	13	13	13				3	0.01	13.0	0.00	0.00	0.00	1.13	0.00	0.00	0.00	13.0	13.0	Low	13.0
34	AQ15	13466.3	12	12	12				3	0.01	12.0	0.00	0.00	0.00	1.13	0.00	0.00	0.00	12.0	12.0	Low	12.0
35	AQ22	11017.2	9.9	9.9	10				3	0.01	9.9	0.06	0.41	0.04	1.13	0.46	0.05	0.03	10.0	10.1	Low	10.0
36	C27	14788.0	6.1	7.6	7.3				3	0.01	7.0	0.79	5.61	0.80	1.15	6.43	0.92	0.46	8.3	9.0	Low	8.3
37	C35	9243.3	12	9.3	11				3	0.01	10.8	1.37	9.65	0.90	1.15	11.13	1.03	0.79	13.1	14.2	Low	13.1
38	C37	7935.9	9.2	12	8.4				3	0.00	9.9	1.89	13.37	1.35	1.20	16.10	1.63	1.09	13.1	14.6	Med	14.6
39	E27	14436.0	8.8	9.1	9.9				3	0.01	9.3	0.57	4.02	0.43	1.13	4.54	0.49	0.33	10.2	10.7	Low	10.2
40	F32	10000.0	12	11	11				3	0.01	11.3	0.58	4.08	0.36	1.13	4.60	0.41	0.33	12.3	12.8	Low	12.3
41	G30	10000.0	12	10	12				3	0.01	11.3	1.15	8.16	0.72	1.14	9.31	0.82	0.67	13.3	14.2	Low	13.3
42	H35	10000.0	11	10	11				3	0.01	10.7	0.58	4.08	0.38	1.13	4.60	0.43	0.33	11.6	12.1	Low	11.6
43	H39	12972.6	8.1	10	8.5				3	0.01	8.9	1.00	7.08	0.80	1.15	8.11	0.92	0.58	10.6	11.4	Low	10.6

Row #	IDs/Names of the Smaller DUs	DU Area (Sq feet)	Replicate field sample concentrations						Number of Replicates	Weight	Arithmetic Mean	SD of Replicates	calc'd SD of Increments	calc'd CV for the DU	Adj Factor	adj'd SD of Increments	adj'd CV for DU	SE of DU	95% UCL			
			Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6											Student's-t	Chebychev	CV of Increments	95% UCL
44	I29	10000.0	9.1	9.3	9.5				3	0.01	9.3	0.20	1.41	0.15	1.13	1.59	0.17	0.12	9.6	9.8	Low	9.6
45	I30	10000.0	9	7.5	8.7				3	0.01	8.4	0.79	5.61	0.67	1.14	6.38	0.76	0.46	9.7	10.4	Low	9.7
46	I33	10000.0	8.5	8.7	9.3				3	0.01	8.8	0.42	2.94	0.33	1.13	3.32	0.38	0.24	9.5	9.9	Low	9.5
47	I38	12991.4	8.4	11	8.3				3	0.01	9.2	1.53	10.82	1.17	1.18	12.78	1.38	0.88	11.8	13.1	Low	11.8
48	K30	10000.0	9.3	9.3	9				3	0.01	9.2	0.17	1.22	0.13	1.13	1.38	0.15	0.10	9.5	9.6	Low	9.5
49	K34	10000.0	9.3	9.1	9.7				3	0.01	9.4	0.31	2.16	0.23	1.13	2.43	0.26	0.18	9.9	10.1	Low	9.9
50	L29	10000.0	8.8	9	9				3	0.01	8.9	0.12	0.82	0.09	1.13	0.92	0.10	0.07	9.1	9.2	Low	9.1
51	L34	10000.0	9.4	8.4	9.8				3	0.01	9.2	0.72	5.10	0.55	1.13	5.77	0.63	0.42	10.4	11.0	Low	10.4
52	L37	10000.0	9.9	10	10				3	0.01	10.0	0.06	0.41	0.04	1.13	0.46	0.05	0.03	10.1	10.1	Low	10.1
53	M28	10000.0	11	10	12				3	0.01	11.0	1.00	7.07	0.64	1.14	8.03	0.73	0.58	12.7	13.5	Low	12.7
54	M32	10000.0	9.5	9.2	9.6				3	0.01	9.4	0.21	1.47	0.16	1.13	1.66	0.18	0.12	9.8	10.0	Low	9.8
55	M39	13011.8	9.4	7	8.2				3	0.01	8.2	1.20	8.49	1.03	1.17	9.89	1.21	0.69	10.2	11.2	Low	10.2
56	N27	10000.0	14	12	12				3	0.01	12.7	1.15	8.16	0.64	1.14	9.28	0.73	0.67	14.6	15.6	Low	14.6
57	N28	10000.0	11	10	10				3	0.01	10.3	0.58	4.08	0.40	1.13	4.60	0.45	0.33	11.3	11.8	Low	11.3
58	N37	10000.0	9.8	9.5	9.8				3	0.01	9.7	0.17	1.22	0.13	1.13	1.38	0.14	0.10	10.0	10.1	Low	10.0
59	O27	10000.0	12	9.4	12				3	0.01	11.1	1.50	10.61	0.95	1.16	12.29	1.10	0.87	13.7	14.9	Low	13.7
60	O32	10000.0	9.3	8.8	7.9				3	0.01	8.7	0.71	5.02	0.58	1.13	5.69	0.66	0.41	9.9	10.5	Low	9.9
61	O37	10000.0	10	9.5	9.8				3	0.01	9.8	0.25	1.78	0.18	1.13	2.01	0.21	0.15	10.2	10.4	Low	10.2
62	P32	10000.0	9.8	7.8	7.2				3	0.01	8.3	1.36	9.63	1.16	1.18	11.36	1.37	0.79	10.6	11.7	Low	10.6
63	P33	10000.0	9.8	8.2	9.9				3	0.01	9.3	0.95	6.75	0.73	1.14	7.70	0.83	0.55	10.9	11.7	Low	10.9
64	Q26	10000.0	14	14	14				3	0.01	14.0	0.00	0.00	0.00	1.13	0.00	0.00	0.00	14.0	14.0	Low	14.0
65	Q29	10000.0	10	11	12				3	0.01	11.0	1.00	7.07	0.64	1.14	8.03	0.73	0.58	12.7	13.5	Low	12.7
66	Q38	13187.6	8.4	7.5	7.6				3	0.01	7.8	0.49	3.49	0.45	1.13	3.94	0.50	0.28	8.7	9.1	Low	8.7
67	Q39	13187.6	8.2	9	8.7				3	0.01	8.6	0.40	2.86	0.33	1.13	3.22	0.37	0.23	9.3	9.7	Low	9.3
68	R24	10000.0	8.9	8.9	9.6				3	0.01	9.1	0.40	2.86	0.31	1.13	3.22	0.35	0.23	9.8	10.2	Low	9.8
69	R32	10000.0	10	9.4	8.7				3	0.01	9.4	0.65	4.60	0.49	1.13	5.20	0.56	0.38	10.5	11.0	Low	10.5
70	S26	10000.0	11	11	12				3	0.01	11.3	0.58	4.08	0.36	1.13	4.60	0.41	0.33	12.3	12.8	Low	12.3
71	S29	10000.0	9.8	11	11				3	0.01	10.6	0.69	4.90	0.46	1.13	5.53	0.52	0.40	11.8	12.3	Low	11.8
72	S36	10000.0	9	8.6	8.6				3	0.01	8.7	0.23	1.63	0.19	1.13	1.84	0.21	0.13	9.1	9.3	Low	9.1
73	T23	10000.0	14	12	14				3	0.01	13.3	1.15	8.16	0.61	1.13	9.27	0.69	0.67	15.3	16.2	Low	15.3
74	T28	10000.0	9.7	12	12				3	0.01	11.2	1.33	9.39	0.84	1.15	10.78	0.96	0.77	13.5	14.6	Low	13.5
75	T32	10000.0	11	8.5	10				3	0.01	9.8	1.26	8.90	0.90	1.15	10.27	1.04	0.73	12.0	13.0	Low	12.0
76	T39	13380.2	7.8	7.9	7.5				3	0.01	7.7	0.21	1.47	0.19	1.13	1.66	0.21	0.12	8.1	8.3	Low	8.1
77	U28	10000.0	11	12	11				3	0.01	11.3	0.58	4.08	0.36	1.13	4.60	0.41	0.33	12.3	12.8	Low	12.3
78	U32	10000.0	11	9.4	8.8				3	0.01	9.7	1.14	8.04	0.83	1.15	9.23	0.95	0.66	11.7	12.6	Low	11.7
79	U33	10000.0	9	8.6	9				3	0.01	8.9	0.23	1.63	0.18	1.13	1.84	0.21	0.13	9.3	9.4	Low	9.3
80	U35	10000.0	11	10	11				3	0.01	10.7	0.58	4.08	0.38	1.13	4.60	0.43	0.33	11.6	12.1	Low	11.6
81	U37	10000.0	9.6	10	10				3	0.01	9.9	0.23	1.63	0.17	1.13	1.84	0.19	0.13	10.3	10.4	Low	10.3
82	V30	10000.0	10	10	9.9				3	0.01	10.0	0.06	0.41	0.04	1.13	0.46	0.05	0.03	10.1	10.1	Low	10.1
83	V33	10000.0	11	11	9.3				3	0.01	10.4	0.98	6.94	0.67	1.14	7.89	0.76	0.57	12.1	12.9	Low	12.1
84	V36	10000.0	9.4	11	10				3	0.01	10.1	0.81	5.72	0.56	1.13	6.47	0.64	0.47	11.5	12.2	Low	11.5
85	W26	10000.0	17	15	15				3	0.01	15.7	1.15	8.16	0.52	1.13	9.24	0.59	0.67	17.6	18.6	Low	17.6
86	W28	10000.0	14	15	18				3	0.01	15.7	2.08	14.72	0.94	1.16	17.03	1.09	1.20	19.2	20.9	Low	19.2
87	W31	10000.0	10	9.3	10				3	0.01	9.8	0.40	2.86	0.29	1.13	3.22	0.33	0.23	10.4	10.8	Low	10.4
88	W34	10000.0	9.5	9.4	11				3	0.01	10.0	0.90	6.34	0.64	1.14	7.20	0.72	0.52	11.5	12.2	Low	11.5
89	W39	13397.6	8.4	7.9	7.4				3	0.01	7.9	0.50	3.54	0.45	1.13	3.99	0.51	0.29	8.7	9.2	Low	8.7
90	X25	10000.0	12	11	12				3	0.01	11.7	0.58	4.08	0.35	1.13	4.60	0.39	0.33	12.6	13.1	Low	12.6
91	X33	10000.0	9.6	9.2	8.6				3	0.01	9.1	0.50	3.56	0.39	1.13	4.01	0.44	0.29	10.0	10.4	Low	10.0
92	X36	10000.0	9.4	9.4	9.8				3	0.01	9.5	0.23	1.63	0.17	1.13	1.84	0.19	0.13	9.9	10.1	Low	9.9
93	Z29	10000.0	10	11	11				3	0.01	10.7	0.58	4.08	0.38	1.13	4.60	0.43	0.33	11.6	12.1	Low	11.6
94	AA24	10000.0	17	15	13				3	0.01	15.0	2.00	14.14	0.94	1.16	16.36	1.09	1.15	18.4	20.0	Low	18.4
95	AB24	10000.0	11	11	10				3	0.01	10.7	0.58	4.08	0.38	1.13	4.60	0.43	0.33	11.6	12.1	Low	11.6
96	AB25	10000.0	23	15	17				3	0.01	18.3	4.16	29.44	1.61	1.24	36.63	2.00	2.40	25.4	28.8	Med	28.8
97	AC25	10000.0	14	13	13				3	0.01	13.3	0.58	4.08	0.31	1.13	4.60	0.34	0.33	14.3	14.8	Low	14.3
98	AD25	10000.0	10	10	10				3	0.01	10.0	0.00	0.00	0.00	1.13	0.00	0.00	0.00	10.0	10.0	Low	10.0
99	AE25	10000.0	10	9.4	21				3	0.01	13.5	6.53	46.18	3.43	1.78	82.06	6.09	3.77	24.5	29.9	High	29.9
100	AF25	10000.0	12	13	12				3	0.01	12.3	0.58	4.08	0.33	1.13	4.60	0.37	0.33	13.3	13.8	Low	13.3

Row #	IDs/Names of the Smaller DUs	DU Area (Sq feet)	Replicate field sample concentrations						Number of Replicates	Weight	Arithmetic Mean	SD of Replicates	calc'd SD of Increments	calc'd CV for the DU	Adj Factor	adj'd SD of Increments	adj'd CV for DU	SE of DU	95% UCL			
			Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6											Student's-t	Chebychev	CV of Increments	95% UCL
101	AG25	10000.0	12	13	13				3	0.01	12.7	0.58	4.08	0.32	1.13	4.60	0.36	0.33	13.6	14.1	Low	13.6
102	AH24	10000.0	13	12	11				3	0.01	12.0	1.00	7.07	0.59	1.13	8.02	0.67	0.58	13.7	14.5	Low	13.7
103	AI23	10000.0	13	12	9.4				3	0.01	11.5	1.86	13.14	1.15	1.18	15.48	1.35	1.07	14.6	16.1	Low	14.6
104	AI24	10000.0	14	13	14				3	0.01	13.7	0.58	4.08	0.30	1.13	4.60	0.34	0.33	14.6	15.1	Low	14.6
105	AJ23	10000.0	13	13	11				3	0.01	12.3	1.15	8.16	0.66	1.14	9.29	0.75	0.67	14.3	15.2	Low	14.3
106	AK23	10000.0	14	12	17				3	0.01	14.3	2.52	17.80	1.24	1.19	21.17	1.48	1.45	18.6	20.7	Low	18.6
107	AL23	10000.0	14	14	16				3	0.01	14.7	1.15	8.16	0.56	1.13	9.25	0.63	0.67	16.6	17.6	Low	16.6
108	AL24	10000.0	14	13	13				3	0.01	13.3	0.58	4.08	0.31	1.13	4.60	0.34	0.33	14.3	14.8	Low	14.3
109	AL25	10000.0	13	14	14				3	0.01	13.7	0.58	4.08	0.30	1.13	4.60	0.34	0.33	14.6	15.1	Low	14.6
110	AM25	10000.0	17	15	16				3	0.01	16.0	1.00	7.07	0.44	1.13	7.98	0.50	0.58	17.7	18.5	Low	17.7
111	AN25	10000.0	15	14	13				3	0.01	14.0	1.00	7.07	0.51	1.13	7.99	0.57	0.58	15.7	16.5	Low	15.7
112	AO25	10000.0	13	12	11				3	0.01	12.0	1.00	7.07	0.59	1.13	8.02	0.67	0.58	13.7	14.5	Low	13.7
113	AP8	12741.9	5.8	5.3	5.8				3	0.01	5.6	0.29	2.04	0.36	1.13	2.30	0.41	0.17	6.1	6.4	Low	6.1
114	AP9	12741.9	13	12	12				3	0.01	12.3	0.58	4.08	0.33	1.13	4.60	0.37	0.33	13.3	13.8	Low	13.3
115	AP10	12742.0	14	16	15				3	0.01	15.0	1.00	7.07	0.47	1.13	7.99	0.53	0.58	16.7	17.5	Low	16.7
116	AP11	12741.9	14	16	13				3	0.01	14.3	1.53	10.80	0.75	1.14	12.34	0.86	0.88	16.9	18.2	Low	16.9
117	AP12	12742.0	14	13	11				3	0.01	12.7	1.53	10.80	0.85	1.15	12.42	0.98	0.88	15.2	16.5	Low	15.2
118	AP14	12741.6	14	14	14				3	0.01	14.0	0.00	0.00	0.00	1.13	0.00	0.00	0.00	14.0	14.0	Low	14.0
119	AP15	12742.2	14	14	14				3	0.01	14.0	0.00	0.00	0.00	1.13	0.00	0.00	0.00	14.0	14.0	Low	14.0
120	AP16	12741.9	13	15	14				3	0.01	14.0	1.00	7.07	0.51	1.13	7.99	0.57	0.58	15.7	16.5	Low	15.7
121	AP17	12741.9	14	4	13				3	0.01	10.3	5.51	38.94	3.77	1.92	74.91	7.25	3.18	19.6	24.2	High	24.2
122	AP18	12741.9	13	14	13				3	0.01	13.3	0.58	4.08	0.31	1.13	4.60	0.34	0.33	14.3	14.8	Low	14.3
123	AP19	12741.9	14	12	13				3	0.01	13.0	1.00	7.07	0.54	1.13	8.00	0.62	0.58	14.7	15.5	Low	14.7
124	AP20	12741.9	15	14	14				3	0.01	14.3	0.58	4.08	0.28	1.13	4.60	0.32	0.33	15.3	15.8	Low	15.3
125	AP21	12741.9	14	13	13				3	0.01	13.3	0.58	4.08	0.31	1.13	4.60	0.34	0.33	14.3	14.8	Low	14.3
126	AP22	12742.0	13	15	13				3	0.01	13.7	1.15	8.16	0.60	1.13	9.26	0.68	0.67	15.6	16.6	Low	15.6
127	AP25	12741.8	13	12	12				3	0.01	12.3	0.58	4.08	0.33	1.13	4.60	0.37	0.33	13.3	13.8	Low	13.3
128	AQ23	10435.9	13	12	11				3	0.01	12.0	1.00	7.07	0.59	1.13	8.02	0.67	0.58	13.7	14.5	Low	13.7
129	AQ24	9852.5	13	11	12				3	0.01	12.0	1.00	7.07	0.59	1.13	8.02	0.67	0.58	13.7	14.5	Low	13.7
130	B8	8381.5	8.6	8.7	7.9				3	0.00	8.4	0.44	3.08	0.37	1.13	3.47	0.41	0.25	9.1	9.5	Low	9.1
131	B20	7901.2	8.6	8.6	8.5				3	0.00	8.6	0.06	0.41	0.05	1.13	0.46	0.05	0.03	8.7	8.7	Low	8.7
132	B21	7425.3	8.5	8.9	8.8				3	0.00	8.7	0.21	1.47	0.17	1.13	1.66	0.19	0.12	9.1	9.3	Low	9.1
133	B22	6933.6	12	11	11				3	0.00	11.3	0.58	4.08	0.36	1.13	4.60	0.41	0.33	12.3	12.8	Low	12.3
134	C8	9158.1	9.2	11	9.3				3	0.01	9.8	1.01	7.15	0.73	1.14	8.16	0.83	0.58	11.5	12.4	Low	11.5
135	C22	6929.0	11	8.1	9.6				3	0.00	9.6	1.45	10.26	1.07	1.17	11.99	1.25	0.84	12.0	13.2	Low	12.0
136	D8	9410.4	9.4	7.9	7.9				3	0.01	8.4	0.87	6.12	0.73	1.14	6.99	0.83	0.50	9.9	10.6	Low	9.9
137	D22	10000.0	9.6	7.9	9.5				3	0.01	9.0	0.95	6.75	0.75	1.14	7.71	0.86	0.55	10.6	11.4	Low	10.6
138	E22	10000.0	12	10	11				3	0.01	11.0	1.00	7.07	0.64	1.14	8.03	0.73	0.58	12.7	13.5	Low	12.7
139	E23	10000.0	7.3	8	8.2				3	0.01	7.8	0.47	3.34	0.43	1.13	3.77	0.48	0.27	8.6	9.0	Low	8.6
140	E24	10000.0	7.1	8.3	7.5				3	0.01	7.6	0.61	4.32	0.57	1.13	4.89	0.64	0.35	8.7	9.2	Low	8.7
141	E25	10000.0	7	7.6	7.4				3	0.01	7.3	0.31	2.16	0.29	1.13	2.43	0.33	0.18	7.8	8.1	Low	7.8
142	E26	13604.3	9.4	8.7	10				3	0.01	9.4	0.65	4.60	0.49	1.13	5.20	0.56	0.38	10.5	11.0	Low	10.5
143	F26	5258.3	8.7	8.1	8.6				3	0.00	8.5	0.32	2.27	0.27	1.13	2.56	0.30	0.19	9.0	9.3	Low	9.0
144	G25	8218.3	12	11	11				3	0.00	11.3	0.58	4.08	0.36	1.13	4.60	0.41	0.33	12.3	12.8	Low	12.3
145	G26	9346.7	9.7	10	9.4				3	0.01	9.7	0.30	2.12	0.22	1.13	2.39	0.25	0.17	10.2	10.5	Low	10.2
146	H25	10000.0	11	10	12				3	0.01	11.0	1.00	7.07	0.64	1.14	8.03	0.73	0.58	12.7	13.5	Low	12.7
147	I25	7781.1	11	9.1	10				3	0.00	10.0	0.95	6.72	0.67	1.14	7.65	0.76	0.55	11.6	12.4	Low	11.6
148	J22	10000.0	12	17	13				3	0.01	14.0	2.65	18.71	1.34	1.20	22.49	1.61	1.53	18.5	20.7	Med	20.7
149	J23	10000.4	11	9.6	10				3	0.01	10.2	0.72	5.10	0.50	1.13	5.76	0.57	0.42	11.4	12.0	Low	11.4
150	J24	7428.9	9.2	8.5	10				3	0.00	9.2	0.75	5.31	0.57	1.13	6.01	0.65	0.43	10.5	11.1	Low	10.5
151	J25	6743.5	12	9.8	11				3	0.00	10.9	1.10	7.79	0.71	1.14	8.88	0.81	0.64	12.8	13.7	Low	12.8
152	K22	10000.0	11	10	18				3	0.01	13.0	4.36	30.82	2.37	1.42	43.63	3.36	2.52	20.3	24.0	High	24.0
153	L22	10000.0	8.8	9	9.2				3	0.01	9.0	0.20	1.41	0.16	1.13	1.59	0.18	0.12	9.3	9.5	Low	9.3
154	M22	10000.0	12	11	9.8				3	0.01	10.9	1.10	7.79	0.71	1.14	8.88	0.81	0.64	12.8	13.7	Low	12.8

Row #	IDs/Names of the Smaller DUs	DU Area (Sq feet)	Replicate field sample concentrations						Number of Replicates	Weight	Arithmetic Mean	SD of Replicates	calc'd SD of Increments	calc'd CV for the DU	Adj Factor	adj'd SD of Increments	adj'd CV for DU	SE of DU	95% UCL			
			Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6											Student's-t	Chebychev	CV of Increments	95% UCL
155	N22	10000.0	11	13	12				3	0.01	12.0	1.00	7.07	0.59	1.13	8.02	0.67	0.58	13.7	14.5	Low	13.7
156	O22	10000.0	15	15	16				3	0.01	15.3	0.58	4.08	0.27	1.13	4.60	0.30	0.33	16.3	16.8	Low	16.3
157	P22	10000.0	9.6	9.1	10				3	0.01	9.6	0.45	3.19	0.33	1.13	3.59	0.38	0.26	10.3	10.7	Low	10.3
158	Q22	10000.0	12	9.6	10				3	0.01	10.5	1.29	9.09	0.86	1.15	10.46	0.99	0.74	12.7	13.8	Low	12.7
159	R22	7999.4	18	12	11				3	0.00	13.7	3.79	26.77	1.96	1.31	35.18	2.57	2.19	20.0	23.2	Med	23.2
160	S22	10000.0	12	10	14				3	0.01	12.0	2.00	14.14	1.18	1.18	16.71	1.39	1.15	15.4	17.0	Low	15.4
161	T22	9920.3	13	24	15				3	0.01	17.3	5.86	41.43	2.39	1.42	58.87	3.40	3.38	27.2	32.1	High	32.1
162	U22	6762.1	16	13	13				3	0.00	14.0	1.73	12.25	0.87	1.15	14.10	1.01	1.00	16.9	18.4	Low	16.9
163	V22	10000.0	12	12	15				3	0.01	13.0	1.73	12.25	0.94	1.16	14.17	1.09	1.00	15.9	17.4	Low	15.9
164	W22	10000.0	15	13	14				3	0.01	14.0	1.00	7.07	0.51	1.13	7.99	0.57	0.58	15.7	16.5	Low	15.7
165	W23	10000.0	14	11	12				3	0.01	12.3	1.53	10.80	0.88	1.15	12.44	1.01	0.88	14.9	16.2	Low	14.9
166	W24	10000.0	22	15	9.9	11	12		5	0.01	14.0	4.87	34.43	2.46	1.30	44.72	3.20	2.18	18.6	23.5	High	23.5
167	X24	10000.0	14	14	16				3	0.01	14.7	1.15	8.16	0.56	1.13	9.25	0.63	0.67	16.6	17.6	Low	16.6
168	Y24	10000.0	14	13	15				3	0.01	14.0	1.00	7.07	0.51	1.13	7.99	0.57	0.58	15.7	16.5	Low	15.7
169	Z24	10000.0	14	14	18				3	0.01	15.3	2.31	16.33	1.06	1.17	19.09	1.24	1.33	19.2	21.1	Low	19.2
	Sum:	1734193	--	--	--	--	--	--	509	1.00	11.3	0.01	0.07	0.01	NA	0.08	0.01	0.01	11.3	11.3	Low	11.3

df by Welch-Satterthwaite approximation:	**4.9**

Recommended UCL: **11.3** **mg/kg** >> Student's t 95% UCL

Note: Student's-t or Chebychev 95% UCL may be appropriate.

*Student's t UCL is acceptable if adj'd CV for DU is "Low" (e.g., CV ≤ 1.5). The User should consult the instructions for additional guidance on which 95% UCL is recommended for specific data sets.

Notes

adj'd	= adjusted	df	= degrees of freedom	SD	= arithmetic standard deviation
calc'd	= calculated	DU	= decision unit	SE	= standard error
CV	= coefficient of variation	RSD	= relative standard deviation	95% UCL	= 95% upper confidence limit for arithmetic mean

Calculation of Weighted 95% UCLs for a Combined Decision Unit (DU) from Several Smaller DUs Having Replicate Incremental Samples

Enter information in green highlighted cells. See the "Instructions" tab for detailed instructions.

Project ID:	Fort Wingate Inner Fence
Property/Sample ID:	Inner Fence Area Grids
Date of calculations:	7/6/2024
Calculator completed by:	CMC
Analyte:	Manganese
Analyte units:	mg/kg
DU metric units:	Sq feet
Notes:	

Click in green cell below to select from drop-down menu

DU size metric: area, volume, or depth interval: Area

Note: Assumes all replicates have the same number of increments

Number of increments per replicate: 50

Row #	IDs/Names of the Smaller DUs	DU Area (Sq feet)	Replicate field sample concentrations						Number of Replicates	Weight	Arithmetic Mean	SD of Replicates	calc'd SD of Increments	calc'd CV for the DU	Adj Factor	adj'd SD of Increments	adj'd CV for DU	SE of DU	95% UCL			
			Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6											Student's-t	Chebychev	CV of Increments	95% UCL
1	AA32	10000.0	250	270	250				3	0.01	256.7	11.55	81.65	0.32	1.13	92.00	0.36	6.67	276.1	285.7	Low	276.1
2	AB27	10000.0	340	330	390				3	0.01	353.3	32.15	227.30	0.64	1.14	258.27	0.73	18.56	407.5	434.2	Low	407.5
3	AB38	13378.0	390	440	400				3	0.01	410.0	26.46	187.08	0.46	1.13	211.24	0.52	15.28	454.6	476.6	Low	454.6
4	AC34	10000.0	380	390	370				3	0.01	380.0	10.00	70.71	0.19	1.13	79.67	0.21	5.77	396.9	405.2	Low	396.9
5	AD28	10000.0	290	270	280				3	0.01	280.0	10.00	70.71	0.25	1.13	79.65	0.28	5.77	296.9	305.2	Low	296.9
6	AD34	10000.0	260	270	250				3	0.01	260.0	10.00	70.71	0.27	1.13	79.65	0.31	5.77	276.9	285.2	Low	276.9
7	AE27	9999.9	240	250	270				3	0.01	253.3	15.28	108.01	0.43	1.13	121.88	0.48	8.82	279.1	291.8	Low	279.1
8	AE38	13378.0	430	460	470				3	0.01	453.3	20.82	147.20	0.32	1.13	165.86	0.37	12.02	488.4	505.7	Low	488.4
9	AF29	10000.0	250	220	240				3	0.01	236.7	15.28	108.01	0.46	1.13	121.96	0.52	8.82	262.4	275.1	Low	262.4
10	AF30	10000.0	280	300	310				3	0.01	296.7	15.28	108.01	0.36	1.13	121.76	0.41	8.82	322.4	335.1	Low	322.4
11	AF32	10000.0	300	270	280				3	0.01	283.3	15.28	108.01	0.38	1.13	121.78	0.43	8.82	309.1	321.8	Low	309.1
12	AF34	10000.0	240	250	250				3	0.01	246.7	5.77	40.82	0.17	1.13	46.01	0.19	3.33	256.4	261.2	Low	256.4
13	AH28	10000.0	190	220	190				3	0.01	200.0	17.32	122.47	0.61	1.13	138.98	0.69	10.00	229.2	243.6	Low	229.2
14	AH39	10617.1	360	340	340				3	0.01	346.7	11.55	81.65	0.24	1.13	91.98	0.27	6.67	366.1	375.7	Low	366.1
15	AI26	10000.0	270	260	250				3	0.01	260.0	10.00	70.71	0.27	1.13	79.65	0.31	5.77	276.9	285.2	Low	276.9
16	AI29	10000.0	380	420	400				3	0.01	400.0	20.00	141.42	0.35	1.13	159.40	0.40	11.55	433.7	450.3	Low	433.7
17	AI31	10000.0	350	340	290				3	0.01	326.7	32.15	227.30	0.70	1.14	258.92	0.79	18.56	380.9	407.6	Low	380.9
18	AJ26	10000.0	350	360	320				3	0.01	343.3	20.82	147.20	0.43	1.13	166.10	0.48	12.02	378.4	395.7	Low	378.4
19	AJ27	10000.0	320	300	290				3	0.01	303.3	15.28	108.01	0.36	1.13	121.74	0.40	8.82	329.1	341.8	Low	329.1
20	AJ31	10000.0	480	490	480				3	0.01	483.3	5.77	40.82	0.08	1.13	46.06	0.10	3.33	493.1	497.9	Low	493.1
21	AJ33	10000.0	380	400	330				3	0.01	370.0	36.06	254.95	0.69	1.14	290.31	0.78	20.82	430.8	460.7	Low	430.8
22	AK28	10000.0	320	310	310				3	0.01	313.3	5.77	40.82	0.13	1.13	46.03	0.15	3.33	323.1	327.9	Low	323.1
23	AK36	10000.0	420	420	470				3	0.01	436.7	28.87	204.12	0.47	1.13	230.54	0.53	16.67	485.3	509.3	Low	485.3
24	AL27	10000.0	210	220	230				3	0.01	220.0	10.00	70.71	0.32	1.13	79.67	0.36	5.77	236.9	245.2	Low	236.9
25	AL34	10000.0	280	270	270				3	0.01	273.3	5.77	40.82	0.15	1.13	46.02	0.17	3.33	283.1	287.9	Low	283.1
26	AL39	7384.7	500	500	550				3	0.00	516.7	28.87	204.12	0.40	1.13	230.20	0.45	16.67	565.3	589.3	Low	565.3
27	AM29	10000.0	350	350	360				3	0.01	353.3	5.77	40.82	0.12	1.13	46.04	0.13	3.33	363.1	367.9	Low	363.1
28	AM33	10000.0	300	300	310				3	0.01	303.3	5.77	40.82	0.13	1.13	46.02	0.15	3.33	313.1	317.9	Low	313.1
29	AN27	10000.0	340	270	270				3	0.01	293.3	40.41	285.77	0.97	1.16	331.49	1.13	23.33	361.5	395.0	Low	361.5
30	AN28	10000.0	430	450	510				3	0.01	463.3	41.63	294.39	0.64	1.14	334.39	0.72	24.04	533.5	568.1	Low	533.5
31	AN38	6980.7	400	380	390				3	0.00	390.0	10.00	70.71	0.18	1.13	79.68	0.20	5.77	406.9	415.2	Low	406.9
32	AO26	10000.0	300	280	270				3	0.01	283.3	15.28	108.01	0.38	1.13	121.78	0.43	8.82	309.1	321.8	Low	309.1
33	AP28	8819.3	740	700	770				3	0.01	736.7	35.12	248.33	0.34	1.13	279.84	0.38	20.28	795.9	825.0	Low	795.9
34	AQ15	13466.3	300	290	280				3	0.01	290.0	10.00	70.71	0.24	1.13	79.65	0.27	5.77	306.9	315.2	Low	306.9
35	AQ22	11017.2	230	250	240				3	0.01	240.0	10.00	70.71	0.29	1.13	79.66	0.33	5.77	256.9	265.2	Low	256.9
36	C27	14788.0	310	340	410				3	0.01	353.3	51.32	362.86	1.03	1.17	422.75	1.20	29.63	439.8	482.5	Low	439.8
37	C35	9243.3	650	630	630				3	0.01	636.7	11.55	81.65	0.13	1.13	92.06	0.14	6.67	656.1	665.7	Low	656.1
38	C37	7935.9	930	840	810				3	0.00	860.0	62.45	441.59	0.51	1.13	499.35	0.58	36.06	965.3	1017.2	Low	965.3
39	E27	14436.0	340	360	360				3	0.01	353.3	11.55	81.65	0.23	1.13	91.98	0.26	6.67	372.8	382.4	Low	372.8
40	F32	10000.0	540	490	500				3	0.01	510.0	26.46	187.08	0.37	1.13	210.90	0.41	15.28	554.6	576.6	Low	554.6
41	G30	10000.0	410	350	400				3	0.01	386.7	32.15	227.30	0.59	1.13	257.69	0.67	18.56	440.9	467.6	Low	440.9
42	H35	10000.0	850	750	830				3	0.01	810.0	52.92	374.17	0.46	1.13	422.53	0.52	30.55	899.2	943.2	Low	899.2
43	H39	12972.6	590	610	560				3	0.01	586.7	25.17	177.95	0.30	1.13	200.48	0.34	14.53	629.1	650.0	Low	629.1

Row #	IDs/Names of the Smaller DUs	DU Area (Sq feet)	Replicate field sample concentrations						Number of Replicates	Weight	Arithmetic Mean	SD of Replicates	calc'd SD of Increments	calc'd CV for the DU	Adj Factor	adj'd SD of Increments	adj'd CV for DU	SE of DU	95% UCL			
			Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6											Student's-t	Chebychev	CV of Increments	95% UCL
44	I29	10000.0	330	360	360				3	0.01	350.0	17.32	122.47	0.35	1.13	138.04	0.39	10.00	379.2	393.6	Low	379.2
45	I30	10000.0	380	350	350				3	0.01	360.0	17.32	122.47	0.34	1.13	138.02	0.38	10.00	389.2	403.6	Low	389.2
46	I33	10000.0	490	510	490				3	0.01	496.7	11.55	81.65	0.16	1.13	92.02	0.19	6.67	516.1	525.7	Low	516.1
47	I38	12991.4	460	510	430				3	0.01	466.7	40.41	285.77	0.61	1.13	324.29	0.69	23.33	534.8	568.4	Low	534.8
48	K30	10000.0	550	540	520				3	0.01	536.7	15.28	108.01	0.20	1.13	121.69	0.23	8.82	562.4	575.1	Low	562.4
49	K34	10000.0	510	500	550				3	0.01	520.0	26.46	187.08	0.36	1.13	210.88	0.41	15.28	564.6	586.6	Low	564.6
50	L29	10000.0	350	350	320				3	0.01	340.0	17.32	122.47	0.36	1.13	138.05	0.41	10.00	369.2	383.6	Low	369.2
51	L34	10000.0	450	400	480				3	0.01	443.3	40.41	285.77	0.64	1.14	324.73	0.73	23.33	511.5	545.0	Low	511.5
52	L37	10000.0	710	680	720				3	0.01	703.3	20.82	147.20	0.21	1.13	165.83	0.24	12.02	738.4	755.7	Low	738.4
53	M28	10000.0	310	300	320				3	0.01	310.0	10.00	70.71	0.23	1.13	79.66	0.26	5.77	326.9	335.2	Low	326.9
54	M32	10000.0	260	270	270				3	0.01	266.7	5.77	40.82	0.15	1.13	46.01	0.17	3.33	276.4	281.2	Low	276.4
55	M39	13011.8	510	460	440				3	0.01	470.0	36.06	254.95	0.54	1.13	288.56	0.61	20.82	530.8	560.7	Low	530.8
56	N27	10000.0	330	310	310				3	0.01	316.7	11.55	81.65	0.26	1.13	91.97	0.29	6.67	336.1	345.7	Low	336.1
57	N28	10000.0	390	410	390				3	0.01	396.7	11.55	81.65	0.21	1.13	91.99	0.23	6.67	416.1	425.7	Low	416.1
58	N37	10000.0	470	480	470				3	0.01	473.3	5.77	40.82	0.09	1.13	46.06	0.10	3.33	483.1	487.9	Low	483.1
59	O27	10000.0	610	370	410				3	0.01	463.3	128.58	909.21	1.96	1.31	1195.44	2.58	74.24	680.1	786.9	Med	786.9
60	O32	10000.0	290	280	260				3	0.01	276.7	15.28	108.01	0.39	1.13	121.80	0.44	8.82	302.4	315.1	Low	302.4
61	O37	10000.0	420	440	400				3	0.01	420.0	20.00	141.42	0.34	1.13	159.37	0.38	11.55	453.7	470.3	Low	453.7
62	P32	10000.0	260	230	210				3	0.01	233.3	25.17	177.95	0.76	1.14	203.43	0.87	14.53	275.8	296.7	Low	275.8
63	P33	10000.0	270	270	270				3	0.01	270.0	0.00	0.00	0.00	1.13	0.00	0.00	0.00	270.0	270.0	Low	270.0
64	Q26	10000.0	460	480	490				3	0.01	476.7	15.28	108.01	0.23	1.13	121.68	0.26	8.82	502.4	515.1	Low	502.4
65	Q29	10000.0	340	330	330				3	0.01	333.3	5.77	40.82	0.12	1.13	46.03	0.14	3.33	343.1	347.9	Low	343.1
66	Q38	13187.6	260	250	270				3	0.01	260.0	10.00	70.71	0.27	1.13	79.65	0.31	5.77	276.9	285.2	Low	276.9
67	Q39	13187.6	400	400	410				3	0.01	403.3	5.77	40.82	0.10	1.13	46.05	0.11	3.33	413.1	417.9	Low	413.1
68	R24	10000.0	530	600	580				3	0.01	570.0	36.06	254.95	0.45	1.13	287.81	0.50	20.82	630.8	660.7	Low	630.8
69	R32	10000.0	400	440	370				3	0.01	403.3	35.12	248.33	0.62	1.13	281.83	0.70	20.28	462.5	491.7	Low	462.5
70	S26	10000.0	420	410	410				3	0.01	413.3	5.77	40.82	0.10	1.13	46.05	0.11	3.33	423.1	427.9	Low	423.1
71	S29	10000.0	250	270	260				3	0.01	260.0	10.00	70.71	0.27	1.13	79.65	0.31	5.77	276.9	285.2	Low	276.9
72	S36	10000.0	410	400	390				3	0.01	400.0	10.00	70.71	0.18	1.13	79.68	0.20	5.77	416.9	425.2	Low	416.9
73	T23	10000.0	480	440	420				3	0.01	446.7	30.55	216.02	0.48	1.13	244.08	0.55	17.64	498.2	523.6	Low	498.2
74	T28	10000.0	230	260	290				3	0.01	260.0	30.00	212.13	0.82	1.15	243.29	0.94	17.32	310.6	335.5	Low	310.6
75	T32	10000.0	460	400	410				3	0.01	423.3	32.15	227.30	0.54	1.13	257.22	0.61	18.56	477.5	504.2	Low	477.5
76	T39	13380.2	410	430	360				3	0.01	400.0	36.06	254.95	0.64	1.14	289.61	0.72	20.82	460.8	490.7	Low	460.8
77	U28	10000.0	300	290	320				3	0.01	303.3	15.28	108.01	0.36	1.13	121.74	0.40	8.82	329.1	341.8	Low	329.1
78	U32	10000.0	420	470	410				3	0.01	433.3	32.15	227.30	0.52	1.13	257.12	0.59	18.56	487.5	514.2	Low	487.5
79	U33	10000.0	310	340	290				3	0.01	313.3	25.17	177.95	0.57	1.13	201.59	0.64	14.53	355.8	376.7	Low	355.8
80	U35	10000.0	440	440	430				3	0.01	436.7	5.77	40.82	0.09	1.13	46.05	0.11	3.33	446.4	451.2	Low	446.4
81	U37	10000.0	350	350	390				3	0.01	363.3	23.09	163.30	0.45	1.13	184.35	0.51	13.33	402.3	421.5	Low	402.3
82	V30	10000.0	330	390	440				3	0.01	386.7	55.08	389.44	1.01	1.16	452.96	1.17	31.80	479.5	525.3	Low	479.5
83	V33	10000.0	360	390	350				3	0.01	366.7	20.82	147.20	0.40	1.13	166.02	0.45	12.02	401.8	419.1	Low	401.8
84	V36	10000.0	370	400	410				3	0.01	393.3	20.82	147.20	0.37	1.13	165.95	0.42	12.02	428.4	445.7	Low	428.4
85	W26	10000.0	520	400	420				3	0.01	446.7	64.29	454.61	1.02	1.16	529.22	1.18	37.12	555.1	608.5	Low	555.1
86	W28	10000.0	410	430	500				3	0.01	446.7	47.26	334.17	0.75	1.14	381.70	0.85	27.28	526.3	565.6	Low	526.3
87	W31	10000.0	310	270	300				3	0.01	293.3	20.82	147.20	0.50	1.13	166.40	0.57	12.02	328.4	345.7	Low	328.4
88	W34	10000.0	390	410	390				3	0.01	396.7	11.55	81.65	0.21	1.13	91.99	0.23	6.67	416.1	425.7	Low	416.1
89	W39	13397.6	330	380	330				3	0.01	346.7	28.87	204.12	0.59	1.13	231.42	0.67	16.67	395.3	419.3	Low	395.3
90	X25	10000.0	490	490	460				3	0.01	480.0	17.32	122.47	0.26	1.13	137.96	0.29	10.00	509.2	523.6	Low	509.2
91	X33	10000.0	380	400	380				3	0.01	386.7	11.55	81.65	0.21	1.13	91.98	0.24	6.67	406.1	415.7	Low	406.1
92	X36	10000.0	390	370	390				3	0.01	383.3	11.55	81.65	0.21	1.13	91.98	0.24	6.67	402.8	412.4	Low	402.8
93	Z29	10000.0	240	240	240				3	0.01	240.0	0.00	0.00	0.00	1.13	0.00	0.00	0.00	240.0	240.0	Low	240.0
94	AA24	10000.0	330	370	380				3	0.01	360.0	26.46	187.08	0.52	1.13	211.60	0.59	15.28	404.6	426.6	Low	404.6
95	AB24	10000.0	340	380	370				3	0.01	363.3	20.82	147.20	0.41	1.13	166.03	0.46	12.02	398.4	415.7	Low	398.4
96	AB25	10000.0	300	250	270				3	0.01	273.3	25.17	177.95	0.65	1.14	202.27	0.74	14.53	315.8	336.7	Low	315.8
97	AC25	10000.0	590	650	600				3	0.01	613.3	32.15	227.30	0.37	1.13	256.25	0.42	18.56	667.5	694.2	Low	667.5
98	AD25	10000.0	690	500	560				3	0.01	583.3	97.13	686.78	1.18	1.18	811.43	1.39	56.08	747.1	827.8	Low	747.1
99	AE25	10000.0	370	390	360				3	0.01	373.3	15.28	108.01	0.29	1.13	121.68	0.33	8.82	399.1	411.8	Low	399.1
100	AF25	10000.0	240	240	250				3	0.01	243.3	5.77	40.82	0.17	1.13	46.01	0.19	3.33	253.1	257.9	Low	253.1

Row #	IDs/Names of the Smaller DUs	DU Area (Sq feet)	Replicate field sample concentrations						Number of Replicates	Weight	Arithmetic Mean	SD of Replicates	calc'd SD of Increments	calc'd CV for the DU	Adj Factor	adj'd SD of Increments	adj'd CV for DU	SE of DU	95% UCL			
			Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6											Student's-t	Chebychev	CV of Increments	95% UCL
101	AG25	10000.0	330	330	340				3	0.01	333.3	5.77	40.82	0.12	1.13	46.03	0.14	3.33	343.1	347.9	Low	343.1
102	AH24	10000.0	320	290	290				3	0.01	300.0	17.32	122.47	0.41	1.13	138.15	0.46	10.00	329.2	343.6	Low	329.2
103	AI23	10000.0	320	300	270				3	0.01	296.7	25.17	177.95	0.60	1.13	201.83	0.68	14.53	339.1	360.0	Low	339.1
104	AI24	10000.0	260	260	240				3	0.01	253.3	11.55	81.65	0.32	1.13	92.00	0.36	6.67	272.8	282.4	Low	272.8
105	AJ23	10000.0	240	240	240				3	0.01	240.0	0.00	0.00	0.00	1.13	0.00	0.00	0.00	240.0	240.0	Low	240.0
106	AK23	10000.0	330	320	380				3	0.01	343.3	32.15	227.30	0.66	1.14	258.49	0.75	18.56	397.5	424.2	Low	397.5
107	AL23	10000.0	270	250	330				3	0.01	283.3	41.63	294.39	1.04	1.17	343.34	1.21	24.04	353.5	388.1	Low	353.5
108	AL24	10000.0	290	280	280				3	0.01	283.3	5.77	40.82	0.14	1.13	46.02	0.16	3.33	293.1	297.9	Low	293.1
109	AL25	10000.0	220	230	240				3	0.01	230.0	10.00	70.71	0.31	1.13	79.67	0.35	5.77	246.9	255.2	Low	246.9
110	AM25	10000.0	290	270	280				3	0.01	280.0	10.00	70.71	0.25	1.13	79.65	0.28	5.77	296.9	305.2	Low	296.9
111	AN25	10000.0	300	300	280				3	0.01	293.3	11.55	81.65	0.28	1.13	91.98	0.31	6.67	312.8	322.4	Low	312.8
112	AO25	10000.0	340	290	280				3	0.01	303.3	32.15	227.30	0.75	1.14	259.65	0.86	18.56	357.5	384.2	Low	357.5
113	AP8	12741.9	220	210	220				3	0.01	216.7	5.77	40.82	0.19	1.13	46.00	0.21	3.33	226.4	231.2	Low	226.4
114	AP9	12741.9	470	410	440				3	0.01	440.0	30.00	212.13	0.48	1.13	239.67	0.54	17.32	490.6	515.5	Low	490.6
115	AP10	12742.0	390	410	390				3	0.01	396.7	11.55	81.65	0.21	1.13	91.99	0.23	6.67	416.1	425.7	Low	416.1
116	AP11	12741.9	330	360	330				3	0.01	340.0	17.32	122.47	0.36	1.13	138.05	0.41	10.00	369.2	383.6	Low	369.2
117	AP12	12742.0	360	350	330				3	0.01	346.7	15.28	108.01	0.31	1.13	121.69	0.35	8.82	372.4	385.1	Low	372.4
118	AP14	12741.6	420	410	440				3	0.01	423.3	15.28	108.01	0.26	1.13	121.67	0.29	8.82	449.1	461.8	Low	449.1
119	AP15	12742.2	380	380	400				3	0.01	386.7	11.55	81.65	0.21	1.13	91.98	0.24	6.67	406.1	415.7	Low	406.1
120	AP16	12741.9	350	380	340				3	0.01	356.7	20.82	147.20	0.41	1.13	166.05	0.47	12.02	391.8	409.1	Low	391.8
121	AP17	12741.9	280	300	300				3	0.01	293.3	11.55	81.65	0.28	1.13	91.98	0.31	6.67	312.8	322.4	Low	312.8
122	AP18	12741.9	240	270	250				3	0.01	253.3	15.28	108.01	0.43	1.13	121.88	0.48	8.82	279.1	291.8	Low	279.1
123	AP19	12741.9	270	240	260				3	0.01	256.7	15.28	108.01	0.42	1.13	121.87	0.47	8.82	282.4	295.1	Low	282.4
124	AP20	12741.9	310	300	300				3	0.01	303.3	5.77	40.82	0.13	1.13	46.02	0.15	3.33	313.1	317.9	Low	313.1
125	AP21	12741.9	250	270	260				3	0.01	260.0	10.00	70.71	0.27	1.13	79.65	0.31	5.77	276.9	285.2	Low	276.9
126	AP22	12742.0	240	270	250				3	0.01	253.3	15.28	108.01	0.43	1.13	121.88	0.48	8.82	279.1	291.8	Low	279.1
127	AP25	12741.8	300	300	300				3	0.01	300.0	0.00	0.00	0.00	1.13	0.00	0.00	0.00	300.0	300.0	Low	300.0
128	AQ23	10435.9	290	270	280				3	0.01	280.0	10.00	70.71	0.25	1.13	79.65	0.28	5.77	296.9	305.2	Low	296.9
129	AQ24	9852.5	260	250	290				3	0.01	266.7	20.82	147.20	0.55	1.13	166.66	0.62	12.02	301.8	319.1	Low	301.8
130	B8	8381.5	320	320	290				3	0.00	310.0	17.32	122.47	0.40	1.13	138.12	0.45	10.00	339.2	353.6	Low	339.2
131	B20	7901.2	420	450	430				3	0.00	433.3	15.28	108.01	0.25	1.13	121.67	0.28	8.82	459.1	471.8	Low	459.1
132	B21	7425.3	570	540	510				3	0.00	540.0	30.00	212.13	0.39	1.13	239.22	0.44	17.32	590.6	615.5	Low	590.6
133	B22	6933.6	530	500	480				3	0.00	503.3	25.17	177.95	0.35	1.13	200.57	0.40	14.53	545.8	566.7	Low	545.8
134	C8	9158.1	300	310	300				3	0.01	303.3	5.77	40.82	0.13	1.13	46.02	0.15	3.33	313.1	317.9	Low	313.1
135	C22	6929.0	440	400	480				3	0.00	440.0	40.00	282.84	0.64	1.14	321.38	0.73	23.09	507.4	540.7	Low	507.4
136	D8	9410.4	190	190	200				3	0.01	193.3	5.77	40.82	0.21	1.13	45.99	0.24	3.33	203.1	207.9	Low	203.1
137	D22	10000.0	430	400	430				3	0.01	420.0	17.32	122.47	0.29	1.13	137.97	0.33	10.00	449.2	463.6	Low	449.2
138	E22	10000.0	410	410	410				3	0.01	410.0	0.00	0.00	0.00	1.13	0.00	0.00	0.00	410.0	410.0	Low	410.0
139	E23	10000.0	340	380	370				3	0.01	363.3	20.82	147.20	0.41	1.13	166.03	0.46	12.02	398.4	415.7	Low	398.4
140	E24	10000.0	360	400	360				3	0.01	373.3	23.09	163.30	0.44	1.13	184.31	0.49	13.33	412.3	431.5	Low	412.3
141	E25	10000.0	350	360	360				3	0.01	356.7	5.77	40.82	0.11	1.13	46.04	0.13	3.33	366.4	371.2	Low	366.4
142	E26	13604.3	480	470	480				3	0.01	476.7	5.77	40.82	0.09	1.13	46.06	0.10	3.33	486.4	491.2	Low	486.4
143	F26	5258.3	500	390	490				3	0.00	460.0	60.83	430.12	0.94	1.16	497.39	1.08	35.12	562.5	613.1	Low	562.5
144	G25	8218.3	470	500	450				3	0.00	473.3	25.17	177.95	0.38	1.13	200.63	0.42	14.53	515.8	536.7	Low	515.8
145	G26	9346.7	490	470	450				3	0.01	470.0	20.00	141.42	0.30	1.13	159.33	0.34	11.55	503.7	520.3	Low	503.7
146	H25	10000.0	510	520	520				3	0.01	516.7	5.77	40.82	0.08	1.13	46.07	0.09	3.33	526.4	531.2	Low	526.4
147	I25	7781.1	580	540	620				3	0.00	580.0	40.00	282.84	0.49	1.13	319.61	0.55	23.09	647.4	680.7	Low	647.4
148	J22	10000.0	550	550	550				3	0.01	550.0	0.00	0.00	0.00	1.13	0.00	0.00	0.00	550.0	550.0	Low	550.0
149	J23	10000.4	610	740	600				3	0.01	650.0	78.10	552.27	0.85	1.15	634.77	0.98	45.09	781.7	846.6	Low	781.7
150	J24	7428.9	350	640	570				3	0.00	520.0	151.33	1070.05	2.06	1.34	1430.05	2.75	87.37	775.1	900.8	Med	900.8
151	J25	6743.5	450	440	440				3	0.00	443.3	5.77	40.82	0.09	1.13	46.06	0.10	3.33	453.1	457.9	Low	453.1
152	K22	10000.0	460	500	400				3	0.01	453.3	50.33	355.90	0.79	1.14	407.40	0.90	29.06	538.2	580.0	Low	538.2
153	L22	10000.0	580	680	610				3	0.01	623.3	51.32	362.86	0.58	1.13	411.27	0.66	29.63	709.8	752.5	Low	709.8
154	M22	10000.0	740	650	640				3	0.01	676.7	55.08	389.44	0.58	1.13	441.30	0.65	31.80	769.5	815.3	Low	769.5

Row #	IDs/Names of the Smaller DUs	DU Area (Sq feet)	Replicate field sample concentrations						Number of Replicates	Weight	Arithmetic Mean	SD of Replicates	calc'd SD of Increments	calc'd CV for the DU	Adj Factor	adj'd SD of Increments	adj'd CV for DU	SE of DU	95% UCL			
			Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6											Student's-t	Chebychev	CV of Increments	95% UCL
155	N22	10000.0	690	740	620				3	0.01	683.3	60.28	426.22	0.62	1.14	483.89	0.71	34.80	785.0	835.0	Low	785.0
156	O22	10000.0	480	460	480				3	0.01	473.3	11.55	81.65	0.17	1.13	92.01	0.19	6.67	492.8	502.4	Low	492.8
157	P22	10000.0	360	400	430				3	0.01	396.7	35.12	248.33	0.63	1.14	281.95	0.71	20.28	455.9	485.0	Low	455.9
158	Q22	10000.0	760	750	690				3	0.01	733.3	37.86	267.71	0.37	1.13	301.77	0.41	21.86	797.2	828.6	Low	797.2
159	R22	7999.4	430	400	430				3	0.00	420.0	17.32	122.47	0.29	1.13	137.97	0.33	10.00	449.2	463.6	Low	449.2
160	S22	10000.0	340	370	350				3	0.01	353.3	15.28	108.01	0.31	1.13	121.69	0.34	8.82	379.1	391.8	Low	379.1
161	T22	9920.3	360	440	420				3	0.01	406.7	41.63	294.39	0.72	1.14	335.82	0.83	24.04	476.9	511.4	Low	476.9
162	U22	6762.1	370	360	340				3	0.00	356.7	15.28	108.01	0.30	1.13	121.69	0.34	8.82	382.4	395.1	Low	382.4
163	V22	10000.0	400	410	490				3	0.01	433.3	49.33	348.81	0.80	1.15	399.76	0.92	28.48	516.5	557.5	Low	516.5
164	W22	10000.0	610	670	600				3	0.01	626.7	37.86	267.71	0.43	1.13	302.08	0.48	21.86	690.5	721.9	Low	690.5
165	W23	10000.0	630	590	610				3	0.01	610.0	20.00	141.42	0.23	1.13	159.31	0.26	11.55	643.7	660.3	Low	643.7
166	W24	10000.0	450	410	550	510	530		5	0.01	490.0	58.31	412.31	0.84	1.08	443.83	0.91	26.08	545.6	603.7	Low	545.6
167	X24	10000.0	640	590	690				3	0.01	640.0	50.00	353.55	0.55	1.13	400.30	0.63	28.87	724.3	765.8	Low	724.3
168	Y24	10000.0	630	630	760				3	0.01	673.3	75.06	530.72	0.79	1.14	607.62	0.90	43.33	799.9	862.2	Low	799.9
169	Z24	10000.0	760	790	740				3	0.01	763.3	25.17	177.95	0.23	1.13	200.46	0.26	14.53	805.8	826.7	Low	805.8
	Sum:	1734193	--	--	--	--	--	--	509	1.00	393.4	0.28	2.01	0.01	NA	2.27	0.01	0.16	393.8	394.1	Low	393.8

df by Welch-Satterthwaite approximation:	**4.4**

Recommended UCL: **393.8** **mg/kg** >> Student's t 95% UCL

Note: Student's-t or Chebychev 95% UCL may be appropriate.

*Student's t UCL is acceptable if adj'd CV for DU is "Low" (e.g., CV ≤ 1.5). The User should consult the instructions for additional guidance on which 95% UCL is recommended for specific data sets.

Notes

adj'd	= adjusted	df	= degrees of freedom	SD	= arithmetic standard deviation
calc'd	= calculated	DU	= decision unit	SE	= standard error
CV	= coefficient of variation	RSD	= relative standard deviation	95% UCL	= 95% upper confidence limit for arithmetic mean

Calculation of Weighted 95% UCLs for a Combined Decision Unit (DU) from Several Smaller DUs Having Replicate Incremental Samples

Enter information in green highlighted cells. See the "Instructions" tab for detailed instructions.

Project ID:	Fort Wingate Inner Fence
Property/Sample ID:	Inner Fence Area Grids
Date of calculations:	7/6/2024
Calculator completed by:	CMC
Analyte:	Mercury
Analyte units:	mg/kg
DU metric units:	Sq feet
Notes:	

Click in green cell below to select from drop-down menu

DU size metric: area, volume, or depth interval: **Area**

Note: Assumes all replicates have the same number of increments

Number of increments per replicate: **50**

Row #	IDs/Names of the Smaller DUs	DU Area (Sq feet)	Replicate field sample concentrations						Number of Replicates	Weight	Arithmetic Mean	SD of Replicates	calc'd SD of Increments	calc'd CV for the DU	Adj Factor	adj'd SD of Increments	adj'd CV for DU	SE of DU	95% UCL			
			Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6											Student's-t	Chebychev	CV of Increments	95% UCL
1	AA32	10000.0	0.017	0.017	0.016				3	0.01	0.0	0.00	0.00	0.24	1.13	0.00	0.28	0.00	0.0	0.0	Low	0.0
2	AB27	10000.0	0.032	0.023	0.039				3	0.01	0.0	0.01	0.06	1.81	1.28	0.07	2.32	0.00	0.0	0.1	Med	0.1
3	AB38	13378.0	0.019	0.019	0.017				3	0.01	0.0	0.00	0.01	0.45	1.13	0.01	0.50	0.00	0.0	0.0	Low	0.0
4	AC34	10000.0	0.017	0.017	0.015				3	0.01	0.0	0.00	0.01	0.50	1.13	0.01	0.57	0.00	0.0	0.0	Low	0.0
5	AD28	10000.0	0.028	0.049	0.026				3	0.01	0.0	0.01	0.09	2.62	1.49	0.13	3.91	0.01	0.1	0.1	High	0.1
6	AD34	10000.0	0.028	0.034	0.026				3	0.01	0.0	0.00	0.03	1.00	1.16	0.03	1.17	0.00	0.0	0.0	Low	0.0
7	AE27	9999.9	0.059	0.038	0.032				3	0.01	0.0	0.01	0.10	2.33	1.40	0.14	3.28	0.01	0.1	0.1	High	0.1
8	AE38	13378.0	0.016	0.016	0.017				3	0.01	0.0	0.00	0.00	0.25	1.13	0.00	0.28	0.00	0.0	0.0	Low	0.0
9	AF29	10000.0	0.023	0.024	0.027				3	0.01	0.0	0.00	0.01	0.60	1.13	0.02	0.68	0.00	0.0	0.0	Low	0.0
10	AF30	10000.0	0.044	0.037	0.052				3	0.01	0.0	0.01	0.05	1.20	1.18	0.06	1.42	0.00	0.1	0.1	Low	0.1
11	AF32	10000.0	0.027	0.023	0.035				3	0.01	0.0	0.01	0.04	1.52	1.23	0.05	1.88	0.00	0.0	0.0	Med	0.0
12	AF34	10000.0	0.02	0.022	0.019				3	0.01	0.0	0.00	0.01	0.53	1.13	0.01	0.60	0.00	0.0	0.0	Low	0.0
13	AH28	10000.0	0.023	0.023	0.022				3	0.01	0.0	0.00	0.00	0.18	1.13	0.00	0.20	0.00	0.0	0.0	Low	0.0
14	AH39	10617.1	0.021	0.0205	0.021				3	0.01	0.0	0.00	0.00	0.10	1.13	0.00	0.11	0.00	0.0	0.0	Low	0.0
15	AI26	10000.0	0.03	0.03	0.04				3	0.01	0.0	0.01	0.04	1.22	1.19	0.05	1.45	0.00	0.0	0.0	Low	0.0
16	AI29	10000.0	0.02	0.02	0.07				3	0.01	0.0	0.03	0.20	5.57	2.95	0.60	16.41	0.02	0.1	0.1	High	0.1
17	AI31	10000.0	0.026	0.025	0.022				3	0.01	0.0	0.00	0.01	0.60	1.13	0.02	0.69	0.00	0.0	0.0	Low	0.0
18	AJ26	10000.0	0.016	0.023	0.022				3	0.01	0.0	0.00	0.03	1.32	1.20	0.03	1.58	0.00	0.0	0.0	Med	0.0
19	AJ27	10000.0	0.025	0.02	0.025				3	0.01	0.0	0.00	0.02	0.87	1.15	0.02	1.01	0.00	0.0	0.0	Low	0.0
20	AJ31	10000.0	0.03	0.035	0.029				3	0.01	0.0	0.00	0.02	0.73	1.14	0.03	0.83	0.00	0.0	0.0	Low	0.0
21	AJ33	10000.0	0.059	0.056	0.034				3	0.01	0.0	0.01	0.10	1.94	1.31	0.13	2.55	0.01	0.1	0.1	Med	0.1
22	AK28	10000.0	0.022	0.022	0.022				3	0.01	0.0	0.00	0.00	0.00	1.13	0.00	0.00	0.00	0.0	0.0	Low	0.0
23	AK36	10000.0	0.031	0.03	0.033				3	0.01	0.0	0.00	0.01	0.34	1.13	0.01	0.39	0.00	0.0	0.0	Low	0.0
24	AL27	10000.0	0.027	0.027	0.032				3	0.01	0.0	0.00	0.02	0.71	1.14	0.02	0.81	0.00	0.0	0.0	Low	0.0
25	AL34	10000.0	0.026	0.037	0.095				3	0.01	0.1	0.04	0.26	4.98	2.57	0.67	12.77	0.02	0.1	0.1	High	0.1
26	AL39	7384.7	0.025	0.024	0.032				3	0.00	0.0	0.00	0.03	1.14	1.18	0.04	1.34	0.00	0.0	0.0	Low	0.0
27	AM29	10000.0	0.016	0.015	0.015				3	0.01	0.0	0.00	0.00	0.27	1.13	0.00	0.30	0.00	0.0	0.0	Low	0.0
28	AM33	10000.0	0.029	0.034	0.028				3	0.01	0.0	0.00	0.02	0.75	1.14	0.03	0.86	0.00	0.0	0.0	Low	0.0
29	AN27	10000.0	0.032	0.025	0.04				3	0.01	0.0	0.01	0.05	1.64	1.25	0.07	2.05	0.00	0.0	0.1	Med	0.1
30	AN28	10000.0	0.029	0.031	0.026				3	0.01	0.0	0.00	0.02	0.62	1.14	0.02	0.70	0.00	0.0	0.0	Low	0.0
31	AN38	6980.7	0.023	0.018	0.017				3	0.00	0.0	0.00	0.02	1.18	1.18	0.03	1.39	0.00	0.0	0.0	Low	0.0
32	AO26	10000.0	0.026	0.024	0.025				3	0.01	0.0	0.00	0.01	0.28	1.13	0.01	0.32	0.00	0.0	0.0	Low	0.0
33	AP28	8819.3	0.033	0.028	0.038				3	0.01	0.0	0.01	0.04	1.07	1.17	0.04	1.25	0.00	0.0	0.0	Low	0.0
34	AQ15	13466.3	0.037	0.035	1.2				3	0.01	0.4	0.67	4.75	11.21	8.87	42.13	99.37	0.39	1.6	2.1	High	2.1
35	AQ22	11017.2	0.039	0.026	0.026				3	0.01	0.0	0.01	0.05	1.75	1.27	0.07	2.22	0.00	0.0	0.0	Med	0.0
36	C27	14788.0	0.016	0.015	0.014				3	0.01	0.0	0.00	0.01	0.47	1.13	0.01	0.53	0.00	0.0	0.0	Low	0.0
37	C35	9243.3	0.031	0.025	0.027				3	0.01	0.0	0.00	0.02	0.78	1.14	0.02	0.89	0.00	0.0	0.0	Low	0.0
38	C37	7935.9	0.026	0.033	0.023				3	0.00	0.0	0.01	0.04	1.33	1.20	0.04	1.59	0.00	0.0	0.0	Med	0.0
39	E27	14436.0	0.025	0.025	0.03				3	0.01	0.0	0.00	0.02	0.77	1.14	0.02	0.88	0.00	0.0	0.0	Low	0.0
40	F32	10000.0	0.03	0.031	0.029				3	0.01	0.0	0.00	0.01	0.24	1.13	0.01	0.27	0.00	0.0	0.0	Low	0.0
41	G30	10000.0	0.032	0.027	0.03				3	0.01	0.0	0.00	0.02	0.60	1.13	0.02	0.68	0.00	0.0	0.0	Low	0.0
42	H35	10000.0	0.032	0.029	0.031				3	0.01	0.0	0.00	0.01	0.35	1.13	0.01	0.40	0.00	0.0	0.0	Low	0.0
43	H39	12972.6	0.016	0.017	0.02				3	0.01	0.0	0.00	0.01	0.83	1.15	0.02	0.96	0.00	0.0	0.0	Low	0.0
44	I29	10000.0	0.021	0.023	0.025				3	0.01	0.0	0.00	0.01	0.61	1.13	0.02	0.70	0.00	0.0	0.0	Low	0.0
45	I30	10000.0	0.029	0.025	0.025				3	0.01	0.0	0.00	0.02	0.62	1.14	0.02	0.70	0.00	0.0	0.0	Low	0.0
46	I33	10000.0	0.027	0.026	0.031				3	0.01	0.0	0.00	0.02	0.67	1.14	0.02	0.76	0.00	0.0	0.0	Low	0.0
47	I38	12991.4	0.019	0.023	0.024				3	0.01	0.0	0.00	0.02	0.85	1.15	0.02	0.98	0.00	0.0	0.0	Low	0.0
48	K30	10000.0	0.019	0.015	0.019				3	0.01	0.0	0.00	0.02	0.92	1.16	0.02	1.07	0.00	0.0	0.0	Low	0.0
49	K34	10000.0	0.025	0.024	0.022				3	0.01	0.0	0.00	0.01	0.46	1.13	0.01	0.52	0.00	0.0	0.0	Low	0.0
50	L29	10000.0	0.02	0.021	0.065				3	0.01	0.0	0.03	0.18	5.14	2.67	0.48	13.72	0.01	0.1	0.1	High	0.1
51	L34	10000.0	0.031	0.025	0.027				3	0.01	0.0	0.00	0.02	0.78	1.14	0.02	0.89	0.00	0.0	0.0	Low	0.0
52	L37	10000.0	0.03	0.043	0.023				3	0.01	0.0	0.01	0.07	2.24	1.38	0.10	3.10	0.01	0.0	0.1	High	0.1
53	M28	10000.0	0.016	0.021	0.026				3	0.01	0.0	0.01	0.04	1.68	1.26	0.04	2.12	0.00	0.0	0.0	Med	0.0

Row #	IDs/Names of the Smaller DUs	DU Area (Sq feet)	Replicate field sample concentrations						Number of Replicates	Weight	Arithmetic Mean	SD of Replicates	calc'd SD of Increments	calc'd CV for the DU	Adj Factor	adj'd SD of Increments	adj'd CV for DU	SE of DU	95% UCL			
			Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6											Student's-t	Chebychev	CV of Increments	95% UCL
54	M32	10000.0	0.019	0.021	0.019				3	0.01	0.0	0.00	0.01	0.42	1.13	0.01	0.47	0.00	0.0	0.0	Low	0.0
55	M39	13011.8	0.022	0.023	0.022				3	0.01	0.0	0.00	0.00	0.18	1.13	0.00	0.21	0.00	0.0	0.0	Low	0.0
56	N27	10000.0	0.022	0.02	0.021				3	0.01	0.0	0.00	0.01	0.34	1.13	0.01	0.38	0.00	0.0	0.0	Low	0.0
57	N28	10000.0	0.03	0.028	0.027				3	0.01	0.0	0.00	0.01	0.38	1.13	0.01	0.43	0.00	0.0	0.0	Low	0.0
58	N37	10000.0	0.021	0.018	0.019				3	0.01	0.0	0.00	0.01	0.56	1.13	0.01	0.63	0.00	0.0	0.0	Low	0.0
59	O27	10000.0	0.015	0.022	0.017				3	0.01	0.0	0.00	0.03	1.42	1.21	0.03	1.72	0.00	0.0	0.0	Med	0.0
60	O32	10000.0	0.021	0.022	0.024				3	0.01	0.0	0.00	0.01	0.48	1.13	0.01	0.55	0.00	0.0	0.0	Low	0.0
61	O37	10000.0	0.021	0.018	0.02				3	0.01	0.0	0.00	0.01	0.55	1.13	0.01	0.62	0.00	0.0	0.0	Low	0.0
62	P32	10000.0	0.024	0.023	0.023				3	0.01	0.0	0.00	0.00	0.17	1.13	0.00	0.20	0.00	0.0	0.0	Low	0.0
63	P33	10000.0	0.022	0.021	0.019				3	0.01	0.0	0.00	0.01	0.52	1.13	0.01	0.59	0.00	0.0	0.0	Low	0.0
64	Q26	10000.0	0.023	0.02	0.022				3	0.01	0.0	0.00	0.01	0.50	1.13	0.01	0.56	0.00	0.0	0.0	Low	0.0
65	Q29	10000.0	0.022	0.028	0.023				3	0.01	0.0	0.00	0.02	0.93	1.16	0.03	1.08	0.00	0.0	0.0	Low	0.0
66	Q38	13187.6	0.021	0.019	0.018				3	0.01	0.0	0.00	0.01	0.56	1.13	0.01	0.63	0.00	0.0	0.0	Low	0.0
67	Q39	13187.6	0.019	0.019	0.017				3	0.01	0.0	0.00	0.01	0.45	1.13	0.01	0.50	0.00	0.0	0.0	Low	0.0
68	R24	10000.0	0.023	0.022	0.027				3	0.01	0.0	0.00	0.02	0.78	1.14	0.02	0.89	0.00	0.0	0.0	Low	0.0
69	R32	10000.0	0.025	0.022	0.021				3	0.01	0.0	0.00	0.01	0.65	1.14	0.02	0.74	0.00	0.0	0.0	Low	0.0
70	S26	10000.0	0.026	0.024	0.022				3	0.01	0.0	0.00	0.01	0.59	1.13	0.02	0.67	0.00	0.0	0.0	Low	0.0
71	S29	10000.0	0.027	0.023	0.024				3	0.01	0.0	0.00	0.01	0.60	1.13	0.02	0.68	0.00	0.0	0.0	Low	0.0
72	S36	10000.0	0.037	0.016	0.018				3	0.01	0.0	0.01	0.08	3.46	1.79	0.15	6.20	0.01	0.0	0.1	High	0.1
73	T23	10000.0	0.022	0.022	0.02				3	0.01	0.0	0.00	0.01	0.38	1.13	0.01	0.43	0.00	0.0	0.0	Low	0.0
74	T28	10000.0	0.025	0.022	0.022				3	0.01	0.0	0.00	0.01	0.53	1.13	0.01	0.60	0.00	0.0	0.0	Low	0.0
75	T32	10000.0	0.038	0.036	0.037				3	0.01	0.0	0.00	0.01	0.19	1.13	0.01	0.22	0.00	0.0	0.0	Low	0.0
76	T39	13380.2	0.018	0.017	0.02				3	0.01	0.0	0.00	0.01	0.59	1.13	0.01	0.67	0.00	0.0	0.0	Low	0.0
77	U28	10000.0	0.014	0.013	0.016				3	0.01	0.0	0.00	0.01	0.75	1.14	0.01	0.86	0.00	0.0	0.0	Low	0.0
78	U32	10000.0	0.039	0.033	0.032				3	0.01	0.0	0.00	0.03	0.77	1.14	0.03	0.88	0.00	0.0	0.0	Low	0.0
79	U33	10000.0	0.022	0.18	0.018				3	0.01	0.1	0.09	0.65	8.91	5.96	3.89	53.09	0.05	0.2	0.3	High	0.3
80	U35	10000.0	0.021	0.025	0.026				3	0.01	0.0	0.00	0.02	0.78	1.14	0.02	0.89	0.00	0.0	0.0	Low	0.0
81	U37	10000.0	0.02	0.02	0.021				3	0.01	0.0	0.00	0.00	0.20	1.13	0.00	0.23	0.00	0.0	0.0	Low	0.0
82	V30	10000.0	0.025	0.029	0.028				3	0.01	0.0	0.00	0.01	0.54	1.13	0.02	0.61	0.00	0.0	0.0	Low	0.0
83	V33	10000.0	0.023	0.021	0.02				3	0.01	0.0	0.00	0.01	0.51	1.13	0.01	0.57	0.00	0.0	0.0	Low	0.0
84	V36	10000.0	0.017	0.019	0.018				3	0.01	0.0	0.00	0.01	0.39	1.13	0.01	0.44	0.00	0.0	0.0	Low	0.0
85	W26	10000.0	0.032	0.025	0.036				3	0.01	0.0	0.01	0.04	1.27	1.19	0.05	1.52	0.00	0.0	0.0	Med	0.0
86	W28	10000.0	0.081	0.084	0.03				3	0.01	0.1	0.03	0.21	3.30	1.73	0.37	5.70	0.02	0.1	0.1	High	0.1
87	W31	10000.0	0.018	0.017	0.019				3	0.01	0.0	0.00	0.01	0.39	1.13	0.01	0.44	0.00	0.0	0.0	Low	0.0
88	W34	10000.0	0.013	0.014	0.017				3	0.01	0.0	0.00	0.01	1.00	1.16	0.02	1.17	0.00	0.0	0.0	Low	0.0
89	W39	13397.6	0.011	0.042	0.012				3	0.01	0.0	0.02	0.12	5.75	3.07	0.38	17.68	0.01	0.1	0.1	High	0.1
90	X25	10000.0	0.019	0.085	0.026				3	0.01	0.0	0.04	0.26	5.92	3.19	0.82	18.90	0.02	0.1	0.1	High	0.1
91	X33	10000.0	0.018	0.016	0.019				3	0.01	0.0	0.00	0.01	0.61	1.13	0.01	0.69	0.00	0.0	0.0	Low	0.0
92	X36	10000.0	0.017	0.015	0.019				3	0.01	0.0	0.00	0.01	0.83	1.15	0.02	0.96	0.00	0.0	0.0	Low	0.0
93	Z29	10000.0	0.017	0.016	0.013				3	0.01	0.0	0.00	0.01	0.96	1.16	0.02	1.11	0.00	0.0	0.0	Low	0.0
94	AA24	10000.0	0.018	0.031	0.035				3	0.01	0.0	0.01	0.06	2.24	1.38	0.09	3.10	0.01	0.0	0.1	High	0.1
95	AB24	10000.0	0.021	0.024	0.021				3	0.01	0.0	0.00	0.01	0.56	1.13	0.01	0.63	0.00	0.0	0.0	Low	0.0
96	AB25	10000.0	0.053	0.042	0.049				3	0.01	0.0	0.01	0.04	0.82	1.15	0.05	0.94	0.00	0.1	0.1	Low	0.1
97	AC25	10000.0	0.043	0.033	0.022				3	0.01	0.0	0.01	0.07	2.27	1.39	0.10	3.16	0.01	0.1	0.1	High	0.1
98	AD25	10000.0	0.023	0.019	0.019				3	0.01	0.0	0.00	0.02	0.80	1.15	0.02	0.92	0.00	0.0	0.0	Low	0.0
99	AE25	10000.0	0.037	0.028	0.025				3	0.01	0.0	0.01	0.04	1.47	1.22	0.05	1.80	0.00	0.0	0.0	Med	0.0
100	AF25	10000.0	0.023	0.03	0.022				3	0.01	0.0	0.00	0.03	1.23	1.19	0.04	1.47	0.00	0.0	0.0	Low	0.0
101	AG25	10000.0	0.027	0.024	0.024				3	0.01	0.0	0.00	0.01	0.49	1.13	0.01	0.55	0.00	0.0	0.0	Low	0.0
102	AH24	10000.0	0.022	0.024	0.022				3	0.01	0.0	0.00	0.01	0.36	1.13	0.01	0.41	0.00	0.0	0.0	Low	0.0
103	AI23	10000.0	0.02	0.018	0.012				3	0.01	0.0	0.00	0.03	1.77	1.27	0.04	2.25	0.00	0.0	0.0	Med	0.0
104	AI24	10000.0	0.029	0.029	0.03				3	0.01	0.0	0.00	0.00	0.14	1.13	0.00	0.16	0.00	0.0	0.0	Low	0.0
105	AJ23	10000.0	0.022	0.024	0.02				3	0.01	0.0	0.00	0.01	0.64	1.14	0.02	0.73	0.00	0.0	0.0	Low	0.0
106	AK23	10000.0	0.032	0.026	0.03				3	0.01	0.0	0.00	0.02	0.74	1.14	0.02	0.84	0.00	0.0	0.0	Low	0.0
107	AL23	10000.0	0.019	0.023	0.029				3	0.01	0.0	0.01	0.04	1.50	1.23	0.04	1.85	0.00	0.0	0.0	Med	0.0
108	AL24	10000.0	0.022	0.02	0.021				3	0.01	0.0	0.00	0.01	0.34	1.13	0.01	0.38	0.00	0.0	0.0	Low	0.0
109	AL25	10000.0	0.025	0.024	0.026				3	0.01	0.0	0.00	0.01	0.28	1.13	0.01	0.32	0.00	0.0	0.0	Low	0.0
110	AM25	10000.0	0.036	0.034	0.036				3	0.01	0.0	0.00	0.01	0.23	1.13	0.01	0.26	0.00	0.0	0.0	Low	0.0
111	AN25	10000.0	0.041	0.023	0.023				3	0.01	0.0	0.01	0.07	2.53	1.46	0.11	3.70	0.01	0.0	0.1	High	0.1
112	AO25	10000.0	0.02	0.02	0.015				3	0.01	0.0	0.00	0.02	1.11	1.17	0.02	1.31	0.00	0.0	0.0	Low	0.0
113	AP8	12741.9	0.026	0.025	0.037				3	0.01	0.0	0.01	0.05	1.61	1.24	0.06	2.00	0.00	0.0	0.0	Med	0.0
114	AP9	12741.9	0.045	0.048	0.042				3	0.01	0.0	0.00	0.02	0.47	1.13	0.02	0.53	0.00	0.1	0.1	Low	0.1
115	AP10	12742.0	0.071	0.052	0.061				3	0.01	0.1	0.01	0.07	1.10	1.17	0.08	1.28	0.01	0.1	0.1	Low	0.1
116	AP11	12741.9	0.062	0.066	0.05				3	0.01	0.1	0.01	0.06	0.99	1.16	0.07	1.15	0.00	0.1	0.1	Low	0.1
117	AP12	12742.0	0.048	0.051	0.052				3	0.01	0.1	0.00	0.01	0.29	1.13	0.02	0.33	0.00	0.1	0.1	Low	0.1
118	AP14	12741.6	0.041	0.047	0.05				3	0.01	0.0	0.00	0.03	0.70	1.14	0.04	0.80	0.00	0.1	0.1	Low	0.1
119	AP15	12742.2	0.061	0.063	0.049				3	0.01	0.1	0.01	0.05	0.93	1.16	0.06	1.07	0.00	0.1	0.1	Low	0.1
120	AP16	12741.9	0.074	0.065	0.056				3	0.01	0.1	0.01	0.06	0.98	1.16	0.07	1.14	0.01	0.1	0.1	Low	0.1
121	AP17	12741.9	0.039	0.046	0.054				3	0.01	0.0	0.01	0.05	1.15	1.18	0.06	1.35	0.00	0.1	0.1	Low	0.1
122	AP18	12741.9	0.035	0.03	0.04				3	0.01	0.0	0.01	0.04	1.01	1.16	0.04	1.18	0.00	0.0	0.0	Low	0.0

Row #	IDs/Names of the Smaller DUs	DU Area (Sq feet)	Replicate field sample concentrations						Number of Replicates	Weight	Arithmetic Mean	SD of Replicates	calc'd SD of Increments	calc'd CV for the DU	Adj Factor	adj'd SD of Increments	adj'd CV for DU	SE of DU	95% UCL			
			Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6											Student's-t	Chebychev	CV of Increments	95% UCL
123	AP19	12741.9	0.034	0.029	1.9				3	0.01	0.7	1.08	7.63	11.66	9.52	72.58	110.93	0.62	2.5	3.4	High	3.4
124	AP20	12741.9	0.069	0.045	0.048				3	0.01	0.1	0.01	0.09	1.71	1.26	0.12	2.16	0.01	0.1	0.1	Med	0.1
125	AP21	12741.9	0.028	0.04	0.03				3	0.01	0.0	0.01	0.05	1.39	1.21	0.06	1.68	0.00	0.0	0.0	Med	0.0
126	AP22	12742.0	0.027	0.029	0.025				3	0.01	0.0	0.00	0.01	0.52	1.13	0.02	0.59	0.00	0.0	0.0	Low	0.0
127	AP25	12741.8	0.023	0.024	0.025				3	0.01	0.0	0.00	0.01	0.29	1.13	0.01	0.33	0.00	0.0	0.0	Low	0.0
128	AQ23	10435.9	0.035	0.037	0.04				3	0.01	0.0	0.00	0.02	0.48	1.13	0.02	0.54	0.00	0.0	0.0	Low	0.0
129	AQ24	9852.5	0.028	0.048	0.028				3	0.01	0.0	0.01	0.08	2.36	1.41	0.12	3.32	0.01	0.1	0.1	High	0.1
130	B8	8381.5	0.0205	0.0205	0.2				3	0.00	0.1	0.10	0.73	9.12	6.20	4.54	56.55	0.06	0.3	0.3	High	0.3
131	B20	7901.2	0.015	0.017	0.016				3	0.00	0.0	0.00	0.01	0.44	1.13	0.01	0.50	0.00	0.0	0.0	Low	0.0
132	B21	7425.3	0.023	0.024	0.022				3	0.00	0.0	0.00	0.01	0.31	1.13	0.01	0.35	0.00	0.0	0.0	Low	0.0
133	B22	6933.6	0.022	0.019	0.023				3	0.00	0.0	0.00	0.01	0.69	1.14	0.02	0.79	0.00	0.0	0.0	Low	0.0
134	C8	9158.1	0.02	0.018	0.02				3	0.01	0.0	0.00	0.01	0.42	1.13	0.01	0.48	0.00	0.0	0.0	Low	0.0
135	C22	6929.0	0.02	0.022	0.023				3	0.00	0.0	0.00	0.01	0.50	1.13	0.01	0.56	0.00	0.0	0.0	Low	0.0
136	D8	9410.4	0.019	0.014	0.012				3	0.01	0.0	0.00	0.03	1.70	1.26	0.03	2.14	0.00	0.0	0.0	Med	0.0
137	D22	10000.0	0.028	0.03	0.026				3	0.01	0.0	0.00	0.01	0.51	1.13	0.02	0.57	0.00	0.0	0.0	Low	0.0
138	E22	10000.0	0.027	0.029	0.029				3	0.01	0.0	0.00	0.01	0.29	1.13	0.01	0.32	0.00	0.0	0.0	Low	0.0
139	E23	10000.0	0.015	0.018	0.019				3	0.01	0.0	0.00	0.01	0.85	1.15	0.02	0.98	0.00	0.0	0.0	Low	0.0
140	E24	10000.0	0.023	0.021	0.021				3	0.01	0.0	0.00	0.01	0.38	1.13	0.01	0.42	0.00	0.0	0.0	Low	0.0
141	E25	10000.0	0.018	0.02	0.023				3	0.01	0.0	0.00	0.02	0.88	1.15	0.02	1.01	0.00	0.0	0.0	Low	0.0
142	E26	13604.3	0.026	0.032	0.035				3	0.01	0.0	0.00	0.03	1.05	1.17	0.04	1.22	0.00	0.0	0.0	Low	0.0
143	F26	5258.3	0.018	0.019	0.02				3	0.00	0.0	0.00	0.01	0.37	1.13	0.01	0.42	0.00	0.0	0.0	Low	0.0
144	G25	8218.3	0.042	0.04	0.041				3	0.00	0.0	0.00	0.01	0.17	1.13	0.01	0.19	0.00	0.0	0.0	Low	0.0
145	G26	9346.7	0.021	0.022	0.021				3	0.01	0.0	0.00	0.00	0.19	1.13	0.00	0.22	0.00	0.0	0.0	Low	0.0
146	H25	10000.0	0.029	0.032	0.032				3	0.01	0.0	0.00	0.01	0.40	1.13	0.01	0.45	0.00	0.0	0.0	Low	0.0
147	I25	7781.1	0.023	0.017	0.043				3	0.00	0.0	0.01	0.10	3.48	1.80	0.17	6.25	0.01	0.1	0.1	High	0.1
148	J22	10000.0	0.038	0.037	0.038				3	0.01	0.0	0.00	0.00	0.11	1.13	0.00	0.12	0.00	0.0	0.0	Low	0.0
149	J23	10000.4	0.016	0.018	0.015				3	0.01	0.0	0.00	0.01	0.66	1.14	0.01	0.75	0.00	0.0	0.0	Low	0.0
150	J24	10000.0	0.022	0.015	0.012				3	0.01	0.0	0.01	0.04	2.22	1.38	0.05	3.06	0.00	0.0	0.0	High	0.0
151	J25	6743.5	0.024	0.022	0.02				3	0.00	0.0	0.00	0.01	0.64	1.14	0.02	0.73	0.00	0.0	0.0	Low	0.0
152	K22	10000.0	0.015	0.015	0.016				3	0.01	0.0	0.00	0.00	0.27	1.13	0.00	0.30	0.00	0.0	0.0	Low	0.0
153	L22	10000.0	0.011	0.012	0.015				3	0.01	0.0	0.00	0.01	1.16	1.18	0.02	1.37	0.00	0.0	0.0	Low	0.0
154	M22	10000.0	0.018	0.016	0.025				3	0.01	0.0	0.00	0.03	1.70	1.26	0.04	2.14	0.00	0.0	0.0	Med	0.0
155	N22	10000.0	0.017	0.017	0.019				3	0.01	0.0	0.00	0.01	0.46	1.13	0.01	0.52	0.00	0.0	0.0	Low	0.0
156	O22	10000.0	0.019	0.016	0.02				3	0.01	0.0	0.00	0.01	0.80	1.15	0.02	0.92	0.00	0.0	0.0	Low	0.0
157	P22	10000.0	0.022	0.012	0.012				3	0.01	0.0	0.01	0.04	2.66	1.50	0.06	4.00	0.00	0.0	0.0	High	0.0
158	Q22	10000.0	0.013	0.013	0.016				3	0.01	0.0	0.00	0.01	0.87	1.15	0.01	1.01	0.00	0.0	0.0	Low	0.0
159	R22	7999.4	0.018	0.02	0.027				3	0.00	0.0	0.00	0.03	1.54	1.23	0.04	1.90	0.00	0.0	0.0	Med	0.0
160	S22	10000.0	0.02	0.022	0.021				3	0.01	0.0	0.00	0.01	0.34	1.13	0.01	0.38	0.00	0.0	0.0	Low	0.0
161	T22	9920.3	0.027	0.024	0.026				3	0.01	0.0	0.00	0.01	0.42	1.13	0.01	0.47	0.00	0.0	0.0	Low	0.0
162	U22	6762.1	0.023	0.021	0.023				3	0.00	0.0	0.00	0.01	0.37	1.13	0.01	0.41	0.00	0.0	0.0	Low	0.0
163	V22	10000.0	0.019	0.018	0.019				3	0.01	0.0	0.00	0.00	0.22	1.13	0.00	0.25	0.00	0.0	0.0	Low	0.0
164	W22	10000.0	0.016	0.021	0.025				3	0.01	0.0	0.00	0.03	1.54	1.23	0.04	1.90	0.00	0.0	0.0	Med	0.0
165	W23	10000.0	0.021	0.021	0.021				3	0.01	0.0	0.00	0.00	0.00	1.13	0.00	0.00	0.00	0.0	0.0	Low	0.0
166	W24	10000.0	0.05	0.05	0.14	0.0105	0.078		5	0.01	0.1	0.05	0.34	5.16	2.54	0.86	13.14	0.02	0.1	0.2	High	0.2
167	X24	10000.0	0.0215	0.0215	0.021				3	0.01	0.0	0.00	0.00	0.10	1.13	0.00	0.11	0.00	0.0	0.0	Low	0.0
168	Y24	10000.0	1.7	0.0225	0.0215				3	0.01	0.6	0.97	6.85	11.78	9.70	66.46	114.33	0.56	2.2	3.0	High	3.0
169	Z24	10000.0	0.19	0.1	0.082				3	0.01	0.1	0.06	0.41	3.30	1.72	0.71	5.69	0.03	0.2	0.3	High	0.3
	Sum:	1736764	--	--	--	--	--	--	509	1.00	0.0393	0.00	0.00	0.01	NA	0.00	0.01	0.00	0.0	0.0	Low	0.039

df by Welch-Satterthwaite approximation:	**2.2**	**Recommended UCL:**	**0.0394** **mg/kg** >> Student's t 95% UCL

Note: Student's-t or Chebychev 95% UCL may be appropriate.

*Student's t UCL is acceptable if adj'd CV for DU is "Low" (e.g., CV ≤ 1.5). The User should consult the instructions for additional guidance on which 95% UCL is recommended for specific data sets.

Notes

adj'd	= adjusted	df	= degrees of freedom	SD	= arithmetic standard deviation
calc'd	= calculated	DU	= decision unit	SE	= standard error
CV	= coefficient of variation	RSD	= relative standard deviation	95% UCL	= 95% upper confidence limit for arithmetic mean

Calculation of Weighted 95% UCLs for a Combined Decision Unit (DU) from Several Smaller DUs Having Replicate Incremental Samples

Enter information in green highlighted cells. See the "Instructions" tab for detailed instructions.

Project ID:	Fort Wingate Inner Fence
Property/Sample ID:	Inner Fence Area Grids
Date of calculations:	7/6/2024
Calculator completed by:	CMC
Analyte:	Nickel
Analyte units:	mg/kg
DU metric units:	Sq feet
Notes:	

Click in green cell below to select from drop-down menu

DU size metric: area, volume, or depth interval: Area

Note: Assumes all replicates have the same number of increments

Number of increments per replicate: 50

Row #	IDs/Names of the Smaller DUs	DU Area (Sq feet)	Replicate field sample concentrations						Number of Replicates	Weight	Arithmetic Mean	SD of Replicates	calc'd SD of Increments	calc'd CV for the DU	Adj Factor	adj'd SD of Increments	adj'd CV for DU	SE of DU	95% UCL			
			Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6											Student's-t	Chebychev	CV of Increments	95% UCL
1	AA32	10000.0	10	11	11				3	0.01	10.7	0.58	4.08	0.38	1.13	4.60	0.43	0.33	11.6	12.1	Low	11.6
2	AB27	10000.0	11	12	11				3	0.01	11.3	0.58	4.08	0.36	1.13	4.60	0.41	0.33	12.3	12.8	Low	12.3
3	AB38	13378.0	12	12	12				3	0.01	12.0	0.00	0.00	0.00	1.13	0.00	0.00	0.00	12.0	12.0	Low	12.0
4	AC34	10000.0	8.4	7.6	7.8				3	0.01	7.9	0.42	2.94	0.37	1.13	3.32	0.42	0.24	8.6	9.0	Low	8.6
5	AD28	10000.0	9.7	9.2	9.2				3	0.01	9.4	0.29	2.04	0.22	1.13	2.30	0.25	0.17	9.9	10.1	Low	9.9
6	AD34	10000.0	8.3	8.6	7.6				3	0.01	8.2	0.51	3.63	0.44	1.13	4.10	0.50	0.30	9.0	9.5	Low	9.0
7	AE27	9999.9	7.8	9	8.4				3	0.01	8.4	0.60	4.24	0.51	1.13	4.80	0.57	0.35	9.4	9.9	Low	9.4
8	AE38	13378.0	11	12	11				3	0.01	11.3	0.58	4.08	0.36	1.13	4.60	0.41	0.33	12.3	12.8	Low	12.3
9	AF29	10000.0	8.9	8	8.6				3	0.01	8.5	0.46	3.24	0.38	1.13	3.65	0.43	0.26	9.3	9.7	Low	9.3
10	AF30	10000.0	8.5	10	8.7				3	0.01	9.1	0.81	5.76	0.64	1.14	6.54	0.72	0.47	10.4	11.1	Low	10.4
11	AF32	10000.0	9.4	8.3	8.1				3	0.01	8.6	0.70	4.95	0.58	1.13	5.61	0.65	0.40	9.8	10.4	Low	9.8
12	AF34	10000.0	10	9.3	9.5				3	0.01	9.6	0.36	2.55	0.27	1.13	2.87	0.30	0.21	10.2	10.5	Low	10.2
13	AH28	10000.0	7	8.3	6.4				3	0.01	7.2	0.97	6.87	0.95	1.16	7.95	1.10	0.56	8.9	9.7	Low	8.9
14	AH39	10617.1	13	13	12				3	0.01	12.7	0.58	4.08	0.32	1.13	4.60	0.36	0.33	13.6	14.1	Low	13.6
15	AI26	10000.0	10	10	9.8				3	0.01	9.9	0.12	0.82	0.08	1.13	0.92	0.09	0.07	10.1	10.2	Low	10.1
16	AI29	10000.0	12	12	11				3	0.01	11.7	0.58	4.08	0.35	1.13	4.60	0.39	0.33	12.6	13.1	Low	12.6
17	AI31	10000.0	13	14	14				3	0.01	13.7	0.58	4.08	0.30	1.13	4.60	0.34	0.33	14.6	15.1	Low	14.6
18	AJ26	10000.0	14	14	13				3	0.01	13.7	0.58	4.08	0.30	1.13	4.60	0.34	0.33	14.6	15.1	Low	14.6
19	AJ27	10000.0	12	11	10				3	0.01	11.0	1.00	7.07	0.64	1.14	8.03	0.73	0.58	12.7	13.5	Low	12.7
20	AJ31	10000.0	13	13	14				3	0.01	13.3	0.58	4.08	0.31	1.13	4.60	0.34	0.33	14.3	14.8	Low	14.3
21	AJ33	10000.0	10	9.6	9.4				3	0.01	9.7	0.31	2.16	0.22	1.13	2.43	0.25	0.18	10.2	10.4	Low	10.2
22	AK28	10000.0	10	11	10				3	0.01	10.3	0.58	4.08	0.40	1.13	4.60	0.45	0.33	11.3	11.8	Low	11.3
23	AK36	10000.0	11	12	12				3	0.01	11.7	0.58	4.08	0.35	1.13	4.60	0.39	0.33	12.6	13.1	Low	12.6
24	AL27	10000.0	13	12	13				3	0.01	12.7	0.58	4.08	0.32	1.13	4.60	0.36	0.33	13.6	14.1	Low	13.6
25	AL34	10000.0	9.6	9	9.5				3	0.01	9.4	0.32	2.27	0.24	1.13	2.56	0.27	0.19	9.9	10.2	Low	9.9
26	AL39	7384.7	9.2	9	9.1				3	0.00	9.1	0.10	0.71	0.08	1.13	0.80	0.09	0.06	9.3	9.4	Low	9.3
27	AM29	10000.0	14	14	14				3	0.01	14.0	0.00	0.00	0.00	1.13	0.00	0.00	0.00	14.0	14.0	Low	14.0
28	AM33	10000.0	13	13	13				3	0.01	13.0	0.00	0.00	0.00	1.13	0.00	0.00	0.00	13.0	13.0	Low	13.0
29	AN27	10000.0	16	17	17				3	0.01	16.7	0.58	4.08	0.24	1.13	4.60	0.28	0.33	17.6	18.1	Low	17.6
30	AN28	10000.0	13	14	12				3	0.01	13.0	1.00	7.07	0.54	1.13	8.00	0.62	0.58	14.7	15.5	Low	14.7
31	AN38	6980.7	11	11	11				3	0.00	11.0	0.00	0.00	0.00	1.13	0.00	0.00	0.00	11.0	11.0	Low	11.0
32	AO26	10000.0	10	9.4	9				3	0.01	9.5	0.50	3.56	0.38	1.13	4.01	0.42	0.29	10.3	10.7	Low	10.3
33	AP28	8819.3	15	15	14				3	0.01	14.7	0.58	4.08	0.28	1.13	4.60	0.31	0.33	15.6	16.1	Low	15.6
34	AQ15	13466.3	11	11	9.3				3	0.01	10.4	0.98	6.94	0.67	1.14	7.89	0.76	0.57	12.1	12.9	Low	12.1
35	AQ22	11017.2	5.1	5.5	6				3	0.01	5.5	0.45	3.19	0.58	1.13	3.61	0.65	0.26	6.3	6.7	Low	6.3
36	C27	14788.0	5.8	6.6	6.8				3	0.01	6.4	0.53	3.74	0.58	1.13	4.24	0.66	0.31	7.3	7.7	Low	7.3
37	C35	9243.3	8.8	7.7	8.9				3	0.01	8.5	0.67	4.71	0.56	1.13	5.33	0.63	0.38	9.6	10.1	Low	9.6
38	C37	7935.9	7.8	8.1	7.6				3	0.00	7.8	0.25	1.78	0.23	1.13	2.00	0.26	0.15	8.3	8.5	Low	8.3
39	E27	14436.0	7.5	8.2	9				3	0.01	8.2	0.75	5.31	0.64	1.14	6.03	0.73	0.43	9.5	10.1	Low	9.5
40	F32	10000.0	10	10	9.6				3	0.01	9.9	0.23	1.63	0.17	1.13	1.84	0.19	0.13	10.3	10.4	Low	10.3
41	G30	10000.0	9.8	8.4	9.7				3	0.01	9.3	0.78	5.52	0.59	1.13	6.26	0.67	0.45	10.6	11.3	Low	10.6
42	H35	10000.0	12	11	11				3	0.01	11.3	0.58	4.08	0.36	1.13	4.60	0.41	0.33	12.3	12.8	Low	12.3
43	H39	12972.6	8.2	8.3	7.3				3	0.01	7.9	0.55	3.89	0.49	1.13	4.40	0.55	0.32	8.9	9.3	Low	8.9

Row #	IDs/Names of the Smaller DUs	DU Area (Sq feet)	Replicate field sample concentrations						Number of Replicates	Weight	Arithmetic Mean	SD of Replicates	calc'd SD of Increments	calc'd CV for the DU	Adj Factor	adj'd SD of Increments	adj'd CV for DU	SE of DU	95% UCL			
			Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6											Student's-t	Chebychev	CV of Increments	95% UCL
44	I29	10000.0	7.8	7.8	8.1				3	0.01	7.9	0.17	1.22	0.16	1.13	1.38	0.17	0.10	8.2	8.3	Low	8.2
45	I30	10000.0	7.2	6.7	7.8				3	0.01	7.2	0.55	3.89	0.54	1.13	4.41	0.61	0.32	8.2	8.6	Low	8.2
46	I33	10000.0	9	9.1	8				3	0.01	8.7	0.61	4.30	0.49	1.13	4.86	0.56	0.35	9.7	10.2	Low	9.7
47	I38	12991.4	7.9	8.2	8.6				3	0.01	8.2	0.35	2.48	0.30	1.13	2.80	0.34	0.20	8.8	9.1	Low	8.8
48	K30	10000.0	8	8.6	7.3				3	0.01	8.0	0.65	4.60	0.58	1.13	5.21	0.65	0.38	9.1	9.6	Low	9.1
49	K34	10000.0	9.5	9.2	9.4				3	0.01	9.4	0.15	1.08	0.12	1.13	1.22	0.13	0.09	9.6	9.8	Low	9.6
50	L29	10000.0	7.3	8.2	8.2				3	0.01	7.9	0.52	3.67	0.47	1.13	4.15	0.53	0.30	8.8	9.2	Low	8.8
51	L34	10000.0	8.3	7.2	9.4				3	0.01	8.3	1.10	7.78	0.94	1.16	9.00	1.08	0.64	10.2	11.1	Low	10.2
52	L37	10000.0	11	11	13				3	0.01	11.7	1.15	8.16	0.70	1.14	9.30	0.80	0.67	13.6	14.6	Low	13.6
53	M28	10000.0	11	9.5	12				3	0.01	10.8	1.26	8.90	0.82	1.15	10.21	0.94	0.73	13.0	14.0	Low	13.0
54	M32	10000.0	7.2	7.2	7				3	0.01	7.1	0.12	0.82	0.11	1.13	0.92	0.13	0.07	7.3	7.4	Low	7.3
55	M39	13011.8	11	8.1	9.4				3	0.01	9.5	1.45	10.27	1.08	1.17	12.02	1.27	0.84	11.9	13.2	Low	11.9
56	N27	10000.0	15	14	13				3	0.01	14.0	1.00	7.07	0.51	1.13	7.99	0.57	0.58	15.7	16.5	Low	15.7
57	N28	10000.0	12	11	10				3	0.01	11.0	1.00	7.07	0.64	1.14	8.03	0.73	0.58	12.7	13.5	Low	12.7
58	N37	10000.0	9	9.4	10				3	0.01	9.5	0.50	3.56	0.38	1.13	4.01	0.42	0.29	10.3	10.7	Low	10.3
59	O27	10000.0	14	10	13				3	0.01	12.3	2.08	14.72	1.19	1.18	17.42	1.41	1.20	15.8	17.6	Low	15.8
60	O32	10000.0	7.8	7.1	6.9				3	0.01	7.3	0.47	3.34	0.46	1.13	3.77	0.52	0.27	8.1	8.5	Low	8.1
61	O37	10000.0	9.1	10	9.6				3	0.01	9.6	0.45	3.19	0.33	1.13	3.59	0.38	0.26	10.3	10.7	Low	10.3
62	P32	10000.0	7.8	5.9	6.6				3	0.01	6.8	0.96	6.79	1.00	1.16	7.90	1.17	0.55	8.4	9.2	Low	8.4
63	P33	10000.0	8.8	6.4	9				3	0.01	8.1	1.45	10.23	1.27	1.19	12.20	1.51	0.84	10.5	11.7	Med	11.7
64	Q26	10000.0	13	14	13				3	0.01	13.3	0.58	4.08	0.31	1.13	4.60	0.34	0.33	14.3	14.8	Low	14.3
65	Q29	10000.0	7.5	8.5	8.1				3	0.01	8.0	0.50	3.56	0.44	1.13	4.02	0.50	0.29	8.9	9.3	Low	8.9
66	Q38	13187.6	7.6	7	6.7				3	0.01	7.1	0.46	3.24	0.46	1.13	3.66	0.52	0.26	7.9	8.3	Low	7.9
67	Q39	13187.6	7.9	8.8	9.6				3	0.01	8.8	0.85	6.01	0.69	1.14	6.85	0.78	0.49	10.2	10.9	Low	10.2
68	R24	10000.0	9.6	10	11				3	0.01	10.2	0.72	5.10	0.50	1.13	5.76	0.57	0.42	11.4	12.0	Low	11.4
69	R32	10000.0	8.7	7.5	7.3				3	0.01	7.8	0.76	5.35	0.68	1.14	6.10	0.78	0.44	9.1	9.7	Low	9.1
70	S26	10000.0	11	13	14				3	0.01	12.7	1.53	10.80	0.85	1.15	12.42	0.98	0.88	15.2	16.5	Low	15.2
71	S29	10000.0	9.5	10	10				3	0.01	9.8	0.29	2.04	0.21	1.13	2.30	0.23	0.17	10.3	10.6	Low	10.3
72	S36	10000.0	8.8	8.6	8.7				3	0.01	8.7	0.10	0.71	0.08	1.13	0.80	0.09	0.06	8.9	9.0	Low	8.9
73	T23	10000.0	14	11	11				3	0.01	12.0	1.73	12.25	1.02	1.16	14.26	1.19	1.00	14.9	16.4	Low	14.9
74	T28	10000.0	12	13	13				3	0.01	12.7	0.58	4.08	0.32	1.13	4.60	0.36	0.33	13.6	14.1	Low	13.6
75	T32	10000.0	8.3	8.2	7.3				3	0.01	7.9	0.55	3.89	0.49	1.13	4.40	0.55	0.32	8.9	9.3	Low	8.9
76	T39	13380.2	9.1	11	9.1				3	0.01	9.7	1.10	7.76	0.80	1.15	8.89	0.91	0.63	11.6	12.5	Low	11.6
77	U28	10000.0	16	16	15				3	0.01	15.7	0.58	4.08	0.26	1.13	4.60	0.29	0.33	16.6	17.1	Low	16.6
78	U32	10000.0	8.2	8.3	6.8				3	0.01	7.8	0.84	5.93	0.76	1.14	6.78	0.87	0.48	9.2	9.9	Low	9.2
79	U33	10000.0	7	7.2	6.8				3	0.01	7.0	0.20	1.41	0.20	1.13	1.59	0.23	0.12	7.3	7.5	Low	7.3
80	U35	10000.0	9.3	8.9	8.2				3	0.01	8.8	0.56	3.94	0.45	1.13	4.44	0.51	0.32	9.7	10.2	Low	9.7
81	U37	10000.0	8.4	8.6	8.8				3	0.01	8.6	0.20	1.41	0.16	1.13	1.59	0.19	0.12	8.9	9.1	Low	8.9
82	V30	10000.0	9.8	9.7	9.9				3	0.01	9.8	0.10	0.71	0.07	1.13	0.80	0.08	0.06	10.0	10.1	Low	10.0
83	V33	10000.0	8.8	8.5	7.9				3	0.01	8.4	0.46	3.24	0.39	1.13	3.65	0.43	0.26	9.2	9.6	Low	9.2
84	V36	10000.0	8	8.3	8.6				3	0.01	8.3	0.30	2.12	0.26	1.13	2.39	0.29	0.17	8.8	9.1	Low	8.8
85	W26	10000.0	14	13	13				3	0.01	13.3	0.58	4.08	0.31	1.13	4.60	0.34	0.33	14.3	14.8	Low	14.3
86	W28	10000.0	13	13	15				3	0.01	13.7	1.15	8.16	0.60	1.13	9.26	0.68	0.67	15.6	16.6	Low	15.6
87	W31	10000.0	9.6	8.8	9.5				3	0.01	9.3	0.44	3.08	0.33	1.13	3.47	0.37	0.25	10.0	10.4	Low	10.0
88	W34	10000.0	9.6	10	8.9				3	0.01	9.5	0.56	3.94	0.41	1.13	4.44	0.47	0.32	10.4	10.9	Low	10.4
89	W39	13397.6	13	12	12				3	0.01	12.3	0.58	4.08	0.33	1.13	4.60	0.37	0.33	13.3	13.8	Low	13.3
90	X25	10000.0	12	12	12				3	0.01	12.0	0.00	0.00	0.00	1.13	0.00	0.00	0.00	12.0	12.0	Low	12.0
91	X33	10000.0	8.7	8.8	8.1				3	0.01	8.5	0.38	2.68	0.31	1.13	3.02	0.35	0.22	9.2	9.5	Low	9.2
92	X36	10000.0	7.3	7.8	7.9				3	0.01	7.7	0.32	2.27	0.30	1.13	2.56	0.33	0.19	8.2	8.5	Low	8.2
93	Z29	10000.0	12	12	12				3	0.01	12.0	0.00	0.00	0.00	1.13	0.00	0.00	0.00	12.0	12.0	Low	12.0
94	AA24	10000.0	11	9.7	10				3	0.01	10.2	0.68	4.81	0.47	1.13	5.44	0.53	0.39	11.4	11.9	Low	11.4
95	AB24	10000.0	7.3	7.9	8.2				3	0.01	7.8	0.46	3.24	0.42	1.13	3.66	0.47	0.26	8.6	9.0	Low	8.6
96	AB25	10000.0	11	10	10				3	0.01	10.3	0.58	4.08	0.40	1.13	4.60	0.45	0.33	11.3	11.8	Low	11.3
97	AC25	10000.0	12	12	12				3	0.01	12.0	0.00	0.00	0.00	1.13	0.00	0.00	0.00	12.0	12.0	Low	12.0
98	AD25	10000.0	12	10	11				3	0.01	11.0	1.00	7.07	0.64	1.14	8.03	0.73	0.58	12.7	13.5	Low	12.7
99	AE25	10000.0	9.5	9.6	10				3	0.01	9.7	0.26	1.87	0.19	1.13	2.11	0.22	0.15	10.1	10.4	Low	10.1

Row #	IDs/Names of the Smaller DUs	DU Area (Sq feet)	Replicate field sample concentrations						Number of Replicates	Weight	Arithmetic Mean	SD of Replicates	calc'd SD of Increments	calc'd CV for the DU	Adj Factor	adj'd SD of Increments	adj'd CV for DU	SE of DU	95% UCL			
			Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6											Student's-t	Chebychev	CV of Increments	95% UCL
100	AF25	10000.0	8.9	8.6	8.6				3	0.01	8.7	0.17	1.22	0.14	1.13	1.38	0.16	0.10	9.0	9.1	Low	9.0
101	AG25	10000.0	10	10	11				3	0.01	10.3	0.58	4.08	0.40	1.13	4.60	0.45	0.33	11.3	11.8	Low	11.3
102	AH24	10000.0	8.9	8.4	7.7				3	0.01	8.3	0.60	4.26	0.51	1.13	4.82	0.58	0.35	9.3	9.9	Low	9.3
103	AI23	10000.0	11	10	10				3	0.01	10.3	0.58	4.08	0.40	1.13	4.60	0.45	0.33	11.3	11.8	Low	11.3
104	AI24	10000.0	8.8	8.1	7.8				3	0.01	8.2	0.51	3.63	0.44	1.13	4.10	0.50	0.30	9.1	9.5	Low	9.1
105	AJ23	10000.0	9.2	8.8	8.9				3	0.01	9.0	0.21	1.47	0.16	1.13	1.66	0.19	0.12	9.3	9.5	Low	9.3
106	AK23	10000.0	10	9.2	12				3	0.01	10.4	1.44	10.20	0.98	1.16	11.84	1.14	0.83	12.8	14.0	Low	12.8
107	AL23	10000.0	10	8.7	11				3	0.01	9.9	1.15	8.15	0.82	1.15	9.36	0.95	0.67	11.8	12.8	Low	11.8
108	AL24	10000.0	10	9.2	9.9				3	0.01	9.7	0.44	3.08	0.32	1.13	3.47	0.36	0.25	10.4	10.8	Low	10.4
109	AL25	10000.0	9.3	10	9.8				3	0.01	9.7	0.36	2.55	0.26	1.13	2.87	0.30	0.21	10.3	10.6	Low	10.3
110	AM25	10000.0	9.5	9	9.1				3	0.01	9.2	0.26	1.87	0.20	1.13	2.11	0.23	0.15	9.6	9.9	Low	9.6
111	AN25	10000.0	9.3	9	8				3	0.01	8.8	0.68	4.81	0.55	1.13	5.45	0.62	0.39	9.9	10.5	Low	9.9
112	AO25	10000.0	8.6	7.7	8.1				3	0.01	8.1	0.45	3.19	0.39	1.13	3.60	0.44	0.26	8.9	9.3	Low	8.9
113	AP8	12741.9	5.2	4.6	4.9				3	0.01	4.9	0.30	2.12	0.43	1.13	2.39	0.49	0.17	5.4	5.7	Low	5.4
114	AP9	12741.9	8.5	7.6	7.8				3	0.01	8.0	0.47	3.34	0.42	1.13	3.77	0.47	0.27	8.8	9.2	Low	8.8
115	AP10	12742.0	8.7	9.5	9.3				3	0.01	9.2	0.42	2.94	0.32	1.13	3.32	0.36	0.24	9.9	10.2	Low	9.9
116	AP11	12741.9	9.4	12	12				3	0.01	11.1	1.50	10.61	0.95	1.16	12.29	1.10	0.87	13.7	14.9	Low	13.7
117	AP12	12742.0	12	12	11				3	0.01	11.7	0.58	4.08	0.35	1.13	4.60	0.39	0.33	12.6	13.1	Low	12.6
118	AP14	12741.6	11	11	9.2				3	0.01	10.4	1.04	7.35	0.71	1.14	8.38	0.81	0.60	12.2	13.0	Low	12.2
119	AP15	12742.2	12	12	12				3	0.01	12.0	0.00	0.00	0.00	1.13	0.00	0.00	0.00	12.0	12.0	Low	12.0
120	AP16	12741.9	9.9	11	9.3				3	0.01	10.1	0.86	6.10	0.61	1.13	6.92	0.69	0.50	11.5	12.2	Low	11.5
121	AP17	12741.9	8.9	9.5	10				3	0.01	9.5	0.55	3.89	0.41	1.13	4.39	0.46	0.32	10.4	10.9	Low	10.4
122	AP18	12741.9	5.3	6.7	6.1				3	0.01	6.0	0.70	4.97	0.82	1.15	5.70	0.94	0.41	7.2	7.8	Low	7.2
123	AP19	12741.9	6.9	5.7	6.2				3	0.01	6.3	0.60	4.26	0.68	1.14	4.85	0.77	0.35	7.3	7.8	Low	7.3
124	AP20	12741.9	7.2	6.8	7.1				3	0.01	7.0	0.21	1.47	0.21	1.13	1.66	0.24	0.12	7.4	7.6	Low	7.4
125	AP21	12741.9	6	6.4	5.6				3	0.01	6.0	0.40	2.83	0.47	1.13	3.19	0.53	0.23	6.7	7.0	Low	6.7
126	AP22	12742.0	6.1	6.6	5.3				3	0.01	6.0	0.66	4.64	0.77	1.14	5.30	0.88	0.38	7.1	7.7	Low	7.1
127	AP25	12741.8	7	6.7	6.7				3	0.01	6.8	0.17	1.22	0.18	1.13	1.38	0.20	0.10	7.1	7.2	Low	7.1
128	AQ23	10435.9	7	6.6	7.3				3	0.01	7.0	0.35	2.48	0.36	1.13	2.80	0.40	0.20	7.6	7.9	Low	7.6
129	AQ24	9852.5	6.1	6.3	7				3	0.01	6.5	0.47	3.34	0.52	1.13	3.78	0.58	0.27	7.3	7.7	Low	7.3
130	B8	8381.5	10	10	9.6				3	0.00	9.9	0.23	1.63	0.17	1.13	1.84	0.19	0.13	10.3	10.4	Low	10.3
131	B20	7901.2	7.6	7.3	8.4				3	0.00	7.8	0.57	4.02	0.52	1.13	4.55	0.59	0.33	8.7	9.2	Low	8.7
132	B21	7425.3	7.8	8.4	8.2				3	0.00	8.1	0.31	2.16	0.27	1.13	2.43	0.30	0.18	8.6	8.9	Low	8.6
133	B22	6933.6	9.3	8.5	8.1				3	0.00	8.6	0.61	4.32	0.50	1.13	4.88	0.57	0.35	9.7	10.2	Low	9.7
134	C8	9158.1	10	11	10				3	0.01	10.3	0.58	4.08	0.40	1.13	4.60	0.45	0.33	11.3	11.8	Low	11.3
135	C22	6929.0	7.9	7.6	9				3	0.00	8.2	0.74	5.21	0.64	1.14	5.92	0.73	0.43	9.4	10.0	Low	9.4
136	D8	9410.4	5.5	5.5	5.7				3	0.01	5.6	0.12	0.82	0.15	1.13	0.92	0.17	0.07	5.8	5.9	Low	5.8
137	D22	10000.0	8.3	7.5	8.7				3	0.01	8.2	0.61	4.32	0.53	1.13	4.89	0.60	0.35	9.2	9.7	Low	9.2
138	E22	10000.0	9.9	9.1	10				3	0.01	9.7	0.49	3.49	0.36	1.13	3.93	0.41	0.28	10.5	10.9	Low	10.5
139	E23	10000.0	6.4	7.3	7.5				3	0.01	7.1	0.59	4.14	0.59	1.13	4.70	0.66	0.34	8.1	8.5	Low	8.1
140	E24	10000.0	7.5	7.9	7.9				3	0.01	7.8	0.23	1.63	0.21	1.13	1.84	0.24	0.13	8.2	8.3	Low	8.2
141	E25	10000.0	7.7	7.7	8.1				3	0.01	7.8	0.23	1.63	0.21	1.13	1.84	0.23	0.13	8.2	8.4	Low	8.2
142	E26	13604.3	8.3	8.2	8.9				3	0.01	8.5	0.38	2.68	0.32	1.13	3.02	0.36	0.22	9.1	9.4	Low	9.1
143	F26	5258.3	6.5	6.6	7.6				3	0.00	6.9	0.61	4.30	0.62	1.14	4.88	0.71	0.35	7.9	8.4	Low	7.9
144	G25	8218.3	9.6	9.9	9.9				3	0.00	9.8	0.17	1.22	0.12	1.13	1.38	0.14	0.10	10.1	10.2	Low	10.1
145	G26	9346.7	8.5	9.5	9.5				3	0.01	9.2	0.58	4.08	0.45	1.13	4.61	0.50	0.33	10.1	10.6	Low	10.1
146	H25	10000.0	11	9.8	11				3	0.01	10.6	0.69	4.90	0.46	1.13	5.53	0.52	0.40	11.8	12.3	Low	11.8
147	I25	7781.1	9.9	8.1	9.9				3	0.00	9.3	1.04	7.35	0.79	1.15	8.41	0.90	0.60	11.1	11.9	Low	11.1
148	J22	10000.0	13	12	13				3	0.01	12.7	0.58	4.08	0.32	1.13	4.60	0.36	0.33	13.6	14.1	Low	13.6
149	J23	10000.4	11	9.5	12				3	0.01	10.8	1.26	8.90	0.82	1.15	10.21	0.94	0.73	13.0	14.0	Low	13.0
150	J24	7428.9	6	8.1	9.1				3	0.00	7.7	1.58	11.19	1.45	1.22	13.63	1.76	0.91	10.4	11.7	Med	11.7
151	J25	6743.5	12	11	12				3	0.00	11.7	0.58	4.08	0.35	1.13	4.60	0.39	0.33	12.6	13.1	Low	12.6
152	K22	10000.0	10	11	17				3	0.01	12.7	3.79	26.77	2.11	1.35	36.13	2.85	2.19	19.0	22.2	Med	22.2
153	L22	10000.0	9.4	9.8	11				3	0.01	10.1	0.83	5.89	0.58	1.13	6.67	0.66	0.48	11.5	12.2	Low	11.5
154	M22	10000.0	12	13	10				3	0.01	11.7	1.53	10.80	0.93	1.16	12.48	1.07	0.88	14.2	15.5	Low	14.2
155	N22	10000.0	11	12	10				3	0.01	11.0	1.00	7.07	0.64	1.14	8.03	0.73	0.58	12.7	13.5	Low	12.7

Row #	IDs/Names of the Smaller DUs	DU Area (Sq feet)	Replicate field sample concentrations						Number of Replicates	Weight	Arithmetic Mean	SD of Replicates	calc'd SD of Increments	calc'd CV for the DU	Adj Factor	adj'd SD of Increments	adj'd CV for DU	SE of DU	95% UCL			
			Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6											Student's-t	Chebychev	CV of Increments	95% UCL
156	O22	10000.0	16	15	15				3	0.01	15.3	0.58	4.08	0.27	1.13	4.60	0.30	0.33	16.3	16.8	Low	16.3
157	P22	10000.0	12	11	12				3	0.01	11.7	0.58	4.08	0.35	1.13	4.60	0.39	0.33	12.6	13.1	Low	12.6
158	Q22	10000.0	8.8	8.6	8.4				3	0.01	8.6	0.20	1.41	0.16	1.13	1.59	0.19	0.12	8.9	9.1	Low	8.9
159	R22	7999.4	21	13	12				3	0.00	15.3	4.93	34.88	2.27	1.39	48.48	3.16	2.85	23.6	27.7	High	27.7
160	S22	10000.0	12	9.7	11				3	0.01	10.9	1.15	8.15	0.75	1.14	9.31	0.85	0.67	12.8	13.8	Low	12.8
161	T22	9920.3	11	13	11				3	0.01	11.7	1.15	8.16	0.70	1.14	9.30	0.80	0.67	13.6	14.6	Low	13.6
162	U22	6762.1	16	14	15				3	0.00	15.0	1.00	7.07	0.47	1.13	7.99	0.53	0.58	16.7	17.5	Low	16.7
163	V22	10000.0	12	12	13				3	0.01	12.3	0.58	4.08	0.33	1.13	4.60	0.37	0.33	13.3	13.8	Low	13.3
164	W22	10000.0	12	13	12				3	0.01	12.3	0.58	4.08	0.33	1.13	4.60	0.37	0.33	13.3	13.8	Low	13.3
165	W23	10000.0	14	12	12				3	0.01	12.7	1.15	8.16	0.64	1.14	9.28	0.73	0.67	14.6	15.6	Low	14.6
166	W24	10000.0	13	11	11	11	11		5	0.01	11.4	0.89	6.32	0.55	1.08	6.82	0.60	0.40	12.3	13.1	Low	12.3
167	X24	10000.0	15	14	16				3	0.01	15.0	1.00	7.07	0.47	1.13	7.99	0.53	0.58	16.7	17.5	Low	16.7
168	Y24	10000.0	15	14	15				3	0.01	14.7	0.58	4.08	0.28	1.13	4.60	0.31	0.33	15.6	16.1	Low	15.6
169	Z24	10000.0	11	12	13				3	0.01	12.0	1.00	7.07	0.59	1.13	8.02	0.67	0.58	13.7	14.5	Low	13.7
	Sum:	1734193	--	--	--	--	--	--	509	1.00	9.85	0.00	0.03	0.00	NA	0.04	0.00	0.00	9.9	9.9	Low	9.85

df by Welch-Satterthwaite approximation:	**4.0**

Recommended UCL: **9.85** **mg/kg** >> Student's t 95% UCL

Note: Student's-t or Chebychev 95% UCL may be appropriate.

*Student's t UCL is acceptable if adj'd CV for DU is "Low" (e.g., CV ≤ 1.5). The User should consult the instructions for additional guidance on which 95% UCL is recommended for specific data sets.

Notes

adj'd	= adjusted	df	= degrees of freedom	SD	= arithmetic standard deviation
calc'd	= calculated	DU	= decision unit	SE	= standard error
CV	= coefficient of variation	RSD	= relative standard deviation	95% UCL	= 95% upper confidence limit for arithmetic mean

Calculation of Weighted 95% UCLs for a Combined Decision Unit (DU) from Several Smaller DUs Having Replicate Incremental Samples

Enter information in green highlighted cells. See the "Instructions" tab for detailed instructions.

Project ID:	Fort Wingate Inner Fence
Property/Sample ID:	Inner Fence Area Grids
Date of calculations:	7/6/2024
Calculator completed by:	CMC
Analyte:	Selenium
Analyte units:	mg/kg
DU metric units:	Sq feet
Notes:	

Click in green cell below to select from drop-down menu

DU size metric: area, volume, or depth interval: Area

Note: Assumes all replicates have the same number of increments

Number of increments per replicate: 50

Row #	IDs/Names of the Smaller DUs	DU Area (Sq feet)	Replicate field sample concentrations						Number of Replicates	Weight	Arithmetic Mean	SD of Replicates	calc'd SD of Increments	calc'd CV for the DU	Adj Factor	adj'd SD of Increments	adj'd CV for DU	SE of DU	95% UCL			
			Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6											Student's-t	Chebychev	CV of Increments	95% UCL
1	AA32	10000.0	0.95	1.2	1				3	0.01	1.1	0.13	0.94	0.89	1.15	1.08	1.03	0.08	1.3	1.4	Low	1.3
2	AB27	10000.0	1.4	1.4	1.3				3	0.01	1.4	0.06	0.41	0.30	1.13	0.46	0.34	0.03	1.5	1.5	Low	1.5
3	AB38	13378.0	1.1	1.2	1.1				3	0.01	1.1	0.06	0.41	0.36	1.13	0.46	0.41	0.03	1.2	1.3	Low	1.2
4	AC34	10000.0	1	1.1	0.94				3	0.01	1.0	0.08	0.57	0.56	1.13	0.65	0.64	0.05	1.1	1.2	Low	1.1
5	AD28	10000.0	1.1	0.96	1.1				3	0.01	1.1	0.08	0.57	0.54	1.13	0.65	0.61	0.05	1.2	1.3	Low	1.2
6	AD34	10000.0	0.94	1	0.95				3	0.01	1.0	0.03	0.23	0.24	1.13	0.26	0.27	0.02	1.0	1.0	Low	1.0
7	AE27	9999.9	0.94	1.1	0.89				3	0.01	1.0	0.11	0.78	0.79	1.15	0.89	0.91	0.06	1.2	1.3	Low	1.2
8	AE38	13378.0	1.2	1.3	1.3				3	0.01	1.3	0.06	0.41	0.32	1.13	0.46	0.36	0.03	1.4	1.4	Low	1.4
9	AF29	10000.0	0.96	1	0.91				3	0.01	1.0	0.05	0.32	0.33	1.13	0.36	0.38	0.03	1.0	1.1	Low	1.0
10	AF30	10000.0	1.2	1.3	1				3	0.01	1.2	0.15	1.08	0.93	1.16	1.25	1.07	0.09	1.4	1.6	Low	1.4
11	AF32	10000.0	1	0.91	1.1				3	0.01	1.0	0.10	0.67	0.67	1.14	0.76	0.76	0.05	1.2	1.2	Low	1.2
12	AF34	10000.0	1	0.96	11				3	0.01	4.3	5.79	40.91	9.47	6.60	270.16	62.54	3.34	14.1	18.9	High	18.9
13	AH28	10000.0	0.62	0.53	0.65				3	0.01	0.6	0.06	0.44	0.74	1.14	0.50	0.84	0.04	0.7	0.8	Low	0.7
14	AH39	10617.1	1.5	1.4	1.5				3	0.01	1.5	0.06	0.41	0.28	1.13	0.46	0.31	0.03	1.6	1.6	Low	1.6
15	AI26	10000.0	0.81	0.67	0.87				3	0.01	0.8	0.10	0.73	0.93	1.16	0.84	1.07	0.06	1.0	1.0	Low	1.0
16	AI29	10000.0	1.1	1.4	1				3	0.01	1.2	0.21	1.47	1.26	1.19	1.75	1.50	0.12	1.5	1.7	Med	1.7
17	AI31	10000.0	1.5	1.3	1.5				3	0.01	1.4	0.12	0.82	0.57	1.13	0.93	0.65	0.07	1.6	1.7	Low	1.6
18	AJ26	10000.0	1.3	1.5	1.3				3	0.01	1.4	0.12	0.82	0.60	1.13	0.93	0.68	0.07	1.6	1.7	Low	1.6
19	AJ27	10000.0	1.4	1.3	1.3				3	0.01	1.3	0.06	0.41	0.31	1.13	0.46	0.34	0.03	1.4	1.5	Low	1.4
20	AJ31	10000.0	1.3	1.6	1.4				3	0.01	1.4	0.15	1.08	0.75	1.14	1.23	0.86	0.09	1.7	1.8	Low	1.7
21	AJ33	10000.0	1.2	1.2	1				3	0.01	1.1	0.12	0.82	0.72	1.14	0.93	0.82	0.07	1.3	1.4	Low	1.3
22	AK28	10000.0	1.3	1.1	1.1				3	0.01	1.2	0.12	0.82	0.70	1.14	0.93	0.80	0.07	1.4	1.5	Low	1.4
23	AK36	10000.0	1.3	1.2	1.6				3	0.01	1.4	0.21	1.47	1.08	1.17	1.72	1.26	0.12	1.7	1.9	Low	1.7
24	AL27	10000.0	1.5	1.3	1.4				3	0.01	1.4	0.10	0.71	0.51	1.13	0.80	0.57	0.06	1.6	1.7	Low	1.6
25	AL34	10000.0	1.2	0.96	1.2				3	0.01	1.1	0.14	0.98	0.87	1.15	1.13	1.01	0.08	1.4	1.5	Low	1.4
26	AL39	7384.7	1	1.1	1				3	0.00	1.0	0.06	0.41	0.40	1.13	0.46	0.45	0.03	1.1	1.2	Low	1.1
27	AM29	10000.0	1.7	1.7	1.9				3	0.01	1.8	0.12	0.82	0.46	1.13	0.92	0.52	0.07	2.0	2.1	Low	2.0
28	AM33	10000.0	0.99	1.4	1.2				3	0.01	1.2	0.21	1.45	1.21	1.19	1.72	1.44	0.12	1.5	1.7	Low	1.5
29	AN27	10000.0	1.6	1.8	1.5				3	0.01	1.6	0.15	1.08	0.66	1.14	1.23	0.75	0.09	1.9	2.0	Low	1.9
30	AN28	10000.0	1.5	1.4	1.4				3	0.01	1.4	0.06	0.41	0.28	1.13	0.46	0.32	0.03	1.5	1.6	Low	1.5
31	AN38	6980.7	1.1	1.1	1.2				3	0.00	1.1	0.06	0.41	0.36	1.13	0.46	0.41	0.03	1.2	1.3	Low	1.2
32	AO26	10000.0	1	1.1	0.95				3	0.01	1.0	0.08	0.54	0.53	1.13	0.61	0.60	0.04	1.1	1.2	Low	1.1
33	AP28	8819.3	1.5	1.6	1.5				3	0.01	1.5	0.06	0.41	0.27	1.13	0.46	0.30	0.03	1.6	1.7	Low	1.6
34	AQ15	13466.3	1.4	1.2	1.2				3	0.01	1.3	0.12	0.82	0.64	1.14	0.93	0.73	0.07	1.5	1.6	Low	1.5
35	AQ22	11017.2	0.6	0.86	0.73				3	0.01	0.7	0.13	0.92	1.26	1.19	1.10	1.50	0.08	0.9	1.1	Med	1.1
36	C27	14788.0	1.1	1.3	1				3	0.01	1.1	0.15	1.08	0.95	1.16	1.25	1.10	0.09	1.4	1.5	Low	1.4
37	C35	9243.3	1.5	1.3	1				3	0.01	1.3	0.25	1.78	1.40	1.21	2.16	1.70	0.15	1.7	1.9	Med	1.9
38	C37	7935.9	1.2	1.5	1.1				3	0.00	1.3	0.21	1.47	1.16	1.18	1.74	1.37	0.12	1.6	1.8	Low	1.6
39	E27	14436.0	1.1	1.2	1.4				3	0.01	1.2	0.15	1.08	0.88	1.15	1.24	1.01	0.09	1.5	1.6	Low	1.5
40	F32	10000.0	1.5	1.6	1.5				3	0.01	1.5	0.06	0.41	0.27	1.13	0.46	0.30	0.03	1.6	1.7	Low	1.6
41	G30	10000.0	1.2	1.2	0.97				3	0.01	1.1	0.13	0.94	0.84	1.15	1.08	0.96	0.08	1.3	1.5	Low	1.3
42	H35	10000.0	1.6	1.6	1.9				3	0.01	1.7	0.17	1.22	0.72	1.14	1.40	0.82	0.10	2.0	2.1	Low	2.0

Row #	IDs/Names of the Smaller DUs	DU Area (Sq feet)	Replicate field sample concentrations						Number of Replicates	Weight	Arithmetic Mean	SD of Replicates	calc'd SD of Increments	calc'd CV for the DU	Adj Factor	adj'd SD of Increments	adj'd CV for DU	SE of DU	95% UCL			
			Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6											Student's-t	Chebychev	CV of Increments	95% UCL
43	H39	12972.6	1.2	1.1	0.9				3	0.01	1.1	0.15	1.08	1.01	1.16	1.26	1.18	0.09	1.3	1.5	Low	1.3
44	I29	10000.0	0.92	1.1	0.84				3	0.01	1.0	0.13	0.94	0.99	1.16	1.09	1.15	0.08	1.2	1.3	Low	1.2
45	I30	10000.0	0.92	0.95	1.1				3	0.01	1.0	0.10	0.68	0.69	1.14	0.78	0.78	0.06	1.2	1.2	Low	1.2
46	I33	10000.0	0.95	1.1	1.2				3	0.01	1.1	0.13	0.89	0.82	1.15	1.02	0.94	0.07	1.3	1.4	Low	1.3
47	I38	12991.4	0.88	0.93	1.1				3	0.01	1.0	0.12	0.82	0.84	1.15	0.94	0.97	0.07	1.2	1.3	Low	1.2
48	K30	10000.0	1.4	1.3	1.5				3	0.01	1.4	0.10	0.71	0.51	1.13	0.80	0.57	0.06	1.6	1.7	Low	1.6
49	K34	10000.0	1.3	1.2	1.4				3	0.01	1.3	0.10	0.71	0.54	1.13	0.80	0.62	0.06	1.5	1.6	Low	1.5
50	L29	10000.0	1.1	0.88	0.84				3	0.01	0.9	0.14	0.99	1.05	1.17	1.16	1.23	0.08	1.2	1.3	Low	1.2
51	L34	10000.0	1.3	0.9	1				3	0.01	1.1	0.21	1.47	1.38	1.21	1.78	1.67	0.12	1.4	1.6	Med	1.6
52	L37	10000.0	17	1.8	1.6				3	0.01	6.8	8.83	62.47	9.19	6.27	391.86	57.63	5.10	21.7	29.0	High	29.0
53	M28	10000.0	0.95	1.2	1.1				3	0.01	1.1	0.13	0.89	0.82	1.15	1.02	0.94	0.07	1.3	1.4	Low	1.3
54	M32	10000.0	0.83	0.72	0.85				3	0.01	0.8	0.07	0.49	0.62	1.14	0.56	0.70	0.04	0.9	1.0	Low	0.9
55	M39	13011.8	1.3	1.1	0.93				3	0.01	1.1	0.19	1.31	1.18	1.18	1.55	1.39	0.11	1.4	1.6	Low	1.4
56	N27	10000.0	1.6	1.4	1.3				3	0.01	1.4	0.15	1.08	0.75	1.14	1.23	0.86	0.09	1.7	1.8	Low	1.7
57	N28	10000.0	1	0.92	1				3	0.01	1.0	0.05	0.33	0.34	1.13	0.37	0.38	0.03	1.1	1.1	Low	1.1
58	N37	10000.0	1.4	1.3	1.3				3	0.01	1.3	0.06	0.41	0.31	1.13	0.46	0.34	0.03	1.4	1.5	Low	1.4
59	O27	10000.0	1.3	1.2	1.4				3	0.01	1.3	0.10	0.71	0.54	1.13	0.80	0.62	0.06	1.5	1.6	Low	1.5
60	O32	10000.0	0.78	0.78	0.72				3	0.01	0.8	0.03	0.24	0.32	1.13	0.28	0.36	0.02	0.8	0.8	Low	0.8
61	O37	10000.0	1.1	1.3	1.2				3	0.01	1.2	0.10	0.71	0.59	1.13	0.80	0.67	0.06	1.4	1.5	Low	1.4
62	P32	10000.0	0.78	0.87	0.66				3	0.01	0.8	0.11	0.74	0.97	1.16	0.86	1.12	0.06	0.9	1.0	Low	0.9
63	P33	10000.0	0.72	0.82	1				3	0.01	0.8	0.14	1.00	1.19	1.18	1.19	1.40	0.08	1.1	1.2	Low	1.1
64	Q26	10000.0	1.3	1.4	1.6				3	0.01	1.4	0.15	1.08	0.75	1.14	1.23	0.86	0.09	1.7	1.8	Low	1.7
65	Q29	10000.0	0.95	0.75	8				3	0.01	3.2	4.13	29.20	9.03	6.10	177.97	55.04	2.38	10.2	13.6	High	13.6
66	Q38	13187.6	0.85	0.83	0.64				3	0.01	0.8	0.12	0.82	1.06	1.17	0.96	1.24	0.07	1.0	1.1	Low	1.0
67	Q39	13187.6	1	1.1	1.2				3	0.01	1.1	0.10	0.71	0.64	1.14	0.80	0.73	0.06	1.3	1.4	Low	1.3
68	R24	10000.0	1.3	1.1	1.5				3	0.01	1.3	0.20	1.41	1.09	1.17	1.66	1.27	0.12	1.6	1.8	Low	1.6
69	R32	10000.0	0.96	1.2	1.1				3	0.01	1.1	0.12	0.85	0.78	1.14	0.98	0.90	0.07	1.3	1.4	Low	1.3
70	S26	10000.0	1.1	1.1	1.2				3	0.01	1.1	0.06	0.41	0.36	1.13	0.46	0.41	0.03	1.2	1.3	Low	1.2
71	S29	10000.0	1	0.95	0.98				3	0.01	1.0	0.03	0.18	0.18	1.13	0.20	0.21	0.01	1.0	1.0	Low	1.0
72	S36	10000.0	1.1	1	1.1				3	0.01	1.1	0.06	0.41	0.38	1.13	0.46	0.43	0.03	1.2	1.2	Low	1.2
73	T23	10000.0	1	0.94	0.88				3	0.01	0.9	0.06	0.42	0.45	1.13	0.48	0.51	0.03	1.0	1.1	Low	1.0
74	T28	10000.0	1.2	1.3	1.5				3	0.01	1.3	0.15	1.08	0.81	1.15	1.24	0.93	0.09	1.6	1.7	Low	1.6
75	T32	10000.0	0.95	0.88	0.85				3	0.01	0.9	0.05	0.36	0.41	1.13	0.41	0.46	0.03	1.0	1.0	Low	1.0
76	T39	13380.2	1.2	1	1.2				3	0.01	1.1	0.12	0.82	0.72	1.14	0.93	0.82	0.07	1.3	1.4	Low	1.3
77	U28	10000.0	1.6	1.6	1.6				3	0.01	1.6	0.00	0.00	0.00	1.13	0.00	0.00	0.00	1.6	1.6	Low	1.6
78	U32	10000.0	0.86	0.7	0.83				3	0.01	0.8	0.09	0.60	0.75	1.14	0.69	0.86	0.05	0.9	1.0	Low	0.9
79	U33	10000.0	0.94	1.1	0.61				3	0.01	0.9	0.25	1.77	2.00	1.32	2.34	2.65	0.14	1.3	1.5	Med	1.5
80	U35	10000.0	1.3	1.1	0.97				3	0.01	1.1	0.17	1.18	1.05	1.17	1.37	1.22	0.10	1.4	1.5	Low	1.4
81	U37	10000.0	0.96	0.97	1.2				3	0.01	1.0	0.14	0.96	0.92	1.16	1.11	1.06	0.08	1.3	1.4	Low	1.3
82	V30	10000.0	0.84	0.98	0.94				3	0.01	0.9	0.07	0.51	0.55	1.13	0.58	0.63	0.04	1.0	1.1	Low	1.0
83	V33	10000.0	0.86	1	1.1				3	0.01	1.0	0.12	0.85	0.86	1.15	0.98	0.99	0.07	1.2	1.3	Low	1.2
84	V36	10000.0	0.95	1.2	0.87				3	0.01	1.0	0.17	1.22	1.21	1.19	1.44	1.43	0.10	1.3	1.4	Low	1.3
85	W26	10000.0	1.2	1.2	1.3				3	0.01	1.2	0.06	0.41	0.33	1.13	0.46	0.37	0.03	1.3	1.4	Low	1.3
86	W28	10000.0	1.6	1.6	1.9				3	0.01	1.7	0.17	1.22	0.72	1.14	1.40	0.82	0.10	2.0	2.1	Low	2.0
87	W31	10000.0	1	0.75	0.6				3	0.01	0.8	0.20	1.43	1.82	1.29	1.84	2.34	0.12	1.1	1.3	Med	1.3
88	W34	10000.0	0.89	0.68	0.82				3	0.01	0.8	0.11	0.76	0.95	1.16	0.88	1.10	0.06	1.0	1.1	Low	1.0
89	W39	13397.6	1.3	1.2	1.2				3	0.01	1.2	0.06	0.41	0.33	1.13	0.46	0.37	0.03	1.3	1.4	Low	1.3
90	X25	10000.0	1.4	1.6	1.4				3	0.01	1.5	0.12	0.82	0.56	1.13	0.92	0.63	0.07	1.7	1.8	Low	1.7
91	X33	10000.0	0.65	0.71	0.75				3	0.01	0.7	0.05	0.36	0.51	1.13	0.40	0.57	0.03	0.8	0.8	Low	0.8
92	X36	10000.0	0.84	0.87	0.96				3	0.01	0.9	0.06	0.44	0.50	1.13	0.50	0.56	0.04	1.0	1.0	Low	1.0
93	Z29	10000.0	1.4	1.5	1.3				3	0.01	1.4	0.10	0.71	0.51	1.13	0.80	0.57	0.06	1.6	1.7	Low	1.6
94	AA24	10000.0	0.78	0.99	1.1				3	0.01	1.0	0.16	1.15	1.20	1.18	1.36	1.42	0.09	1.2	1.4	Low	1.2
95	AB24	10000.0	0.6	0.65	0.82				3	0.01	0.7	0.12	0.82	1.18	1.18	0.96	1.40	0.07	0.9	1.0	Low	0.9
96	AB25	10000.0	0.78	1.1	1.1				3	0.01	1.0	0.18	1.31	1.32	1.20	1.57	1.58	0.11	1.3	1.5	Med	1.5
97	AC25	10000.0	1.6	1.7	1.6				3	0.01	1.6	0.06	0.41	0.25	1.13	0.46	0.28	0.03	1.7	1.8	Low	1.7
98	AD25	10000.0	1.5	1.4	1.4				3	0.01	1.4	0.06	0.41	0.28	1.13	0.46	0.32	0.03	1.5	1.6	Low	1.5
99	AE25	10000.0	1.4	1.8	1.4				3	0.01	1.5	0.23	1.63	1.06	1.17	1.91	1.24	0.13	1.9	2.1	Low	1.9

Row #	IDs/Names of the Smaller DUs	DU Area (Sq feet)	Replicate field sample concentrations						Number of Replicates	Weight	Arithmetic Mean	SD of Replicates	calc'd SD of Increments	calc'd CV for the DU	Adj Factor	adj'd SD of Increments	adj'd CV for DU	SE of DU	95% UCL			
			Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6											Student's-t	Chebychev	CV of Increments	95% UCL
100	AF25	10000.0	0.82	0.84	0.79				3	0.01	0.8	0.03	0.18	0.22	1.13	0.20	0.25	0.01	0.9	0.9	Low	0.9
101	AG25	10000.0	0.81	0.89	1				3	0.01	0.9	0.10	0.67	0.75	1.14	0.77	0.86	0.06	1.1	1.1	Low	1.1
102	AH24	10000.0	0.9	0.82	0.92				3	0.01	0.9	0.05	0.37	0.43	1.13	0.42	0.48	0.03	1.0	1.0	Low	1.0
103	AI23	10000.0	1	1.1	1.2				3	0.01	1.1	0.10	0.71	0.64	1.14	0.80	0.73	0.06	1.3	1.4	Low	1.3
104	AI24	10000.0	0.79	0.93	0.72				3	0.01	0.8	0.11	0.76	0.93	1.16	0.87	1.07	0.06	1.0	1.1	Low	1.0
105	AJ23	10000.0	0.71	0.99	1				3	0.01	0.9	0.16	1.16	1.29	1.20	1.39	1.55	0.10	1.2	1.3	Med	1.3
106	AK23	10000.0	1.1	1.1	1.1				3	0.01	1.1	0.00	0.00	0.00	1.13	0.00	0.00	0.00	1.1	1.1	Low	1.1
107	AL23	10000.0	0.99	0.96	1.1				3	0.01	1.0	0.07	0.52	0.51	1.13	0.59	0.58	0.04	1.1	1.2	Low	1.1
108	AL24	10000.0	1.1	0.88	0.96				3	0.01	1.0	0.11	0.79	0.80	1.15	0.90	0.92	0.06	1.2	1.3	Low	1.2
109	AL25	10000.0	0.8	0.84	1				3	0.01	0.9	0.11	0.75	0.85	1.15	0.86	0.98	0.06	1.1	1.1	Low	1.1
110	AM25	10000.0	0.76	0.79	0.71				3	0.01	0.8	0.04	0.29	0.38	1.13	0.32	0.43	0.02	0.8	0.9	Low	0.8
111	AN25	10000.0	0.96	0.97	0.75				3	0.01	0.9	0.12	0.88	0.98	1.16	1.02	1.14	0.07	1.1	1.2	Low	1.1
112	AO25	10000.0	0.68	0.58	0.68				3	0.01	0.6	0.06	0.41	0.63	1.14	0.46	0.72	0.03	0.7	0.8	Low	0.7
113	AP8	12741.9	0.75	0.8	0.73				3	0.01	0.8	0.04	0.25	0.34	1.13	0.29	0.38	0.02	0.8	0.9	Low	0.8
114	AP9	12741.9	1	1.2	1.1				3	0.01	1.1	0.10	0.71	0.64	1.14	0.80	0.73	0.06	1.3	1.4	Low	1.3
115	AP10	12742.0	1.1	1.2	1.2				3	0.01	1.2	0.06	0.41	0.35	1.13	0.46	0.39	0.03	1.3	1.3	Low	1.3
116	AP11	12741.9	14	1.5	1.5				3	0.01	5.7	7.22	51.03	9.01	6.07	309.60	54.64	4.17	17.8	23.8	High	23.8
117	AP12	12742.0	1.2	1.3	1.2				3	0.01	1.2	0.06	0.41	0.33	1.13	0.46	0.37	0.03	1.3	1.4	Low	1.3
118	AP14	12741.6	1.2	1.2	1.2				3	0.01	1.2	0.00	0.00	0.00	1.13	0.00	0.00	0.00	1.2	1.2	Low	1.2
119	AP15	12742.2	1.6	1.2	1.4				3	0.01	1.4	0.20	1.41	1.01	1.16	1.65	1.18	0.12	1.7	1.9	Low	1.7
120	AP16	12741.9	1.3	1.3	1.4				3	0.01	1.3	0.06	0.41	0.31	1.13	0.46	0.34	0.03	1.4	1.5	Low	1.4
121	AP17	12741.9	1.2	1.4	1.4				3	0.01	1.3	0.12	0.82	0.61	1.13	0.93	0.69	0.07	1.5	1.6	Low	1.5
122	AP18	12741.9	0.75	0.96	0.86				3	0.01	0.9	0.11	0.74	0.87	1.15	0.85	1.00	0.06	1.0	1.1	Low	1.0
123	AP19	12741.9	0.69	0.84	1				3	0.01	0.8	0.16	1.10	1.30	1.20	1.31	1.56	0.09	1.1	1.2	Med	1.2
124	AP20	12741.9	0.8	0.79	0.97				3	0.01	0.9	0.10	0.72	0.84	1.15	0.82	0.96	0.06	1.0	1.1	Low	1.0
125	AP21	12741.9	0.81	0.81	0.71				3	0.01	0.8	0.06	0.41	0.53	1.13	0.46	0.59	0.03	0.9	0.9	Low	0.9
126	AP22	12742.0	0.82	0.95	0.77				3	0.01	0.8	0.09	0.66	0.78	1.14	0.75	0.89	0.05	1.0	1.1	Low	1.0
127	AP25	12741.8	0.8	0.67	0.75				3	0.01	0.7	0.07	0.46	0.63	1.14	0.53	0.71	0.04	0.9	0.9	Low	0.9
128	AQ23	10435.9	0.68	0.75	0.9				3	0.01	0.8	0.11	0.79	1.02	1.16	0.93	1.19	0.06	1.0	1.1	Low	1.0
129	AQ24	9852.5	0.7	0.86	0.91				3	0.01	0.8	0.11	0.78	0.94	1.16	0.90	1.09	0.06	1.0	1.1	Low	1.0
130	B8	8381.5	0.91	0.97	0.82				3	0.00	0.9	0.08	0.53	0.59	1.13	0.61	0.67	0.04	1.0	1.1	Low	1.0
131	B20	7901.2	1	1.1	1.2				3	0.00	1.1	0.10	0.71	0.64	1.14	0.80	0.73	0.06	1.3	1.4	Low	1.3
132	B21	7425.3	1.3	1.5	1.2				3	0.00	1.3	0.15	1.08	0.81	1.15	1.24	0.93	0.09	1.6	1.7	Low	1.6
133	B22	6933.6	1.3	1.3	1.2				3	0.00	1.3	0.06	0.41	0.32	1.13	0.46	0.36	0.03	1.4	1.4	Low	1.4
134	C8	9158.1	0.77	0.79	0.74				3	0.01	0.8	0.03	0.18	0.23	1.13	0.20	0.26	0.01	0.8	0.8	Low	0.8
135	C22	6929.0	0.89	0.96	1.2				3	0.00	1.0	0.16	1.15	1.13	1.18	1.35	1.33	0.09	1.3	1.4	Low	1.3
136	D8	9410.4	0.66	0.6	0.62				3	0.01	0.6	0.03	0.22	0.34	1.13	0.24	0.39	0.02	0.7	0.7	Low	0.7
137	D22	10000.0	0.81	0.9	1				3	0.01	0.9	0.10	0.67	0.74	1.14	0.77	0.85	0.05	1.1	1.1	Low	1.1
138	E22	10000.0	0.81	0.73	0.9				3	0.01	0.8	0.09	0.60	0.74	1.14	0.69	0.84	0.05	1.0	1.0	Low	1.0
139	E23	10000.0	0.56	0.79	0.62				3	0.01	0.7	0.12	0.84	1.28	1.20	1.01	1.54	0.07	0.9	1.0	Med	1.0
140	E24	10000.0	1	0.93	0.9				3	0.01	0.9	0.05	0.36	0.38	1.13	0.41	0.43	0.03	1.0	1.1	Low	1.0
141	E25	10000.0	0.64	0.94	0.99				3	0.01	0.9	0.19	1.34	1.56	1.24	1.66	1.93	0.11	1.2	1.3	Med	1.3
142	E26	13604.3	0.96	0.9	1.1				3	0.01	1.0	0.10	0.73	0.74	1.14	0.83	0.84	0.06	1.2	1.2	Low	1.2
143	F26	5258.3	0.94	0.8	1.1				3	0.00	0.9	0.15	1.06	1.12	1.18	1.25	1.32	0.09	1.2	1.3	Low	1.2
144	G25	8218.3	1.1	0.98	1.1				3	0.00	1.1	0.07	0.49	0.46	1.13	0.55	0.52	0.04	1.2	1.2	Low	1.2
145	G26	9346.7	1.1	0.97	1.1				3	0.01	1.1	0.08	0.53	0.50	1.13	0.60	0.57	0.04	1.2	1.2	Low	1.2
146	H25	10000.0	1.3	1	1.2				3	0.01	1.2	0.15	1.08	0.93	1.16	1.25	1.07	0.09	1.4	1.6	Low	1.4
147	I25	7781.1	1.1	0.86	1.2				3	0.00	1.1	0.17	1.24	1.17	1.18	1.46	1.39	0.10	1.3	1.5	Low	1.3
148	J22	10000.0	1.3	0.99	0.88				3	0.01	1.1	0.22	1.54	1.46	1.22	1.88	1.78	0.13	1.4	1.6	Med	1.6
149	J23	10000.4	0.79	0.83	1				3	0.01	0.9	0.11	0.79	0.90	1.15	0.91	1.04	0.06	1.1	1.2	Low	1.1
150	J24	7428.9	1.1	1.3	1.2				3	0.00	1.2	0.10	0.71	0.59	1.13	0.80	0.67	0.06	1.4	1.5	Low	1.4
151	J25	6743.5	1.2	1.2	0.91				3	0.00	1.1	0.17	1.18	1.07	1.17	1.38	1.26	0.10	1.4	1.5	Low	1.4
152	K22	10000.0	0.98	0.76	1.7				3	0.01	1.1	0.49	3.48	3.03	1.62	5.65	4.92	0.28	2.0	2.4	High	2.4
153	L22	10000.0	1.3	0.91	1.3				3	0.01	1.2	0.23	1.59	1.36	1.21	1.92	1.64	0.13	1.5	1.7	Med	1.7
154	M22	10000.0	1.1	0.78	0.93				3	0.01	0.9	0.16	1.13	1.21	1.19	1.34	1.43	0.09	1.2	1.3	Low	1.2
155	N22	10000.0	1.1	1.2	0.91				3	0.01	1.1	0.15	1.04	0.97	1.16	1.21	1.13	0.09	1.3	1.4	Low	1.3

Row #	IDs/Names of the Smaller DUs	DU Area (Sq feet)	Replicate field sample concentrations						Number of Replicates	Weight	Arithmetic Mean	SD of Replicates	calc'd SD of Increments	calc'd CV for the DU	Adj Factor	adj'd SD of Increments	adj'd CV for DU	SE of DU	95% UCL			
			Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6											Student's-t	Chebychev	CV of Increments	95% UCL
156	O22	10000.0	1.4	0.98	0.98				3	0.01	1.1	0.24	1.71	1.53	1.23	2.11	1.89	0.14	1.5	1.7	Med	1.7
157	P22	10000.0	1.5	1	1.3				3	0.01	1.3	0.25	1.78	1.40	1.21	2.16	1.70	0.15	1.7	1.9	Med	1.9
158	Q22	10000.0	0.94	1	0.8				3	0.01	0.9	0.10	0.73	0.79	1.15	0.83	0.91	0.06	1.1	1.2	Low	1.1
159	R22	7999.4	1.3	1.2	1.4				3	0.00	1.3	0.10	0.71	0.54	1.13	0.80	0.62	0.06	1.5	1.6	Low	1.5
160	S22	10000.0	0.96	0.84	0.77				3	0.01	0.9	0.10	0.68	0.79	1.15	0.78	0.91	0.06	1.0	1.1	Low	1.0
161	T22	9920.3	0.63	0.86	1				3	0.01	0.8	0.19	1.32	1.59	1.24	1.64	1.98	0.11	1.1	1.3	Med	1.3
162	U22	6762.1	0.78	0.82	0.84				3	0.00	0.8	0.03	0.22	0.27	1.13	0.24	0.30	0.02	0.9	0.9	Low	0.9
163	V22	10000.0	1.1	0.96	1.1				3	0.01	1.1	0.08	0.57	0.54	1.13	0.65	0.61	0.05	1.2	1.3	Low	1.2
164	W22	10000.0	0.92	1.1	1.1				3	0.01	1.0	0.10	0.73	0.71	1.14	0.84	0.81	0.06	1.2	1.3	Low	1.2
165	W23	10000.0	1.7	1.3	1.5				3	0.01	1.5	0.20	1.41	0.94	1.16	1.64	1.09	0.12	1.8	2.0	Low	1.8
166	W24	10000.0	1	0.95	1.1	1.2	1		5	0.01	1.1	0.10	0.71	0.67	1.08	0.76	0.72	0.04	1.1	1.2	Low	1.1
167	X24	10000.0	1.7	1.6	1.9				3	0.01	1.7	0.15	1.08	0.62	1.14	1.23	0.71	0.09	2.0	2.1	Low	2.0
168	Y24	10000.0	1.8	2.1	2.3				3	0.01	2.1	0.25	1.78	0.86	1.15	2.05	0.99	0.15	2.5	2.7	Low	2.5
169	Z24	10000.0	1.7	1.5	1.6				3	0.01	1.6	0.10	0.71	0.44	1.13	0.80	0.50	0.06	1.8	1.9	Low	1.8
	Sum:	1734193	--	--	--	--	--	--	509	1.00	1.19	0.00094	0.01	0.01	NA	0.01	0.01	0.00	1.2	1.2	Low	1.19

df by Welch-Satterthwaite approximation:	**4.1**

Recommended UCL: **1.19** **mg/kg** >> Student's t 95% UCL

Note: Student's-t or Chebychev 95% UCL may be appropriate.

*Student's t UCL is acceptable if adj'd CV for DU is "Low" (e.g., CV ≤ 1.5). The User should consult the instructions for additional guidance on which 95% UCL is recommended for specific data sets.

Notes

adj'd	= adjusted	df	= degrees of freedom	SD	= arithmetic standard deviation
calc'd	= calculated	DU	= decision unit	SE	= standard error
CV	= coefficient of variation	RSD	= relative standard deviation	95% UCL	= 95% upper confidence limit for arithmetic mean

Calculation of Weighted 95% UCLs for a Combined Decision Unit (DU) from Several Smaller DUs Having Replicate Incremental Samples

Enter information in green highlighted cells. See the "Instructions" tab for detailed instructions.

Project ID:	Fort Wingate Inner Fence
Property/Sample ID:	Inner Fence Area Grids
Date of calculations:	7/6/2024
Calculator completed by:	CMC
Analyte:	Thallium
Analyte units:	mg/kg
DU metric units:	Sq feet
Notes:	

Click in green cell below to select from drop-down menu

DU size metric: area, volume, or depth interval: Area

Note: Assumes all replicates have the same number of increments

Number of increments per replicate: 50

Row #	IDs/Names of the Smaller DUs	DU Area (Sq feet)	Replicate field sample concentrations						Number of Replicates	Weight	Arithmetic Mean	SD of Replicates	calc'd SD of Increments	calc'd CV for the DU	Adj Factor	adj'd SD of Increments	adj'd CV for DU	SE of DU	95% UCL			
			Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6											Student's-t	Chebychev	CV of Increments	95% UCL
1	AA32	10000.0	0.038	0.051	0.041				3	0.01	0.0	0.01	0.05	1.11	1.17	0.06	1.30	0.00	0.1	0.1	Low	0.1
2	AB27	10000.0	0.047	0.054	0.051				3	0.01	0.1	0.00	0.02	0.49	1.13	0.03	0.55	0.00	0.1	0.1	Low	0.1
3	AB38	13378.0	0.11	0.096	0.095				3	0.01	0.1	0.01	0.06	0.59	1.13	0.07	0.67	0.00	0.1	0.1	Low	0.1
4	AC34	10000.0	0.062	0.19	0.054				3	0.01	0.1	0.08	0.54	5.29	2.76	1.49	14.62	0.04	0.2	0.3	High	0.3
5	AD28	10000.0	0.047	0.025	0.049				3	0.01	0.0	0.01	0.09	2.33	1.41	0.13	3.28	0.01	0.1	0.1	High	0.1
6	AD34	10000.0	0.054	0.049	0.044				3	0.01	0.0	0.01	0.04	0.72	1.14	0.04	0.82	0.00	0.1	0.1	Low	0.1
7	AE27	9999.9	0.041	0.045	0.05				3	0.01	0.0	0.00	0.03	0.70	1.14	0.04	0.80	0.00	0.1	0.1	Low	0.1
8	AE38	13378.0	0.073	0.08	0.07				3	0.01	0.1	0.01	0.04	0.49	1.13	0.04	0.55	0.00	0.1	0.1	Low	0.1
9	AF29	10000.0	0.075	0.047	0.043				3	0.01	0.1	0.02	0.12	2.24	1.38	0.17	3.10	0.01	0.1	0.1	High	0.1
10	AF30	10000.0	0.15	0.083	0.067				3	0.01	0.1	0.04	0.31	3.11	1.65	0.52	5.15	0.03	0.2	0.2	High	0.2
11	AF32	10000.0	0.039	0.062	0.04				3	0.01	0.0	0.01	0.09	1.96	1.31	0.12	2.57	0.01	0.1	0.1	Med	0.1
12	AF34	10000.0	0.048	0.052	0.042				3	0.01	0.0	0.01	0.04	0.75	1.14	0.04	0.86	0.00	0.1	0.1	Low	0.1
13	AH28	10000.0	0.041	0.043	0.028				3	0.01	0.0	0.01	0.06	1.54	1.23	0.07	1.90	0.00	0.1	0.1	Med	0.1
14	AH39	10617.1	0.092	0.076	0.082				3	0.01	0.1	0.01	0.06	0.69	1.14	0.07	0.78	0.00	0.1	0.1	Low	0.1
15	AI26	10000.0	0.071	0.071	0.05				3	0.01	0.1	0.01	0.09	1.34	1.20	0.10	1.61	0.01	0.1	0.1	Med	0.1
16	AI29	10000.0	0.072	0.07	0.063				3	0.01	0.1	0.00	0.03	0.49	1.13	0.04	0.55	0.00	0.1	0.1	Low	0.1
17	AI31	10000.0	0.098	0.073	0.1				3	0.01	0.1	0.02	0.11	1.18	1.18	0.13	1.39	0.01	0.1	0.1	Low	0.1
18	AJ26	10000.0	0.17	0.089	0.066				3	0.01	0.1	0.05	0.39	3.57	1.83	0.71	6.54	0.03	0.2	0.2	High	0.2
19	AJ27	10000.0	0.1	0.08	0.085				3	0.01	0.1	0.01	0.07	0.83	1.15	0.08	0.96	0.01	0.1	0.1	Low	0.1
20	AJ31	10000.0	0.079	0.083	0.091				3	0.01	0.1	0.01	0.04	0.51	1.13	0.05	0.58	0.00	0.1	0.1	Low	0.1
21	AJ33	10000.0	0.17	0.09	0.066				3	0.01	0.1	0.05	0.39	3.54	1.82	0.70	6.47	0.03	0.2	0.2	High	0.2
22	AK28	10000.0	0.068	0.066	0.068				3	0.01	0.1	0.00	0.01	0.12	1.13	0.01	0.14	0.00	0.1	0.1	Low	0.1
23	AK36	10000.0	0.17	0.088	0.074				3	0.01	0.1	0.05	0.37	3.31	1.73	0.63	5.73	0.03	0.2	0.2	High	0.2
24	AL27	10000.0	0.071	0.064	0.063				3	0.01	0.1	0.00	0.03	0.47	1.13	0.03	0.53	0.00	0.1	0.1	Low	0.1
25	AL34	10000.0	0.1	0.095	0.11				3	0.01	0.1	0.01	0.05	0.53	1.13	0.06	0.60	0.00	0.1	0.1	Low	0.1
26	AL39	7384.7	0.19	0.14	0.15				3	0.00	0.2	0.03	0.19	1.17	1.18	0.22	1.38	0.02	0.2	0.2	Low	0.2
27	AM29	10000.0	0.078	0.076	0.083				3	0.01	0.1	0.00	0.03	0.32	1.13	0.03	0.36	0.00	0.1	0.1	Low	0.1
28	AM33	10000.0	0.1	0.11	0.1				3	0.01	0.1	0.01	0.04	0.40	1.13	0.05	0.45	0.00	0.1	0.1	Low	0.1
29	AN27	10000.0	0.11	0.092	0.1				3	0.01	0.1	0.01	0.06	0.63	1.14	0.07	0.72	0.01	0.1	0.1	Low	0.1
30	AN28	10000.0	0.07	0.073	0.062				3	0.01	0.1	0.01	0.04	0.59	1.13	0.05	0.67	0.00	0.1	0.1	Low	0.1
31	AN38	6980.7	0.12	0.11	0.12				3	0.00	0.1	0.01	0.04	0.35	1.13	0.05	0.39	0.00	0.1	0.1	Low	0.1
32	AO26	10000.0	0.054	0.047	0.046				3	0.01	0.0	0.00	0.03	0.63	1.14	0.04	0.71	0.00	0.1	0.1	Low	0.1
33	AP28	8819.3	0.085	0.093	0.19				3	0.01	0.1	0.06	0.41	3.37	1.75	0.72	5.91	0.03	0.2	0.3	High	0.3
34	AQ15	13466.3	0.072	0.062	0.059				3	0.01	0.1	0.01	0.05	0.75	1.14	0.05	0.85	0.00	0.1	0.1	Low	0.1
35	AQ22	11017.2	0.024	0.028	0.053				3	0.01	0.0	0.02	0.11	3.18	1.68	0.19	5.32	0.01	0.1	0.1	High	0.1
36	C27	14788.0	0.05	0.067	0.063				3	0.01	0.1	0.01	0.06	1.05	1.17	0.07	1.22	0.01	0.1	0.1	Low	0.1
37	C35	9243.3	0.071	0.071	0.065				3	0.01	0.1	0.00	0.02	0.35	1.13	0.03	0.40	0.00	0.1	0.1	Low	0.1
38	C37	7935.9	0.077	0.091	0.061				3	0.00	0.1	0.02	0.11	1.39	1.21	0.13	1.68	0.01	0.1	0.1	Med	0.1
39	E27	14436.0	0.055	0.063	0.08				3	0.01	0.1	0.01	0.09	1.37	1.21	0.11	1.65	0.01	0.1	0.1	Med	0.1
40	F32	10000.0	0.065	0.063	0.051				3	0.01	0.1	0.01	0.05	0.90	1.15	0.06	1.03	0.00	0.1	0.1	Low	0.1
41	G30	10000.0	0.051	0.046	0.047				3	0.01	0.0	0.00	0.02	0.39	1.13	0.02	0.44	0.00	0.1	0.1	Low	0.1
42	H35	10000.0	0.08	0.074	0.091				3	0.01	0.1	0.01	0.06	0.75	1.14	0.07	0.85	0.00	0.1	0.1	Low	0.1
43	H39	12972.6	0.072	0.081	0.059				3	0.01	0.1	0.01	0.08	1.11	1.17	0.09	1.30	0.01	0.1	0.1	Low	0.1

Row #	IDs/Names of the Smaller DUs	DU Area (Sq feet)	Replicate field sample concentrations						Number of Replicates	Weight	Arithmetic Mean	SD of Replicates	calc'd SD of Increments	calc'd CV for the DU	Adj Factor	adj'd SD of Increments	adj'd CV for DU	SE of DU	95% UCL			
			Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6											Student's-t	Chebychev	CV of Increments	95% UCL
44	I29	10000.0	0.035	0.047	0.04				3	0.01	0.0	0.01	0.04	1.05	1.17	0.05	1.22	0.00	0.1	0.1	Low	0.1
45	I30	10000.0	0.036	0.039	0.059				3	0.01	0.0	0.01	0.09	1.98	1.32	0.12	2.61	0.01	0.1	0.1	Med	0.1
46	I33	10000.0	0.043	0.05	0.04				3	0.01	0.0	0.01	0.04	0.82	1.15	0.04	0.94	0.00	0.1	0.1	Low	0.1
47	I38	12991.4	0.085	0.098	0.096				3	0.01	0.1	0.01	0.05	0.53	1.13	0.06	0.60	0.00	0.1	0.1	Low	0.1
48	K30	10000.0	0.045	0.049	0.037				3	0.01	0.0	0.01	0.04	0.99	1.16	0.05	1.15	0.00	0.1	0.1	Low	0.1
49	K34	10000.0	0.05	0.06	0.049				3	0.01	0.1	0.01	0.04	0.81	1.15	0.05	0.93	0.00	0.1	0.1	Low	0.1
50	L29	10000.0	0.036	0.037	0.042				3	0.01	0.0	0.00	0.02	0.59	1.13	0.03	0.67	0.00	0.0	0.0	Low	0.0
51	L34	10000.0	0.041	0.046	0.051				3	0.01	0.0	0.01	0.04	0.77	1.14	0.04	0.88	0.00	0.1	0.1	Low	0.1
52	L37	10000.0	0.071	0.066	0.07				3	0.01	0.1	0.00	0.02	0.27	1.13	0.02	0.31	0.00	0.1	0.1	Low	0.1
53	M28	10000.0	0.047	0.059	0.057				3	0.01	0.1	0.01	0.05	0.84	1.15	0.05	0.96	0.00	0.1	0.1	Low	0.1
54	M32	10000.0	0.032	0.037	0.029				3	0.01	0.0	0.00	0.03	0.87	1.15	0.03	1.01	0.00	0.0	0.0	Low	0.0
55	M39	13011.8	0.097	0.12	0.082				3	0.01	0.1	0.02	0.14	1.36	1.21	0.16	1.64	0.01	0.1	0.1	Med	0.1
56	N27	10000.0	0.087	0.089	0.069				3	0.01	0.1	0.01	0.08	0.95	1.16	0.09	1.10	0.01	0.1	0.1	Low	0.1
57	N28	10000.0	0.057	0.061	0.044				3	0.01	0.1	0.01	0.06	1.16	1.18	0.07	1.37	0.01	0.1	0.1	Low	0.1
58	N37	10000.0	0.078	0.065	0.063				3	0.01	0.1	0.01	0.06	0.84	1.15	0.07	0.96	0.00	0.1	0.1	Low	0.1
59	O27	10000.0	0.2	0.05	0.07				3	0.01	0.1	0.08	0.58	5.40	2.83	1.63	15.30	0.05	0.2	0.3	High	0.3
60	O32	10000.0	0.037	0.04	0.036				3	0.01	0.0	0.00	0.01	0.39	1.13	0.02	0.44	0.00	0.0	0.0	Low	0.0
61	O37	10000.0	0.065	0.063	0.061				3	0.01	0.1	0.00	0.01	0.22	1.13	0.02	0.25	0.00	0.1	0.1	Low	0.1
62	P32	10000.0	0.035	0.032	0.14				3	0.01	0.1	0.06	0.43	6.30	3.49	1.52	21.98	0.04	0.2	0.2	High	0.2
63	P33	10000.0	0.044	0.062	0.044				3	0.01	0.1	0.01	0.07	1.47	1.22	0.09	1.80	0.01	0.1	0.1	Med	0.1
64	Q26	10000.0	0.059	0.053	0.059				3	0.01	0.1	0.00	0.02	0.43	1.13	0.03	0.48	0.00	0.1	0.1	Low	0.1
65	Q29	10000.0	0.04	0.026	0.028				3	0.01	0.0	0.01	0.05	1.71	1.26	0.07	2.16	0.00	0.0	0.1	Med	0.1
66	Q38	13187.6	0.086	0.074	0.064				3	0.01	0.1	0.01	0.08	1.04	1.17	0.09	1.22	0.01	0.1	0.1	Low	0.1
67	Q39	13187.6	0.052	0.059	0.069				3	0.01	0.1	0.01	0.06	1.01	1.16	0.07	1.17	0.00	0.1	0.1	Low	0.1
68	R24	10000.0	0.05	0.055	0.065				3	0.01	0.1	0.01	0.05	0.95	1.16	0.06	1.10	0.00	0.1	0.1	Low	0.1
69	R32	10000.0	0.053	0.15	0.047				3	0.01	0.1	0.06	0.41	4.91	2.52	1.03	12.37	0.03	0.2	0.2	High	0.2
70	S26	10000.0	0.073	0.068	0.084				3	0.01	0.1	0.01	0.06	0.77	1.14	0.07	0.88	0.00	0.1	0.1	Low	0.1
71	S29	10000.0	0.034	0.033	0.033				3	0.01	0.0	0.00	0.00	0.12	1.13	0.00	0.14	0.00	0.0	0.0	Low	0.0
72	S36	10000.0	0.087	0.078	0.069				3	0.01	0.1	0.01	0.06	0.82	1.15	0.07	0.94	0.01	0.1	0.1	Low	0.1
73	T23	10000.0	0.077	0.076	0.061				3	0.01	0.1	0.01	0.06	0.89	1.15	0.07	1.02	0.01	0.1	0.1	Low	0.1
74	T28	10000.0	0.072	0.07	0.086				3	0.01	0.1	0.01	0.06	0.81	1.15	0.07	0.93	0.01	0.1	0.1	Low	0.1
75	T32	10000.0	0.044	0.045	0.044				3	0.01	0.0	0.00	0.00	0.09	1.13	0.00	0.10	0.00	0.0	0.0	Low	0.0
76	T39	13380.2	0.051	0.064	0.05				3	0.01	0.1	0.01	0.06	1.00	1.16	0.06	1.17	0.00	0.1	0.1	Low	0.1
77	U28	10000.0	0.1	0.1	0.098				3	0.01	0.1	0.00	0.01	0.08	1.13	0.01	0.09	0.00	0.1	0.1	Low	0.1
78	U32	10000.0	0.052	0.044	0.038				3	0.01	0.0	0.01	0.05	1.11	1.17	0.06	1.31	0.00	0.1	0.1	Low	0.1
79	U33	10000.0	0.044	0.074	0.041				3	0.01	0.1	0.02	0.13	2.43	1.43	0.18	3.49	0.01	0.1	0.1	High	0.1
80	U35	10000.0	0.1	0.084	0.076				3	0.01	0.1	0.01	0.09	1.00	1.16	0.10	1.16	0.01	0.1	0.1	Low	0.1
81	U37	10000.0	0.09	0.08	0.089				3	0.01	0.1	0.01	0.04	0.45	1.13	0.04	0.51	0.00	0.1	0.1	Low	0.1
82	V30	10000.0	0.061	0.063	0.064				3	0.01	0.1	0.00	0.01	0.17	1.13	0.01	0.19	0.00	0.1	0.1	Low	0.1
83	V33	10000.0	0.06	0.064	0.051				3	0.01	0.1	0.01	0.05	0.81	1.15	0.05	0.93	0.00	0.1	0.1	Low	0.1
84	V36	10000.0	0.073	0.087	0.081				3	0.01	0.1	0.01	0.05	0.62	1.14	0.06	0.70	0.00	0.1	0.1	Low	0.1
85	W26	10000.0	0.088	0.067	0.08				3	0.01	0.1	0.01	0.07	0.96	1.16	0.09	1.11	0.01	0.1	0.1	Low	0.1
86	W28	10000.0	0.077	0.077	0.11				3	0.01	0.1	0.02	0.13	1.53	1.23	0.17	1.89	0.01	0.1	0.1	Med	0.1
87	W31	10000.0	0.18	0.071	0.057				3	0.01	0.1	0.07	0.48	4.64	2.37	1.13	10.97	0.04	0.2	0.3	High	0.3
88	W34	10000.0	0.068	0.075	0.061				3	0.01	0.1	0.01	0.05	0.73	1.14	0.06	0.83	0.00	0.1	0.1	Low	0.1
89	W39	13397.6	0.069	0.06	0.056				3	0.01	0.1	0.01	0.05	0.76	1.14	0.05	0.87	0.00	0.1	0.1	Low	0.1
90	X25	10000.0	0.045	0.045	0.046				3	0.01	0.0	0.00	0.00	0.09	1.13	0.00	0.10	0.00	0.0	0.0	Low	0.0
91	X33	10000.0	0.087	0.07	0.066				3	0.01	0.1	0.01	0.08	1.06	1.17	0.09	1.24	0.01	0.1	0.1	Low	0.1
92	X36	10000.0	0.084	0.096	0.066				3	0.01	0.1	0.02	0.11	1.30	1.20	0.13	1.56	0.01	0.1	0.1	Med	0.1
93	Z29	10000.0	0.048	0.054	0.051				3	0.01	0.1	0.00	0.02	0.42	1.13	0.02	0.47	0.00	0.1	0.1	Low	0.1
94	AA24	10000.0	0.046	0.042	0.044				3	0.01	0.0	0.00	0.01	0.32	1.13	0.02	0.36	0.00	0.0	0.0	Low	0.0
95	AB24	10000.0	0.07	0.058	0.05				3	0.01	0.1	0.01	0.07	1.20	1.18	0.08	1.42	0.01	0.1	0.1	Low	0.1
96	AB25	10000.0	0.17	0.075	0.056				3	0.01	0.1	0.06	0.43	4.30	2.18	0.94	9.40	0.04	0.2	0.3	High	0.3
97	AC25	10000.0	0.072	0.066	0.067				3	0.01	0.1	0.00	0.02	0.33	1.13	0.03	0.37	0.00	0.1	0.1	Low	0.1
98	AD25	10000.0	0.052	0.064	0.037				3	0.01	0.1	0.01	0.10	1.88	1.30	0.12	2.43	0.01	0.1	0.1	Med	0.1
99	AE25	10000.0	0.04	0.041	0.047				3	0.01	0.0	0.00	0.03	0.63	1.14	0.03	0.71	0.00	0.0	0.1	Low	0.0
100	AF25	10000.0	0.045	0.038	0.042				3	0.01	0.0	0.00	0.02	0.60	1.13	0.03	0.68	0.00	0.0	0.1	Low	0.0

Row #	IDs/Names of the Smaller DUs	DU Area (Sq feet)	Replicate field sample concentrations						Number of Replicates	Weight	Arithmetic Mean	SD of Replicates	calc'd SD of Increments	calc'd CV for the DU	Adj Factor	adj'd SD of Increments	adj'd CV for DU	SE of DU	95% UCL			
			Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6											Student's-t	Chebychev	CV of Increments	95% UCL
101	AG25	10000.0	0.055	0.051	0.057				3	0.01	0.1	0.00	0.02	0.40	1.13	0.02	0.45	0.00	0.1	0.1	Low	0.1
102	AH24	10000.0	0.044	0.042	0.043				3	0.01	0.0	0.00	0.01	0.16	1.13	0.01	0.19	0.00	0.0	0.0	Low	0.0
103	AI23	10000.0	0.052	0.042	0.036				3	0.01	0.0	0.01	0.06	1.32	1.20	0.07	1.58	0.00	0.1	0.1	Med	0.1
104	AI24	10000.0	0.045	0.039	0.037				3	0.01	0.0	0.00	0.03	0.73	1.14	0.03	0.83	0.00	0.0	0.1	Low	0.0
105	AJ23	10000.0	0.13	0.052	0.038				3	0.01	0.1	0.05	0.35	4.78	2.45	0.86	11.70	0.03	0.2	0.2	High	0.2
106	AK23	10000.0	0.044	0.042	0.051				3	0.01	0.0	0.00	0.03	0.73	1.14	0.04	0.84	0.00	0.1	0.1	Low	0.1
107	AL23	10000.0	0.043	0.035	0.051				3	0.01	0.0	0.01	0.06	1.32	1.20	0.07	1.58	0.00	0.1	0.1	Med	0.1
108	AL24	10000.0	0.052	0.041	0.046				3	0.01	0.0	0.01	0.04	0.84	1.15	0.04	0.97	0.00	0.1	0.1	Low	0.1
109	AL25	10000.0	0.05	0.051	0.053				3	0.01	0.1	0.00	0.01	0.21	1.13	0.01	0.24	0.00	0.1	0.1	Low	0.1
110	AM25	10000.0	0.052	0.051	0.052				3	0.01	0.1	0.00	0.00	0.08	1.13	0.00	0.09	0.00	0.1	0.1	Low	0.1
111	AN25	10000.0	0.051	0.049	0.037				3	0.01	0.0	0.01	0.05	1.17	1.18	0.06	1.38	0.00	0.1	0.1	Low	0.1
112	AO25	10000.0	0.046	0.033	0.034				3	0.01	0.0	0.01	0.05	1.36	1.21	0.06	1.64	0.00	0.0	0.1	Med	0.1
113	AP8	12741.9	0.19	0.06	0.05				3	0.01	0.1	0.08	0.55	5.52	2.92	1.61	16.11	0.05	0.2	0.3	High	0.3
114	AP9	12741.9	0.083	0.057	0.063				3	0.01	0.1	0.01	0.10	1.42	1.21	0.12	1.73	0.01	0.1	0.1	Med	0.1
115	AP10	12742.0	0.064	0.069	0.075				3	0.01	0.1	0.01	0.04	0.56	1.13	0.04	0.64	0.00	0.1	0.1	Low	0.1
116	AP11	12741.9	0.071	0.12	0.12				3	0.01	0.1	0.03	0.20	1.93	1.31	0.26	2.52	0.02	0.2	0.2	Med	0.2
117	AP12	12742.0	0.096	0.1	0.1				3	0.01	0.1	0.00	0.02	0.17	1.13	0.02	0.19	0.00	0.1	0.1	Low	0.1
118	AP14	12741.6	0.067	0.089	0.064				3	0.01	0.1	0.01	0.10	1.32	1.20	0.12	1.58	0.01	0.1	0.1	Med	0.1
119	AP15	12742.2	0.08	0.077	0.079				3	0.01	0.1	0.00	0.01	0.14	1.13	0.01	0.15	0.00	0.1	0.1	Low	0.1
120	AP16	12741.9	0.057	0.063	0.057				3	0.01	0.1	0.00	0.02	0.42	1.13	0.03	0.47	0.00	0.1	0.1	Low	0.1
121	AP17	12741.9	0.041	0.047	0.052				3	0.01	0.0	0.01	0.04	0.83	1.15	0.04	0.96	0.00	0.1	0.1	Low	0.1
122	AP18	12741.9	0.036	0.15	0.038				3	0.01	0.1	0.07	0.46	6.18	3.39	1.56	20.95	0.04	0.2	0.2	High	0.2
123	AP19	12741.9	0.033	0.069	0.03				3	0.01	0.0	0.02	0.15	3.49	1.80	0.28	6.28	0.01	0.1	0.1	High	0.1
124	AP20	12741.9	0.049	0.06	0.039				3	0.01	0.0	0.01	0.07	1.51	1.23	0.09	1.85	0.01	0.1	0.1	Med	0.1
125	AP21	12741.9	0.027	0.032	0.034				3	0.01	0.0	0.00	0.03	0.82	1.15	0.03	0.94	0.00	0.0	0.0	Low	0.0
126	AP22	12742.0	0.04	0.037	0.031				3	0.01	0.0	0.00	0.03	0.90	1.15	0.04	1.04	0.00	0.0	0.0	Low	0.0
127	AP25	12741.8	0.036	0.032	0.031				3	0.01	0.0	0.00	0.02	0.57	1.13	0.02	0.64	0.00	0.0	0.0	Low	0.0
128	AQ23	10435.9	0.041	0.046	0.039				3	0.01	0.0	0.00	0.03	0.61	1.13	0.03	0.69	0.00	0.0	0.1	Low	0.0
129	AQ24	9852.5	0.028	0.033	0.034				3	0.01	0.0	0.00	0.02	0.72	1.14	0.03	0.82	0.00	0.0	0.0	Low	0.0
130	B8	8381.5	0.06	0.057	0.049				3	0.00	0.1	0.01	0.04	0.73	1.14	0.05	0.83	0.00	0.1	0.1	Low	0.1
131	B20	7901.2	0.057	0.16	0.052				3	0.00	0.1	0.06	0.43	4.81	2.46	1.06	11.85	0.04	0.2	0.2	High	0.2
132	B21	7425.3	0.052	0.061	0.065				3	0.00	0.1	0.01	0.05	0.79	1.15	0.05	0.91	0.00	0.1	0.1	Low	0.1
133	B22	6933.6	0.091	0.074	0.065				3	0.00	0.1	0.01	0.09	1.22	1.19	0.11	1.44	0.01	0.1	0.1	Low	0.1
134	C8	9158.1	0.048	0.062	0.052				3	0.01	0.1	0.01	0.05	0.94	1.16	0.06	1.09	0.00	0.1	0.1	Low	0.1
135	C22	6929.0	0.052	0.055	0.058				3	0.00	0.1	0.00	0.02	0.39	1.13	0.02	0.43	0.00	0.1	0.1	Low	0.1
136	D8	9410.4	0.047	0.058	0.038				3	0.01	0.0	0.01	0.07	1.49	1.22	0.09	1.82	0.01	0.1	0.1	Med	0.1
137	D22	10000.0	0.053	0.058	0.06				3	0.01	0.1	0.00	0.03	0.45	1.13	0.03	0.50	0.00	0.1	0.1	Low	0.1
138	E22	10000.0	0.058	0.053	0.055				3	0.01	0.1	0.00	0.02	0.32	1.13	0.02	0.36	0.00	0.1	0.1	Low	0.1
139	E23	10000.0	0.048	0.068	0.058				3	0.01	0.1	0.01	0.07	1.22	1.19	0.08	1.45	0.01	0.1	0.1	Low	0.1
140	E24	10000.0	0.05	0.067	0.052				3	0.01	0.1	0.01	0.07	1.17	1.18	0.08	1.38	0.01	0.1	0.1	Low	0.1
141	E25	10000.0	0.049	0.058	0.053				3	0.01	0.1	0.00	0.03	0.60	1.13	0.04	0.68	0.00	0.1	0.1	Low	0.1
142	E26	13604.3	0.048	0.072	0.059				3	0.01	0.1	0.01	0.08	1.42	1.21	0.10	1.73	0.01	0.1	0.1	Med	0.1
143	F26	5258.3	0.03	0.038	0.028				3	0.00	0.0	0.01	0.04	1.17	1.18	0.04	1.38	0.00	0.0	0.0	Low	0.0
144	G25	8218.3	0.054	0.058	0.055				3	0.00	0.1	0.00	0.01	0.26	1.13	0.02	0.30	0.00	0.1	0.1	Low	0.1
145	G26	9346.7	0.05	0.072	0.058				3	0.01	0.1	0.01	0.08	1.31	1.20	0.09	1.57	0.01	0.1	0.1	Med	0.1
146	H25	10000.0	0.075	0.068	0.071				3	0.01	0.1	0.00	0.02	0.35	1.13	0.03	0.39	0.00	0.1	0.1	Low	0.1
147	I25	7781.1	0.076	0.066	0.073				3	0.00	0.1	0.01	0.04	0.51	1.13	0.04	0.57	0.00	0.1	0.1	Low	0.1
148	J22	10000.0	0.077	0.071	0.078				3	0.01	0.1	0.00	0.03	0.36	1.13	0.03	0.40	0.00	0.1	0.1	Low	0.1
149	J23	10000.4	0.074	0.073	0.061				3	0.01	0.1	0.01	0.05	0.74	1.14	0.06	0.84	0.00	0.1	0.1	Low	0.1
150	J24	7428.9	0.092	0.068	0.068				3	0.00	0.1	0.01	0.10	1.29	1.20	0.12	1.54	0.01	0.1	0.1	Med	0.1
151	J25	6743.5	0.08	0.074	0.071				3	0.00	0.1	0.00	0.03	0.43	1.13	0.04	0.49	0.00	0.1	0.1	Low	0.1
152	K22	10000.0	0.082	0.066	0.062				3	0.01	0.1	0.01	0.07	1.07	1.17	0.09	1.25	0.01	0.1	0.1	Low	0.1
153	L22	10000.0	0.061	0.059	0.069				3	0.01	0.1	0.01	0.04	0.59	1.13	0.04	0.67	0.00	0.1	0.1	Low	0.1
154	M22	10000.0	0.063	0.061	0.052				3	0.01	0.1	0.01	0.04	0.71	1.14	0.05	0.80	0.00	0.1	0.1	Low	0.1

Row #	IDs/Names of the Smaller DUs	DU Area (Sq feet)	Replicate field sample concentrations						Number of Replicates	Weight	Arithmetic Mean	SD of Replicates	calc'd SD of Increments	calc'd CV for the DU	Adj Factor	adj'd SD of Increments	adj'd CV for DU	SE of DU	95% UCL			
			Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6											Student's-t	Chebychev	CV of Increments	95% UCL
155	N22	10000.0	0.075	0.094	0.08				3	0.01	0.1	0.01	0.07	0.84	1.15	0.08	0.96	0.01	0.1	0.1	Low	0.1
156	O22	10000.0	0.07	0.068	0.07				3	0.01	0.1	0.00	0.01	0.12	1.13	0.01	0.13	0.00	0.1	0.1	Low	0.1
157	P22	10000.0	0.055	0.059	0.062				3	0.01	0.1	0.00	0.02	0.42	1.13	0.03	0.48	0.00	0.1	0.1	Low	0.1
158	Q22	10000.0	0.093	0.078	0.072				3	0.01	0.1	0.01	0.08	0.94	1.16	0.09	1.09	0.01	0.1	0.1	Low	0.1
159	R22	7999.4	0.067	0.081	0.079				3	0.00	0.1	0.01	0.05	0.71	1.14	0.06	0.81	0.00	0.1	0.1	Low	0.1
160	S22	10000.0	0.065	0.062	0.067				3	0.01	0.1	0.00	0.02	0.28	1.13	0.02	0.31	0.00	0.1	0.1	Low	0.1
161	T22	9920.3	0.058	0.069	0.076				3	0.01	0.1	0.01	0.06	0.95	1.16	0.07	1.10	0.01	0.1	0.1	Low	0.1
162	U22	6762.1	0.064	0.058	0.053				3	0.00	0.1	0.01	0.04	0.67	1.14	0.04	0.76	0.00	0.1	0.1	Low	0.1
163	V22	10000.0	0.057	0.057	0.068				3	0.01	0.1	0.01	0.04	0.74	1.14	0.05	0.85	0.00	0.1	0.1	Low	0.1
164	W22	10000.0	0.067	0.069	0.07				3	0.01	0.1	0.00	0.01	0.16	1.13	0.01	0.18	0.00	0.1	0.1	Low	0.1
165	W23	10000.0	0.06	0.052	0.06				3	0.01	0.1	0.00	0.03	0.57	1.13	0.04	0.65	0.00	0.1	0.1	Low	0.1
166	W24	10000.0	0.061	0.053	0.056	0.061	0.054		5	0.01	0.1	0.00	0.03	0.47	1.08	0.03	0.51	0.00	0.1	0.1	Low	0.1
167	X24	10000.0	0.093	0.073	0.08				3	0.01	0.1	0.01	0.07	0.88	1.15	0.08	1.01	0.01	0.1	0.1	Low	0.1
168	Y24	10000.0	0.074	0.064	0.068				3	0.01	0.1	0.01	0.04	0.52	1.13	0.04	0.59	0.00	0.1	0.1	Low	0.1
169	Z24	10000.0	0.16	0.076	0.07				3	0.01	0.1	0.05	0.36	3.49	1.80	0.64	6.28	0.03	0.2	0.2	High	0.2
	Sum:	1734193	--	--	--	--	--	--	509	1.00	0.1	0.00	0.00	0.01	NA	0.00	0.01	0.00	0.1	0.1	Low	0.07

df by Welch-Satterthwaite approximation:	3.8

Recommended UCL: **0.07** **mg/kg** >> Student's t 95% UCL

Note: Student's-t or Chebychev 95% UCL may be appropriate.

*Student's t UCL is acceptable if adj'd CV for DU is "Low" (e.g., CV ≤ 1.5). The User should consult the instructions for additional guidance on which 95% UCL is recommended for specific data sets.

Notes

adj'd	= adjusted	df	= degrees of freedom	SD	= arithmetic standard deviation
calc'd	= calculated	DU	= decision unit	SE	= standard error
CV	= coefficient of variation	RSD	= relative standard deviation	95% UCL	= 95% upper confidence limit for arithmetic mean

Calculation of Weighted 95% UCLs for a Combined Decision Unit (DU) from Several Smaller DUs Having Replicate Incremental Samples

Enter information in green highlighted cells. See the "Instructions" tab for detailed instructions.

Project ID:	Fort Wingate Inner Fence
Property/Sample ID:	Inner Fence Area Grids
Date of calculations:	7/6/2024
Calculator completed by:	CMC
Analyte:	Vanadium
Analyte units:	mg/kg
DU metric units:	Sq feet
Notes:	

Click in green cell below to select from drop-down menu

DU size metric: area, volume, or depth interval: Area

Note: Assumes all replicates have the same number of increments

Number of increments per replicate: 50

Row #	IDs/Names of the Smaller DUs	DU Area (Sq feet)	Replicate field sample concentrations						Number of Replicates	Weight	Arithmetic Mean	SD of Replicates	calc'd SD of Increments	calc'd CV for the DU	Adj Factor	adj'd SD of Increments	adj'd CV for DU	SE of DU	95% UCL			
			Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6											Student's-t	Chebychev	CV of Increments	95% UCL
1	AA32	10000.0	19	22	21				3	0.01	20.7	1.53	10.80	0.52	1.13	12.22	0.59	0.88	23.2	24.5	Low	23.2
2	AB27	10000.0	19	21	21				3	0.01	20.3	1.15	8.16	0.40	1.13	9.21	0.45	0.67	22.3	23.2	Low	22.3
3	AB38	13378.0	12	11	11				3	0.01	11.3	0.58	4.08	0.36	1.13	4.60	0.41	0.33	12.3	12.8	Low	12.3
4	AC34	10000.0	22	17	18				3	0.01	19.0	2.65	18.71	0.98	1.16	21.72	1.14	1.53	23.5	25.7	Low	23.5
5	AD28	10000.0	18	16	18				3	0.01	17.3	1.15	8.16	0.47	1.13	9.22	0.53	0.67	19.3	20.2	Low	19.3
6	AD34	10000.0	14	15	12				3	0.01	13.7	1.53	10.80	0.79	1.15	12.37	0.90	0.88	16.2	17.5	Low	16.2
7	AE27	9999.9	19	22	18				3	0.01	19.7	2.08	14.72	0.75	1.14	16.81	0.85	1.20	23.2	24.9	Low	23.2
8	AE38	13378.0	14	15	12				3	0.01	13.7	1.53	10.80	0.79	1.15	12.37	0.90	0.88	16.2	17.5	Low	16.2
9	AF29	10000.0	18	16	19				3	0.01	17.7	1.53	10.80	0.61	1.13	12.26	0.69	0.88	20.2	21.5	Low	20.2
10	AF30	10000.0	17	19	17				3	0.01	17.7	1.15	8.16	0.46	1.13	9.22	0.52	0.67	19.6	20.6	Low	19.6
11	AF32	10000.0	18	16	15				3	0.01	16.3	1.53	10.80	0.66	1.14	12.28	0.75	0.88	18.9	20.2	Low	18.9
12	AF34	10000.0	19	19	19				3	0.01	19.0	0.00	0.00	0.00	1.13	0.00	0.00	0.00	19.0	19.0	Low	19.0
13	AH28	10000.0	15	16	14				3	0.01	15.0	1.00	7.07	0.47	1.13	7.99	0.53	0.58	16.7	17.5	Low	16.7
14	AH39	10617.1	11	11	10				3	0.01	10.7	0.58	4.08	0.38	1.13	4.60	0.43	0.33	11.6	12.1	Low	11.6
15	AI26	10000.0	20	18	19				3	0.01	19.0	1.00	7.07	0.37	1.13	7.97	0.42	0.58	20.7	21.5	Low	20.7
16	AI29	10000.0	23	21	18				3	0.01	20.7	2.52	17.80	0.86	1.15	20.47	0.99	1.45	24.9	27.0	Low	24.9
17	AI31	10000.0	20	21	23				3	0.01	21.3	1.53	10.80	0.51	1.13	12.21	0.57	0.88	23.9	25.2	Low	23.9
18	AJ26	10000.0	11	8.5	7.2				3	0.01	8.9	1.93	13.66	1.53	1.23	16.83	1.89	1.12	12.2	13.8	Med	13.8
19	AJ27	10000.0	23	29	25				3	0.01	25.7	3.06	21.60	0.84	1.15	24.82	0.97	1.76	30.8	33.4	Low	30.8
20	AJ31	10000.0	23	28	27				3	0.01	26.0	2.65	18.71	0.72	1.14	21.34	0.82	1.53	30.5	32.7	Low	30.5
21	AJ33	10000.0	20	21	21				3	0.01	20.7	0.58	4.08	0.20	1.13	4.60	0.22	0.33	21.6	22.1	Low	21.6
22	AK28	10000.0	24	26	25				3	0.01	25.0	1.00	7.07	0.28	1.13	7.97	0.32	0.58	26.7	27.5	Low	26.7
23	AK36	10000.0	21	23	22				3	0.01	22.0	1.00	7.07	0.32	1.13	7.97	0.36	0.58	23.7	24.5	Low	23.7
24	AL27	10000.0	32	24	31				3	0.01	29.0	4.36	30.82	1.06	1.17	36.02	1.24	2.52	36.3	40.0	Low	36.3
25	AL34	10000.0	24	23	26				3	0.01	24.3	1.53	10.80	0.44	1.13	12.19	0.50	0.88	26.9	28.2	Low	26.9
26	AL39	7384.7	18	18	16				3	0.00	17.3	1.15	8.16	0.47	1.13	9.22	0.53	0.67	19.3	20.2	Low	19.3
27	AM29	10000.0	18	16	18				3	0.01	17.3	1.15	8.16	0.47	1.13	9.22	0.53	0.67	19.3	20.2	Low	19.3
28	AM33	10000.0	27	27	27				3	0.01	27.0	0.00	0.00	0.00	1.13	0.00	0.00	0.00	27.0	27.0	Low	27.0
29	AN27	10000.0	20	22	22				3	0.01	21.3	1.15	8.16	0.38	1.13	9.21	0.43	0.67	23.3	24.2	Low	23.3
30	AN28	10000.0	12	13	9.9				3	0.01	11.6	1.58	11.19	0.96	1.16	12.96	1.11	0.91	14.3	15.6	Low	14.3
31	AN38	6980.7	27	26	29				3	0.00	27.3	1.53	10.80	0.40	1.13	12.18	0.45	0.88	29.9	31.2	Low	29.9
32	AO26	10000.0	19	18	17				3	0.01	18.0	1.00	7.07	0.39	1.13	7.97	0.44	0.58	19.7	20.5	Low	19.7
33	AP28	8819.3	22	22	21				3	0.01	21.7	0.58	4.08	0.19	1.13	4.60	0.21	0.33	22.6	23.1	Low	22.6
34	AQ15	13466.3	17	17	14				3	0.01	16.0	1.73	12.25	0.77	1.14	14.00	0.88	1.00	18.9	20.4	Low	18.9
35	AQ22	11017.2	16	16	16				3	0.01	16.0	0.00	0.00	0.00	1.13	0.00	0.00	0.00	16.0	16.0	Low	16.0
36	C27	14788.0	4.3	5.3	4.9				3	0.01	4.8	0.50	3.56	0.74	1.14	4.06	0.84	0.29	5.7	6.1	Low	5.7
37	C35	9243.3	12	9.3	11				3	0.01	10.8	1.37	9.65	0.90	1.15	11.13	1.03	0.79	13.1	14.2	Low	13.1
38	C37	7935.9	6.8	7	6.9				3	0.00	6.9	0.10	0.71	0.10	1.13	0.80	0.12	0.06	7.1	7.2	Low	7.1
39	E27	14436.0	8.7	10	12				3	0.01	10.2	1.66	11.75	1.15	1.18	13.85	1.35	0.96	13.0	14.4	Low	13.0
40	F32	10000.0	14	14	14				3	0.01	14.0	0.00	0.00	0.00	1.13	0.00	0.00	0.00	14.0	14.0	Low	14.0
41	G30	10000.0	17	14	16				3	0.01	15.7	1.53	10.80	0.69	1.14	12.30	0.79	0.88	18.2	19.5	Low	18.2
42	H35	10000.0	25	27	25				3	0.01	25.7	1.15	8.16	0.32	1.13	9.20	0.36	0.67	27.6	28.6	Low	27.6

Row #	IDs/Names of the Smaller DUs	DU Area (Sq feet)	Replicate field sample concentrations						Number of Replicates	Weight	Arithmetic Mean	SD of Replicates	calc'd SD of Increments	calc'd CV for the DU	Adj Factor	adj'd SD of Increments	adj'd CV for DU	SE of DU	95% UCL			
			Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6											Student's-t	Chebychev	CV of Increments	95% UCL
43	H39	12972.6	13	13	11				3	0.01	12.3	1.15	8.16	0.66	1.14	9.29	0.75	0.67	14.3	15.2	Low	14.3
44	I29	10000.0	10	12	11				3	0.01	11.0	1.00	7.07	0.64	1.14	8.03	0.73	0.58	12.7	13.5	Low	12.7
45	I30	10000.0	9.2	10	12				3	0.01	10.4	1.44	10.20	0.98	1.16	11.84	1.14	0.83	12.8	14.0	Low	12.8
46	I33	10000.0	19	20	14				3	0.01	17.7	3.21	22.73	1.29	1.20	27.17	1.54	1.86	23.1	25.8	Med	25.8
47	I38	12991.4	13	13	15				3	0.01	13.7	1.15	8.16	0.60	1.13	9.26	0.68	0.67	15.6	16.6	Low	15.6
48	K30	10000.0	16	22	17				3	0.01	18.3	3.21	22.73	1.24	1.19	27.03	1.47	1.86	23.8	26.4	Low	23.8
49	K34	10000.0	22	20	23				3	0.01	21.7	1.53	10.80	0.50	1.13	12.21	0.56	0.88	24.2	25.5	Low	24.2
50	L29	10000.0	15	19	16				3	0.01	16.7	2.08	14.72	0.88	1.15	16.96	1.02	1.20	20.2	21.9	Low	20.2
51	L34	10000.0	17	15	19				3	0.01	17.0	2.00	14.14	0.83	1.15	16.24	0.96	1.15	20.4	22.0	Low	20.4
52	L37	10000.0	30	38	42				3	0.01	36.7	6.11	43.20	1.18	1.18	51.05	1.39	3.53	47.0	52.0	Low	47.0
53	M28	10000.0	13	12	16				3	0.01	13.7	2.08	14.72	1.08	1.17	17.22	1.26	1.20	17.2	18.9	Low	17.2
54	M32	10000.0	13	14	13				3	0.01	13.3	0.58	4.08	0.31	1.13	4.60	0.34	0.33	14.3	14.8	Low	14.3
55	M39	13011.8	27	17	21				3	0.01	21.7	5.03	35.59	1.64	1.25	44.52	2.05	2.91	30.2	34.3	Med	34.3
56	N27	10000.0	13	12	11				3	0.01	12.0	1.00	7.07	0.59	1.13	8.02	0.67	0.58	13.7	14.5	Low	13.7
57	N28	10000.0	22	20	17				3	0.01	19.7	2.52	17.80	0.90	1.15	20.53	1.04	1.45	23.9	26.0	Low	23.9
58	N37	10000.0	23	23	25				3	0.01	23.7	1.15	8.16	0.34	1.13	9.20	0.39	0.67	25.6	26.6	Low	25.6
59	O27	10000.0	15	9.5	12				3	0.01	12.2	2.75	19.47	1.60	1.24	24.21	1.99	1.59	16.8	19.1	Med	19.1
60	O32	10000.0	9.9	11	10				3	0.01	10.3	0.61	4.30	0.42	1.13	4.85	0.47	0.35	11.3	11.8	Low	11.3
61	O37	10000.0	22	25	23				3	0.01	23.3	1.53	10.80	0.46	1.13	12.20	0.52	0.88	25.9	27.2	Low	25.9
62	P32	10000.0	11	9.5	10				3	0.01	10.2	0.76	5.40	0.53	1.13	6.11	0.60	0.44	11.5	12.1	Low	11.5
63	P33	10000.0	11	9.6	13				3	0.01	11.2	1.71	12.08	1.08	1.17	14.14	1.26	0.99	14.1	15.5	Low	14.1
64	Q26	10000.0	13	12	12				3	0.01	12.3	0.58	4.08	0.33	1.13	4.60	0.37	0.33	13.3	13.8	Low	13.3
65	Q29	10000.0	16	14	15				3	0.01	15.0	1.00	7.07	0.47	1.13	7.99	0.53	0.58	16.7	17.5	Low	16.7
66	Q38	13187.6	17	16	14				3	0.01	15.7	1.53	10.80	0.69	1.14	12.30	0.79	0.88	18.2	19.5	Low	18.2
67	Q39	13187.6	21	23	24				3	0.01	22.7	1.53	10.80	0.48	1.13	12.20	0.54	0.88	25.2	26.5	Low	25.2
68	R24	10000.0	8.5	8.5	11				3	0.01	9.3	1.44	10.21	1.09	1.17	11.96	1.28	0.83	11.8	13.0	Low	11.8
69	R32	10000.0	15	13	14				3	0.01	14.0	1.00	7.07	0.51	1.13	7.99	0.57	0.58	15.7	16.5	Low	15.7
70	S26	10000.0	19	20	24				3	0.01	21.0	2.65	18.71	0.89	1.15	21.56	1.03	1.53	25.5	27.7	Low	25.5
71	S29	10000.0	19	19	18				3	0.01	18.7	0.58	4.08	0.22	1.13	4.60	0.25	0.33	19.6	20.1	Low	19.6
72	S36	10000.0	18	17	18				3	0.01	17.7	0.58	4.08	0.23	1.13	4.60	0.26	0.33	18.6	19.1	Low	18.6
73	T23	10000.0	20	19	15				3	0.01	18.0	2.65	18.71	1.04	1.17	21.82	1.21	1.53	22.5	24.7	Low	22.5
74	T28	10000.0	17	17	22				3	0.01	18.7	2.89	20.41	1.09	1.17	23.92	1.28	1.67	23.5	25.9	Low	23.5
75	T32	10000.0	17	19	17				3	0.01	17.7	1.15	8.16	0.46	1.13	9.22	0.52	0.67	19.6	20.6	Low	19.6
76	T39	13380.2	20	20	22				3	0.01	20.7	1.15	8.16	0.40	1.13	9.21	0.45	0.67	22.6	23.6	Low	22.6
77	U28	10000.0	15	14	17				3	0.01	15.3	1.53	10.80	0.70	1.14	12.31	0.80	0.88	17.9	19.2	Low	17.9
78	U32	10000.0	16	20	16				3	0.01	17.3	2.31	16.33	0.94	1.16	18.89	1.09	1.33	21.2	23.1	Low	21.2
79	U33	10000.0	12	13	12				3	0.01	12.3	0.58	4.08	0.33	1.13	4.60	0.37	0.33	13.3	13.8	Low	13.3
80	U35	10000.0	19	17	16				3	0.01	17.3	1.53	10.80	0.62	1.14	12.26	0.71	0.88	19.9	21.2	Low	19.9
81	U37	10000.0	20	20	21				3	0.01	20.3	0.58	4.08	0.20	1.13	4.60	0.23	0.33	21.3	21.8	Low	21.3
82	V30	10000.0	14	15	16				3	0.01	15.0	1.00	7.07	0.47	1.13	7.99	0.53	0.58	16.7	17.5	Low	16.7
83	V33	10000.0	15	14	14				3	0.01	14.3	0.58	4.08	0.28	1.13	4.60	0.32	0.33	15.3	15.8	Low	15.3
84	V36	10000.0	17	18	19				3	0.01	18.0	1.00	7.07	0.39	1.13	7.97	0.44	0.58	19.7	20.5	Low	19.7
85	W26	10000.0	27	22	26				3	0.01	25.0	2.65	18.71	0.75	1.14	21.37	0.85	1.53	29.5	31.7	Low	29.5
86	W28	10000.0	24	20	26				3	0.01	23.3	3.06	21.60	0.93	1.16	24.96	1.07	1.76	28.5	31.0	Low	28.5
87	W31	10000.0	21	18	19				3	0.01	19.3	1.53	10.80	0.56	1.13	12.23	0.63	0.88	21.9	23.2	Low	21.9
88	W34	10000.0	23	24	20				3	0.01	22.3	2.08	14.72	0.66	1.14	16.74	0.75	1.20	25.8	27.6	Low	25.8
89	W39	13397.6	14	13	13				3	0.01	13.3	0.58	4.08	0.31	1.13	4.60	0.34	0.33	14.3	14.8	Low	14.3
90	X25	10000.0	15	15	15				3	0.01	15.0	0.00	0.00	0.00	1.13	0.00	0.00	0.00	15.0	15.0	Low	15.0
91	X33	10000.0	12	14	12				3	0.01	12.7	1.15	8.16	0.64	1.14	9.28	0.73	0.67	14.6	15.6	Low	14.6
92	X36	10000.0	13	13	12				3	0.01	12.7	0.58	4.08	0.32	1.13	4.60	0.36	0.33	13.6	14.1	Low	13.6
93	Z29	10000.0	29	30	29				3	0.01	29.3	0.58	4.08	0.14	1.13	4.60	0.16	0.33	30.3	30.8	Low	30.3
94	AA24	10000.0	17	17	18				3	0.01	17.3	0.58	4.08	0.24	1.13	4.60	0.27	0.33	18.3	18.8	Low	18.3
95	AB24	10000.0	11	13	14				3	0.01	12.7	1.53	10.80	0.85	1.15	12.42	0.98	0.88	15.2	16.5	Low	15.2
96	AB25	10000.0	13	14	13				3	0.01	13.3	0.58	4.08	0.31	1.13	4.60	0.34	0.33	14.3	14.8	Low	14.3
97	AC25	10000.0	17	13	15				3	0.01	15.0	2.00	14.14	0.94	1.16	16.36	1.09	1.15	18.4	20.0	Low	18.4
98	AD25	10000.0	7.7	11	13				3	0.01	10.6	2.68	18.93	1.79	1.28	24.20	2.29	1.55	15.1	17.3	Med	17.3
99	AE25	10000.0	7.2	7.9	7.3				3	0.01	7.5	0.38	2.68	0.36	1.13	3.02	0.40	0.22	8.1	8.4	Low	8.1

Row #	IDs/Names of the Smaller DUs	DU Area (Sq feet)	Replicate field sample concentrations						Number of Replicates	Weight	Arithmetic Mean	SD of Replicates	calc'd SD of Increments	calc'd CV for the DU	Adj Factor	adj'd SD of Increments	adj'd CV for DU	SE of DU	95% UCL			
			Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6											Student's-t	Chebychev	CV of Increments	95% UCL
100	AF25	10000.0	19	15	15				3	0.01	16.3	2.31	16.33	1.00	1.16	18.98	1.16	1.33	20.2	22.1	Low	20.2
101	AG25	10000.0	23	23	25				3	0.01	23.7	1.15	8.16	0.34	1.13	9.20	0.39	0.67	25.6	26.6	Low	25.6
102	AH24	10000.0	16	16	15				3	0.01	15.7	0.58	4.08	0.26	1.13	4.60	0.29	0.33	16.6	17.1	Low	16.6
103	AI23	10000.0	23	24	21				3	0.01	22.7	1.53	10.80	0.48	1.13	12.20	0.54	0.88	25.2	26.5	Low	25.2
104	AI24	10000.0	16	17	15				3	0.01	16.0	1.00	7.07	0.44	1.13	7.98	0.50	0.58	17.7	18.5	Low	17.7
105	AJ23	10000.0	17	18	17				3	0.01	17.3	0.58	4.08	0.24	1.13	4.60	0.27	0.33	18.3	18.8	Low	18.3
106	AK23	10000.0	18	17	24				3	0.01	19.7	3.79	26.77	1.36	1.21	32.27	1.64	2.19	26.0	29.2	Med	29.2
107	AL23	10000.0	20	17	22				3	0.01	19.7	2.52	17.80	0.90	1.15	20.53	1.04	1.45	23.9	26.0	Low	23.9
108	AL24	10000.0	22	19	20				3	0.01	20.3	1.53	10.80	0.53	1.13	12.22	0.60	0.88	22.9	24.2	Low	22.9
109	AL25	10000.0	20	20	21				3	0.01	20.3	0.58	4.08	0.20	1.13	4.60	0.23	0.33	21.3	21.8	Low	21.3
110	AM25	10000.0	20	20	19				3	0.01	19.7	0.58	4.08	0.21	1.13	4.60	0.23	0.33	20.6	21.1	Low	20.6
111	AN25	10000.0	22	22	18				3	0.01	20.7	2.31	16.33	0.79	1.15	18.70	0.90	1.33	24.6	26.5	Low	24.6
112	AO25	10000.0	20	16	18				3	0.01	18.0	2.00	14.14	0.79	1.14	16.19	0.90	1.15	21.4	23.0	Low	21.4
113	AP8	12741.9	9.2	8.3	9.3				3	0.01	8.9	0.55	3.89	0.44	1.13	4.40	0.49	0.32	9.9	10.3	Low	9.9
114	AP9	12741.9	14	11	13				3	0.01	12.7	1.53	10.80	0.85	1.15	12.42	0.98	0.88	15.2	16.5	Low	15.2
115	AP10	12742.0	15	17	18				3	0.01	16.7	1.53	10.80	0.65	1.14	12.28	0.74	0.88	19.2	20.5	Low	19.2
116	AP11	12741.9	17	25	26				3	0.01	22.7	4.93	34.88	1.54	1.23	43.01	1.90	2.85	31.0	35.1	Med	35.1
117	AP12	12742.0	28	27	25				3	0.01	26.7	1.53	10.80	0.41	1.13	12.18	0.46	0.88	29.2	30.5	Low	29.2
118	AP14	12741.6	20	22	14				3	0.01	18.7	4.16	29.44	1.58	1.24	36.49	1.95	2.40	25.7	29.1	Med	29.1
119	AP15	12742.2	22	22	22				3	0.01	22.0	0.00	0.00	0.00	1.13	0.00	0.00	0.00	22.0	22.0	Low	22.0
120	AP16	12741.9	15	16	13				3	0.01	14.7	1.53	10.80	0.74	1.14	12.33	0.84	0.88	17.2	18.5	Low	17.2
121	AP17	12741.9	18	18	19				3	0.01	18.3	0.58	4.08	0.22	1.13	4.60	0.25	0.33	19.3	19.8	Low	19.3
122	AP18	12741.9	13	17	16				3	0.01	15.3	2.08	14.72	0.96	1.16	17.05	1.11	1.20	18.8	20.6	Low	18.8
123	AP19	12741.9	21	18	20				3	0.01	19.7	1.53	10.80	0.55	1.13	12.23	0.62	0.88	22.2	23.5	Low	22.2
124	AP20	12741.9	20	20	20				3	0.01	20.0	0.00	0.00	0.00	1.13	0.00	0.00	0.00	20.0	20.0	Low	20.0
125	AP21	12741.9	15	16	15				3	0.01	15.3	0.58	4.08	0.27	1.13	4.60	0.30	0.33	16.3	16.8	Low	16.3
126	AP22	12742.0	16	17	15				3	0.01	16.0	1.00	7.07	0.44	1.13	7.98	0.50	0.58	17.7	18.5	Low	17.7
127	AP25	12741.8	18	18	17				3	0.01	17.7	0.58	4.08	0.23	1.13	4.60	0.26	0.33	18.6	19.1	Low	18.6
128	AQ23	10435.9	16	14	15				3	0.01	15.0	1.00	7.07	0.47	1.13	7.99	0.53	0.58	16.7	17.5	Low	16.7
129	AQ24	9852.5	14	15	16				3	0.01	15.0	1.00	7.07	0.47	1.13	7.99	0.53	0.58	16.7	17.5	Low	16.7
130	B8	8381.5	13	12	12				3	0.00	12.3	0.58	4.08	0.33	1.13	4.60	0.37	0.33	13.3	13.8	Low	13.3
131	B20	7901.2	12	12	14				3	0.00	12.7	1.15	8.16	0.64	1.14	9.28	0.73	0.67	14.6	15.6	Low	14.6
132	B21	7425.3	16	17	16				3	0.00	16.3	0.58	4.08	0.25	1.13	4.60	0.28	0.33	17.3	17.8	Low	17.3
133	B22	6933.6	12	12	11				3	0.00	11.7	0.58	4.08	0.35	1.13	4.60	0.39	0.33	12.6	13.1	Low	12.6
134	C8	9158.1	11	14	16				3	0.01	13.7	2.52	17.80	1.30	1.20	21.31	1.56	1.45	17.9	20.0	Med	20.0
135	C22	6929.0	9.9	11	12				3	0.00	11.0	1.05	7.43	0.68	1.14	8.45	0.77	0.61	12.7	13.6	Low	12.7
136	D8	9410.4	11	10	10				3	0.01	10.3	0.58	4.08	0.40	1.13	4.60	0.45	0.33	11.3	11.8	Low	11.3
137	D22	10000.0	11	12	11				3	0.01	11.3	0.58	4.08	0.36	1.13	4.60	0.41	0.33	12.3	12.8	Low	12.3
138	E22	10000.0	11	12	13				3	0.01	12.0	1.00	7.07	0.59	1.13	8.02	0.67	0.58	13.7	14.5	Low	13.7
139	E23	10000.0	11	13	15				3	0.01	13.0	2.00	14.14	1.09	1.17	16.57	1.27	1.15	16.4	18.0	Low	16.4
140	E24	10000.0	15	15	16				3	0.01	15.3	0.58	4.08	0.27	1.13	4.60	0.30	0.33	16.3	16.8	Low	16.3
141	E25	10000.0	13	14	15				3	0.01	14.0	1.00	7.07	0.51	1.13	7.99	0.57	0.58	15.7	16.5	Low	15.7
142	E26	13604.3	10	11	14				3	0.01	11.7	2.08	14.72	1.26	1.19	17.55	1.50	1.20	15.2	16.9	Med	16.9
143	F26	5258.3	10	10	12				3	0.00	10.7	1.15	8.16	0.77	1.14	9.34	0.88	0.67	12.6	13.6	Low	12.6
144	G25	8218.3	9	12	10				3	0.00	10.3	1.53	10.80	1.05	1.17	12.60	1.22	0.88	12.9	14.2	Low	12.9
145	G26	9346.7	7.7	8.3	8.4				3	0.01	8.1	0.38	2.68	0.33	1.13	3.02	0.37	0.22	8.8	9.1	Low	8.8
146	H25	10000.0	12	8.7	12				3	0.01	10.9	1.91	13.47	1.24	1.19	16.01	1.47	1.10	14.1	15.7	Low	14.1
147	I25	7781.1	7.2	5.6	7				3	0.00	6.6	0.87	6.16	0.93	1.16	7.13	1.08	0.50	8.1	8.8	Low	8.1
148	J22	10000.0	10	9.4	11				3	0.01	10.1	0.81	5.72	0.56	1.13	6.47	0.64	0.47	11.5	12.2	Low	11.5
149	J23	10000.4	9.9	7.9	9.1				3	0.01	9.0	1.01	7.12	0.79	1.15	8.15	0.91	0.58	10.7	11.5	Low	10.7
150	J24	7428.9	4.2	6.6	8.4				3	0.00	6.4	2.11	14.90	2.33	1.40	20.92	3.27	1.22	10.0	11.7	High	11.7
151	J25	6743.5	12	9.1	9.9				3	0.00	10.3	1.50	10.59	1.02	1.16	12.34	1.19	0.86	12.9	14.1	Low	12.9
152	K22	10000.0	7.5	8.3	22				3	0.01	12.6	8.15	57.63	4.57	2.33	134.31	10.66	4.71	26.3	33.1	High	33.1
153	L22	10000.0	8.6	8.4	11				3	0.01	9.3	1.45	10.23	1.10	1.17	11.99	1.28	0.84	11.8	13.0	Low	11.8
154	M22	10000.0	11	12	7.9				3	0.01	10.3	2.14	15.12	1.47	1.22	18.46	1.79	1.23	13.9	15.7	Med	15.7
155	N22	10000.0	7.8	9.9	8				3	0.01	8.6	1.16	8.20	0.96	1.16	9.49	1.11	0.67	10.5	11.5	Low	10.5

Row #	IDs/Names of the Smaller DUs	DU Area (Sq feet)	Replicate field sample concentrations						Number of Replicates	Weight	Arithmetic Mean	SD of Replicates	calc'd SD of Increments	calc'd CV for the DU	Adj Factor	adj'd SD of Increments	adj'd CV for DU	SE of DU	95% UCL			
			Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6											Student's-t	Chebychev	CV of Increments	95% UCL
156	O22	10000.0	15	15	13				3	0.01	14.3	1.15	8.16	0.57	1.13	9.25	0.65	0.67	16.3	17.2	Low	16.3
157	P22	10000.0	24	22	24				3	0.01	23.3	1.15	8.16	0.35	1.13	9.20	0.39	0.67	25.3	26.2	Low	25.3
158	Q22	10000.0	5.6	5.7	4.8				3	0.01	5.4	0.49	3.49	0.65	1.14	3.96	0.74	0.28	6.2	6.6	Low	6.2
159	R22	7999.4	17	18	18				3	0.00	17.7	0.58	4.08	0.23	1.13	4.60	0.26	0.33	18.6	19.1	Low	18.6
160	S22	10000.0	9.1	9	9.3				3	0.01	9.1	0.15	1.08	0.12	1.13	1.22	0.13	0.09	9.4	9.5	Low	9.4
161	T22	9920.3	11	13	13				3	0.01	12.3	1.15	8.16	0.66	1.14	9.29	0.75	0.67	14.3	15.2	Low	14.3
162	U22	6762.1	10	11	12				3	0.00	11.0	1.00	7.07	0.64	1.14	8.03	0.73	0.58	12.7	13.5	Low	12.7
163	V22	10000.0	6.5	6.6	10				3	0.01	7.7	1.99	14.09	1.83	1.29	18.13	2.35	1.15	11.1	12.7	Med	12.7
164	W22	10000.0	7.8	9.7	7.9				3	0.01	8.5	1.07	7.56	0.89	1.15	8.72	1.03	0.62	10.3	11.2	Low	10.3
165	W23	10000.0	11	11	11				3	0.01	11.0	0.00	0.00	0.00	1.13	0.00	0.00	0.00	11.0	11.0	Low	11.0
166	W24	10000.0	10	10	8.8	8.5	7.2		5	0.01	8.9	1.17	8.28	0.93	1.08	8.93	1.00	0.52	10.0	11.2	Low	10.0
167	X24	10000.0	12	14	12				3	0.01	12.7	1.15	8.16	0.64	1.14	9.28	0.73	0.67	14.6	15.6	Low	14.6
168	Y24	10000.0	11	12	13				3	0.01	12.0	1.00	7.07	0.59	1.13	8.02	0.67	0.58	13.7	14.5	Low	13.7
169	Z24	10000.0	15	17	18				3	0.01	16.7	1.53	10.80	0.65	1.14	12.28	0.74	0.88	19.2	20.5	Low	19.2
	Sum:	1734193	--	--	--	--	--	--	509	1.00	16.1	0.01	0.08	0.01	NA	0.10	0.01	0.01	16.1	16.1	Low	16.104

df by Welch-Satterthwaite approximation:	**4.8**

Recommended UCL: **16.1** **mg/kg** >> Student's t 95% UCL

Note: Student's-t or Chebychev 95% UCL may be appropriate.

*Student's t UCL is acceptable if adj'd CV for DU is "Low" (e.g., CV ≤ 1.5). The User should consult the instructions for additional guidance on which 95% UCL is recommended for specific data sets.

Notes

adj'd	= adjusted	df	= degrees of freedom	SD	= arithmetic standard deviation
calc'd	= calculated	DU	= decision unit	SE	= standard error
CV	= coefficient of variation	RSD	= relative standard deviation	95% UCL	= 95% upper confidence limit for arithmetic mean

Calculation of Weighted 95% UCLs for a Combined Decision Unit (DU) from Several Smaller DUs Having Replicate Incremental Samples

Enter information in green highlighted cells. See the "Instructions" tab for detailed instructions.

Project ID:	Fort Wingate Inner Fence
Property/Sample ID:	Inner Fence Area Grids
Date of calculations:	7/6/2024
Calculator completed by:	CMC
Analyte:	Zinc
Analyte units:	mg/kg
DU metric units:	Sq feet
Notes:	

Click in green cell below to select from drop-down menu

DU size metric: area, volume, or depth interval: Area

Note: Assumes all replicates have the same number of increments

Number of increments per replicate: 50

Row #	IDs/Names of the Smaller DUs	DU Area (Sq feet)	Replicate field sample concentrations						Number of Replicates	Weight	Arithmetic Mean	SD of Replicates	calc'd SD of Increments	calc'd CV for the DU	Adj Factor	adj'd SD of Increments	adj'd CV for DU	SE of DU	95% UCL			
			Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6											Student's-t	Chebychev	CV of Increments	95% UCL
1	AA32	10000.0	30	31	31				3	0.01	30.7	0.58	4.08	0.13	1.13	4.60	0.15	0.33	31.6	32.1	Low	31.6
2	AB27	10000.0	33	30	29				3	0.01	30.7	2.08	14.72	0.48	1.13	16.63	0.54	1.20	34.2	35.9	Low	34.2
3	AB38	13378.0	28	26	27				3	0.01	27.0	1.00	7.07	0.26	1.13	7.97	0.30	0.58	28.7	29.5	Low	28.7
4	AC34	10000.0	25	23	23				3	0.01	23.7	1.15	8.16	0.34	1.13	9.20	0.39	0.67	25.6	26.6	Low	25.6
5	AD28	10000.0	32	30	28				3	0.01	30.0	2.00	14.14	0.47	1.13	15.97	0.53	1.15	33.4	35.0	Low	33.4
6	AD34	10000.0	24	22	22				3	0.01	22.7	1.15	8.16	0.36	1.13	9.20	0.41	0.67	24.6	25.6	Low	24.6
7	AE27	9999.9	29	32	31				3	0.01	30.7	1.53	10.80	0.35	1.13	12.17	0.40	0.88	33.2	34.5	Low	33.2
8	AE38	13378.0	29	30	27				3	0.01	28.7	1.53	10.80	0.38	1.13	12.18	0.42	0.88	31.2	32.5	Low	31.2
9	AF29	10000.0	32	27	32				3	0.01	30.3	2.89	20.41	0.67	1.14	23.23	0.77	1.67	35.2	37.6	Low	35.2
10	AF30	10000.0	38	44	46				3	0.01	42.7	4.16	29.44	0.69	1.14	33.52	0.79	2.40	49.7	53.1	Low	49.7
11	AF32	10000.0	36	26	27				3	0.01	29.7	5.51	38.94	1.31	1.20	46.69	1.57	3.18	39.0	43.5	Med	43.5
12	AF34	10000.0	31	28	31				3	0.01	30.0	1.73	12.25	0.41	1.13	13.82	0.46	1.00	32.9	34.4	Low	32.9
13	AH28	10000.0	27	40	28				3	0.01	31.7	7.23	51.15	1.62	1.25	63.74	2.01	4.18	43.9	49.9	Med	49.9
14	AH39	10617.1	27	26	24				3	0.01	25.7	1.53	10.80	0.42	1.13	12.19	0.47	0.88	28.2	29.5	Low	28.2
15	AI26	10000.0	43	43	40				3	0.01	42.0	1.73	12.25	0.29	1.13	13.80	0.33	1.00	44.9	46.4	Low	44.9
16	AI29	10000.0	31	29	32				3	0.01	30.7	1.53	10.80	0.35	1.13	12.17	0.40	0.88	33.2	34.5	Low	33.2
17	AI31	10000.0	37	32	28				3	0.01	32.3	4.51	31.89	0.99	1.16	37.02	1.14	2.60	39.9	43.7	Low	39.9
18	AJ26	10000.0	31	32	29				3	0.01	30.7	1.53	10.80	0.35	1.13	12.17	0.40	0.88	33.2	34.5	Low	33.2
19	AJ27	10000.0	29	31	29				3	0.01	29.7	1.15	8.16	0.28	1.13	9.20	0.31	0.67	31.6	32.6	Low	31.6
20	AJ31	10000.0	31	34	35				3	0.01	33.3	2.08	14.72	0.44	1.13	16.61	0.50	1.20	36.8	38.6	Low	36.8
21	AJ33	10000.0	32	33	36				3	0.01	33.7	2.08	14.72	0.44	1.13	16.61	0.49	1.20	37.2	38.9	Low	37.2
22	AK28	10000.0	30	30	30				3	0.01	30.0	0.00	0.00	0.00	1.13	0.00	0.00	0.00	30.0	30.0	Low	30.0
23	AK36	10000.0	34	33	33				3	0.01	33.3	0.58	4.08	0.12	1.13	4.60	0.14	0.33	34.3	34.8	Low	34.3
24	AL27	10000.0	33	31	33				3	0.01	32.3	1.15	8.16	0.25	1.13	9.20	0.28	0.67	34.3	35.2	Low	34.3
25	AL34	10000.0	30	30	29				3	0.01	29.7	0.58	4.08	0.14	1.13	4.60	0.16	0.33	30.6	31.1	Low	30.6
26	AL39	7384.7	27	24	27				3	0.00	26.0	1.73	12.25	0.47	1.13	13.83	0.53	1.00	28.9	30.4	Low	28.9
27	AM29	10000.0	36	35	37				3	0.01	36.0	1.00	7.07	0.20	1.13	7.97	0.22	0.58	37.7	38.5	Low	37.7
28	AM33	10000.0	36	37	38				3	0.01	37.0	1.00	7.07	0.19	1.13	7.97	0.22	0.58	38.7	39.5	Low	38.7
29	AN27	10000.0	41	39	39				3	0.01	39.7	1.15	8.16	0.21	1.13	9.20	0.23	0.67	41.6	42.6	Low	41.6
30	AN28	10000.0	36	38	32				3	0.01	35.3	3.06	21.60	0.61	1.13	24.51	0.69	1.76	40.5	43.0	Low	40.5
31	AN38	6980.7	28	26	28				3	0.00	27.3	1.15	8.16	0.30	1.13	9.20	0.34	0.67	29.3	30.2	Low	29.3
32	AO26	10000.0	40	38	36				3	0.01	38.0	2.00	14.14	0.37	1.13	15.94	0.42	1.15	41.4	43.0	Low	41.4
33	AP28	8819.3	45	43	44				3	0.01	44.0	1.00	7.07	0.16	1.13	7.97	0.18	0.58	45.7	46.5	Low	45.7
34	AQ15	13466.3	42	43	38				3	0.01	41.0	2.65	18.71	0.46	1.13	21.12	0.52	1.53	45.5	47.7	Low	45.5
35	AQ22	11017.2	21	22	24				3	0.01	22.3	1.53	10.80	0.48	1.13	12.20	0.55	0.88	24.9	26.2	Low	24.9
36	C27	14788.0	14	16	15				3	0.01	15.0	1.00	7.07	0.47	1.13	7.99	0.53	0.58	16.7	17.5	Low	16.7
37	C35	9243.3	23	19	22				3	0.01	21.3	2.08	14.72	0.69	1.14	16.76	0.79	1.20	24.8	26.6	Low	24.8
38	C37	7935.9	15	17	16				3	0.00	16.0	1.00	7.07	0.44	1.13	7.98	0.50	0.58	17.7	18.5	Low	17.7
39	E27	14436.0	19	18	23				3	0.01	20.0	2.65	18.71	0.94	1.16	21.64	1.08	1.53	24.5	26.7	Low	24.5
40	F32	10000.0	20	19	19				3	0.01	19.3	0.58	4.08	0.21	1.13	4.60	0.24	0.33	20.3	20.8	Low	20.3
41	G30	10000.0	23	19	22				3	0.01	21.3	2.08	14.72	0.69	1.14	16.76	0.79	1.20	24.8	26.6	Low	24.8
42	H35	10000.0	30	29	26				3	0.01	28.3	2.08	14.72	0.52	1.13	16.65	0.59	1.20	31.8	33.6	Low	31.8

Row #	IDs/Names of the Smaller DUs	DU Area (Sq feet)	Replicate field sample concentrations						Number of Replicates	Weight	Arithmetic Mean	SD of Replicates	calc'd SD of Increments	calc'd CV for the DU	Adj Factor	adj'd SD of Increments	adj'd CV for DU	SE of DU	95% UCL			
			Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6											Student's-t	Chebychev	CV of Increments	95% UCL
43	H39	12972.6	22	21	20				3	0.01	21.0	1.00	7.07	0.34	1.13	7.97	0.38	0.58	22.7	23.5	Low	22.7
44	I29	10000.0	21	23	24				3	0.01	22.7	1.53	10.80	0.48	1.13	12.20	0.54	0.88	25.2	26.5	Low	25.2
45	I30	10000.0	21	19	22				3	0.01	20.7	1.53	10.80	0.52	1.13	12.22	0.59	0.88	23.2	24.5	Low	23.2
46	I33	10000.0	23	23	22				3	0.01	22.7	0.58	4.08	0.18	1.13	4.60	0.20	0.33	23.6	24.1	Low	23.6
47	I38	12991.4	21	22	22				3	0.01	21.7	0.58	4.08	0.19	1.13	4.60	0.21	0.33	22.6	23.1	Low	22.6
48	K30	10000.0	23	22	18				3	0.01	21.0	2.65	18.71	0.89	1.15	21.56	1.03	1.53	25.5	27.7	Low	25.5
49	K34	10000.0	24	23	23				3	0.01	23.3	0.58	4.08	0.17	1.13	4.60	0.20	0.33	24.3	24.8	Low	24.3
50	L29	10000.0	21	24	24				3	0.01	23.0	1.73	12.25	0.53	1.13	13.86	0.60	1.00	25.9	27.4	Low	25.9
51	L34	10000.0	23	21	27				3	0.01	23.7	3.06	21.60	0.91	1.15	24.94	1.05	1.76	28.8	31.4	Low	28.8
52	L37	10000.0	24	25	28				3	0.01	25.7	2.08	14.72	0.57	1.13	16.68	0.65	1.20	29.2	30.9	Low	29.2
53	M28	10000.0	27	24	31				3	0.01	27.3	3.51	24.83	0.91	1.15	28.66	1.05	2.03	33.3	36.2	Low	33.3
54	M32	10000.0	23	23	24				3	0.01	23.3	0.58	4.08	0.17	1.13	4.60	0.20	0.33	24.3	24.8	Low	24.3
55	M39	13011.8	27	20	24				3	0.01	23.7	3.51	24.83	1.05	1.17	28.99	1.22	2.03	29.6	32.5	Low	29.6
56	N27	10000.0	27	25	24				3	0.01	25.3	1.53	10.80	0.43	1.13	12.19	0.48	0.88	27.9	29.2	Low	27.9
57	N28	10000.0	31	27	23				3	0.01	27.0	4.00	28.28	1.05	1.17	33.01	1.22	2.31	33.7	37.1	Low	33.7
58	N37	10000.0	23	24	25				3	0.01	24.0	1.00	7.07	0.29	1.13	7.97	0.33	0.58	25.7	26.5	Low	25.7
59	O27	10000.0	23	18	23				3	0.01	21.3	2.89	20.41	0.96	1.16	23.64	1.11	1.67	26.2	28.6	Low	26.2
60	O32	10000.0	23	23	22				3	0.01	22.7	0.58	4.08	0.18	1.13	4.60	0.20	0.33	23.6	24.1	Low	23.6
61	O37	10000.0	24	25	25				3	0.01	24.7	0.58	4.08	0.17	1.13	4.60	0.19	0.33	25.6	26.1	Low	25.6
62	P32	10000.0	26	20	21				3	0.01	22.3	3.21	22.73	1.02	1.16	26.46	1.18	1.86	27.8	30.4	Low	27.8
63	P33	10000.0	26	19	26				3	0.01	23.7	4.04	28.58	1.21	1.19	33.87	1.43	2.33	30.5	33.8	Low	30.5
64	Q26	10000.0	24	25	25				3	0.01	24.7	0.58	4.08	0.17	1.13	4.60	0.19	0.33	25.6	26.1	Low	25.6
65	Q29	10000.0	24	28	28				3	0.01	26.7	2.31	16.33	0.61	1.13	18.53	0.69	1.33	30.6	32.5	Low	30.6
66	Q38	13187.6	21	19	18				3	0.01	19.3	1.53	10.80	0.56	1.13	12.23	0.63	0.88	21.9	23.2	Low	21.9
67	Q39	13187.6	22	23	25				3	0.01	23.3	1.53	10.80	0.46	1.13	12.20	0.52	0.88	25.9	27.2	Low	25.9
68	R24	10000.0	17	17	19				3	0.01	17.7	1.15	8.16	0.46	1.13	9.22	0.52	0.67	19.6	20.6	Low	19.6
69	R32	10000.0	24	21	20				3	0.01	21.7	2.08	14.72	0.68	1.14	16.75	0.77	1.20	25.2	26.9	Low	25.2
70	S26	10000.0	28	31	32				3	0.01	30.3	2.08	14.72	0.49	1.13	16.63	0.55	1.20	33.8	35.6	Low	33.8
71	S29	10000.0	26	28	26				3	0.01	26.7	1.15	8.16	0.31	1.13	9.20	0.34	0.67	28.6	29.6	Low	28.6
72	S36	10000.0	25	24	24				3	0.01	24.3	0.58	4.08	0.17	1.13	4.60	0.19	0.33	25.3	25.8	Low	25.3
73	T23	10000.0	40	33	37				3	0.01	36.7	3.51	24.83	0.68	1.14	28.26	0.77	2.03	42.6	45.5	Low	42.6
74	T28	10000.0	25	31	42				3	0.01	32.7	8.62	60.96	1.87	1.29	78.90	2.42	4.98	47.2	54.4	Med	54.4
75	T32	10000.0	27	22	23				3	0.01	24.0	2.65	18.71	0.78	1.14	21.41	0.89	1.53	28.5	30.7	Low	28.5
76	T39	13380.2	24	25	25				3	0.01	24.7	0.58	4.08	0.17	1.13	4.60	0.19	0.33	25.6	26.1	Low	25.6
77	U28	10000.0	25	26	26				3	0.01	25.7	0.58	4.08	0.16	1.13	4.60	0.18	0.33	26.6	27.1	Low	26.6
78	U32	10000.0	26	24	21				3	0.01	23.7	2.52	17.80	0.75	1.14	20.33	0.86	1.45	27.9	30.0	Low	27.9
79	U33	10000.0	23	23	24				3	0.01	23.3	0.58	4.08	0.17	1.13	4.60	0.20	0.33	24.3	24.8	Low	24.3
80	U35	10000.0	27	25	26				3	0.01	26.0	1.00	7.07	0.27	1.13	7.97	0.31	0.58	27.7	28.5	Low	27.7
81	U37	10000.0	24	25	29				3	0.01	26.0	2.65	18.71	0.72	1.14	21.34	0.82	1.53	30.5	32.7	Low	30.5
82	V30	10000.0	30	31	29				3	0.01	30.0	1.00	7.07	0.24	1.13	7.97	0.27	0.58	31.7	32.5	Low	31.7
83	V33	10000.0	30	27	25				3	0.01	27.3	2.52	17.80	0.65	1.14	20.23	0.74	1.45	31.6	33.7	Low	31.6
84	V36	10000.0	31	25	24				3	0.01	26.7	3.79	26.77	1.00	1.16	31.13	1.17	2.19	33.0	36.2	Low	33.0
85	W26	10000.0	38	24	33				3	0.01	31.7	7.09	50.17	1.58	1.24	62.24	1.97	4.10	43.6	49.5	Med	49.5
86	W28	10000.0	31	32	37				3	0.01	33.3	3.21	22.73	0.68	1.14	25.87	0.78	1.86	38.8	41.4	Low	38.8
87	W31	10000.0	30	26	30				3	0.01	28.7	2.31	16.33	0.57	1.13	18.50	0.65	1.33	32.6	34.5	Low	32.6
88	W34	10000.0	30	30	30				3	0.01	30.0	0.00	0.00	0.00	1.13	0.00	0.00	0.00	30.0	30.0	Low	30.0
89	W39	13397.6	26	25	24				3	0.01	25.0	1.00	7.07	0.28	1.13	7.97	0.32	0.58	26.7	27.5	Low	26.7
90	X25	10000.0	27	27	28				3	0.01	27.3	0.58	4.08	0.15	1.13	4.60	0.17	0.33	28.3	28.8	Low	28.3
91	X33	10000.0	28	27	25				3	0.01	26.7	1.53	10.80	0.41	1.13	12.18	0.46	0.88	29.2	30.5	Low	29.2
92	X36	10000.0	23	23	24				3	0.01	23.3	0.58	4.08	0.17	1.13	4.60	0.20	0.33	24.3	24.8	Low	24.3
93	Z29	10000.0	29	30	29				3	0.01	29.3	0.58	4.08	0.14	1.13	4.60	0.16	0.33	30.3	30.8	Low	30.3
94	AA24	10000.0	36	34	37				3	0.01	35.7	1.53	10.80	0.30	1.13	12.17	0.34	0.88	38.2	39.5	Low	38.2
95	AB24	10000.0	24	27	26				3	0.01	25.7	1.53	10.80	0.42	1.13	12.19	0.47	0.88	28.2	29.5	Low	28.2
96	AB25	10000.0	60	36	43				3	0.01	46.3	12.34	87.27	1.88	1.30	113.27	2.44	7.13	67.1	77.4	Med	77.4
97	AC25	10000.0	32	30	30				3	0.01	30.7	1.15	8.16	0.27	1.13	9.20	0.30	0.67	32.6	33.6	Low	32.6
98	AD25	10000.0	25	23	23				3	0.01	23.7	1.15	8.16	0.34	1.13	9.20	0.39	0.67	25.6	26.6	Low	25.6
99	AE25	10000.0	24	22	48				3	0.01	31.3	14.47	102.31	3.27	1.71	175.09	5.59	8.35	55.7	67.7	High	67.7

Row #	IDs/Names of the Smaller DUs	DU Area (Sq feet)	Replicate field sample concentrations						Number of Replicates	Weight	Arithmetic Mean	SD of Replicates	calc'd SD of Increments	calc'd CV for the DU	Adj Factor	adj'd SD of Increments	adj'd CV for DU	SE of DU	95% UCL			
			Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6											Student's-t	Chebychev	CV of Increments	95% UCL
100	AF25	10000.0	37	36	34				3	0.01	35.7	1.53	10.80	0.30	1.13	12.17	0.34	0.88	38.2	39.5	Low	38.2
101	AG25	10000.0	33	35	34				3	0.01	34.0	1.00	7.07	0.21	1.13	7.97	0.23	0.58	35.7	36.5	Low	35.7
102	AH24	10000.0	32	30	35				3	0.01	32.3	2.52	17.80	0.55	1.13	20.15	0.62	1.45	36.6	38.7	Low	36.6
103	AI23	10000.0	39	36	32				3	0.01	35.7	3.51	24.83	0.70	1.14	28.29	0.79	2.03	41.6	44.5	Low	41.6
104	AI24	10000.0	43	43	39				3	0.01	41.7	2.31	16.33	0.39	1.13	18.42	0.44	1.33	45.6	47.5	Low	45.6
105	AJ23	10000.0	43	48	39				3	0.01	43.3	4.51	31.89	0.74	1.14	36.40	0.84	2.60	50.9	54.7	Low	50.9
106	AK23	10000.0	42	36	49				3	0.01	42.3	6.51	46.01	1.09	1.17	53.89	1.27	3.76	53.3	58.7	Low	53.3
107	AL23	10000.0	48	38	50				3	0.01	45.3	6.43	45.46	1.00	1.16	52.86	1.17	3.71	56.2	61.5	Low	56.2
108	AL24	10000.0	40	34	37				3	0.01	37.0	3.00	21.21	0.57	1.13	24.04	0.65	1.73	42.1	44.5	Low	42.1
109	AL25	10000.0	39	40	40				3	0.01	39.7	0.58	4.08	0.10	1.13	4.60	0.12	0.33	40.6	41.1	Low	40.6
110	AM25	10000.0	47	41	42				3	0.01	43.3	3.21	22.73	0.52	1.13	25.71	0.59	1.86	48.8	51.4	Low	48.8
111	AN25	10000.0	44	39	36				3	0.01	39.7	4.04	28.58	0.72	1.14	32.59	0.82	2.33	46.5	49.8	Low	46.5
112	AO25	10000.0	36	33	32				3	0.01	33.7	2.08	14.72	0.44	1.13	16.61	0.49	1.20	37.2	38.9	Low	37.2
113	AP8	12741.9	21	19	21				3	0.01	20.3	1.15	8.16	0.40	1.13	9.21	0.45	0.67	22.3	23.2	Low	22.3
114	AP9	12741.9	43	37	36				3	0.01	38.7	3.79	26.77	0.69	1.14	30.49	0.79	2.19	45.0	48.2	Low	45.0
115	AP10	12742.0	42	53	53				3	0.01	49.3	6.35	44.91	0.91	1.15	51.84	1.05	3.67	60.0	65.3	Low	60.0
116	AP11	12741.9	39	43	41				3	0.01	41.0	2.00	14.14	0.34	1.13	15.94	0.39	1.15	44.4	46.0	Low	44.4
117	AP12	12742.0	47	47	47				3	0.01	47.0	0.00	0.00	0.00	1.13	0.00	0.00	0.00	47.0	47.0	Low	47.0
118	AP14	12741.6	50	51	46				3	0.01	49.0	2.65	18.71	0.38	1.13	21.09	0.43	1.53	53.5	55.7	Low	53.5
119	AP15	12742.2	57	51	57				3	0.01	55.0	3.46	24.49	0.45	1.13	27.65	0.50	2.00	60.8	63.7	Low	60.8
120	AP16	12741.9	43	46	43				3	0.01	44.0	1.73	12.25	0.28	1.13	13.80	0.31	1.00	46.9	48.4	Low	46.9
121	AP17	12741.9	47	41	43				3	0.01	43.7	3.06	21.60	0.49	1.13	24.42	0.56	1.76	48.8	51.4	Low	48.8
122	AP18	12741.9	33	37	33				3	0.01	34.3	2.31	16.33	0.48	1.13	18.45	0.54	1.33	38.2	40.1	Low	38.2
123	AP19	12741.9	36	30	31				3	0.01	32.3	3.21	22.73	0.70	1.14	25.90	0.80	1.86	37.8	40.4	Low	37.8
124	AP20	12741.9	39	35	35				3	0.01	36.3	2.31	16.33	0.45	1.13	18.44	0.51	1.33	40.2	42.1	Low	40.2
125	AP21	12741.9	57	32	32				3	0.01	40.3	14.43	102.06	2.53	1.46	149.10	3.70	8.33	64.7	76.7	High	76.7
126	AP22	12742.0	31	35	28				3	0.01	31.3	3.51	24.83	0.79	1.15	28.44	0.91	2.03	37.3	40.2	Low	37.3
127	AP25	12741.8	31	29	30				3	0.01	30.0	1.00	7.07	0.24	1.13	7.97	0.27	0.58	31.7	32.5	Low	31.7
128	AQ23	10435.9	31	27	28				3	0.01	28.7	2.08	14.72	0.51	1.13	16.65	0.58	1.20	32.2	33.9	Low	32.2
129	AQ24	9852.5	28	25	29				3	0.01	27.3	2.08	14.72	0.54	1.13	16.66	0.61	1.20	30.8	32.6	Low	30.8
130	B8	8381.5	18	17	17				3	0.00	17.3	0.58	4.08	0.24	1.13	4.60	0.27	0.33	18.3	18.8	Low	18.3
131	B20	7901.2	26	19	33				3	0.00	26.0	7.00	49.50	1.90	1.30	64.45	2.48	4.04	37.8	43.6	Med	43.6
132	B21	7425.3	22	23	23				3	0.00	22.7	0.58	4.08	0.18	1.13	4.60	0.20	0.33	23.6	24.1	Low	23.6
133	B22	6933.6	24	22	22				3	0.00	22.7	1.15	8.16	0.36	1.13	9.20	0.41	0.67	24.6	25.6	Low	24.6
134	C8	9158.1	19	21	20				3	0.01	20.0	1.00	7.07	0.35	1.13	7.97	0.40	0.58	21.7	22.5	Low	21.7
135	C22	6929.0	21	20	24				3	0.00	21.7	2.08	14.72	0.68	1.14	16.75	0.77	1.20	25.2	26.9	Low	25.2
136	D8	9410.4	19	17	18				3	0.01	18.0	1.00	7.07	0.39	1.13	7.97	0.44	0.58	19.7	20.5	Low	19.7
137	D22	10000.0	24	21	22				3	0.01	22.3	1.53	10.80	0.48	1.13	12.20	0.55	0.88	24.9	26.2	Low	24.9
138	E22	10000.0	24	23	26				3	0.01	24.3	1.53	10.80	0.44	1.13	12.19	0.50	0.88	26.9	28.2	Low	26.9
139	E23	10000.0	18	20	21				3	0.01	19.7	1.53	10.80	0.55	1.13	12.23	0.62	0.88	22.2	23.5	Low	22.2
140	E24	10000.0	20	20	22				3	0.01	20.7	1.15	8.16	0.40	1.13	9.21	0.45	0.67	22.6	23.6	Low	22.6
141	E25	10000.0	20	21	22				3	0.01	21.0	1.00	7.07	0.34	1.13	7.97	0.38	0.58	22.7	23.5	Low	22.7
142	E26	13604.3	22	22	26				3	0.01	23.3	2.31	16.33	0.70	1.14	18.60	0.80	1.33	27.2	29.1	Low	27.2
143	F26	5258.3	15	13	18				3	0.00	15.3	2.52	17.80	1.16	1.18	20.99	1.37	1.45	19.6	21.7	Low	19.6
144	G25	8218.3	23	27	23				3	0.00	24.3	2.31	16.33	0.67	1.14	18.58	0.76	1.33	28.2	30.1	Low	28.2
145	G26	9346.7	21	22	21				3	0.01	21.3	0.58	4.08	0.19	1.13	4.60	0.22	0.33	22.3	22.8	Low	22.3
146	H25	10000.0	29	24	36				3	0.01	29.7	6.03	42.62	1.44	1.22	51.86	1.75	3.48	39.8	44.8	Med	44.8
147	I25	7781.1	20	19	20				3	0.00	19.7	0.58	4.08	0.21	1.13	4.60	0.23	0.33	20.6	21.1	Low	20.6
148	J22	10000.0	31	27	30				3	0.01	29.3	2.08	14.72	0.50	1.13	16.64	0.57	1.20	32.8	34.6	Low	32.8
149	J23	10000.4	27	21	25				3	0.01	24.3	3.06	21.60	0.89	1.15	24.89	1.02	1.76	29.5	32.0	Low	29.5
150	J24	7428.9	11	17	21				3	0.00	16.3	5.03	35.59	2.18	1.37	48.60	2.98	2.91	24.8	29.0	Med	29.0
151	J25	6743.5	27	20	24				3	0.00	23.7	3.51	24.83	1.05	1.17	28.99	1.22	2.03	29.6	32.5	Low	29.6
152	K22	10000.0	26	24	40				3	0.01	30.0	8.72	61.64	2.05	1.34	82.34	2.74	5.03	44.7	51.9	Med	51.9
153	L22	10000.0	20	18	26				3	0.01	21.3	4.16	29.44	1.38	1.21	35.57	1.67	2.40	28.4	31.8	Med	31.8
154	M22	10000.0	28	28	22				3	0.01	26.0	3.46	24.49	0.94	1.16	28.34	1.09	2.00	31.8	34.7	Low	31.8

Row #	IDs/Names of the Smaller DUs	DU Area (Sq feet)	Replicate field sample concentrations						Number of Replicates	Weight	Arithmetic Mean	SD of Replicates	calc'd SD of Increments	calc'd CV for the DU	Adj Factor	adj'd SD of Increments	adj'd CV for DU	SE of DU	95% UCL			
			Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6											Student's-t	Chebychev	CV of Increments	95% UCL
155	N22	10000.0	22	25	21				3	0.01	22.7	2.08	14.72	0.65	1.14	16.73	0.74	1.20	26.2	27.9	Low	26.2
156	O22	10000.0	33	32	34				3	0.01	33.0	1.00	7.07	0.21	1.13	7.97	0.24	0.58	34.7	35.5	Low	34.7
157	P22	10000.0	34	29	39				3	0.01	34.0	5.00	35.36	1.04	1.17	41.24	1.21	2.89	42.4	46.6	Low	42.4
158	Q22	10000.0	19	19	19				3	0.01	19.0	0.00	0.00	0.00	1.13	0.00	0.00	0.00	19.0	19.0	Low	19.0
159	R22	7999.4	47	30	28				3	0.00	35.0	10.44	73.82	2.11	1.35	99.56	2.84	6.03	52.6	61.3	Med	61.3
160	S22	10000.0	34	29	33				3	0.01	32.0	2.65	18.71	0.58	1.13	21.21	0.66	1.53	36.5	38.7	Low	36.5
161	T22	9920.3	39	43	40				3	0.01	40.7	2.08	14.72	0.36	1.13	16.59	0.41	1.20	44.2	45.9	Low	44.2
162	U22	6762.1	47	38	38				3	0.00	41.0	5.20	36.74	0.90	1.15	42.37	1.03	3.00	49.8	54.1	Low	49.8
163	V22	10000.0	27	28	28				3	0.01	27.7	0.58	4.08	0.15	1.13	4.60	0.17	0.33	28.6	29.1	Low	28.6
164	W22	10000.0	24	28	27				3	0.01	26.3	2.08	14.72	0.56	1.13	16.67	0.63	1.20	29.8	31.6	Low	29.8
165	W23	10000.0	32	28	28				3	0.01	29.3	2.31	16.33	0.56	1.13	18.49	0.63	1.33	33.2	35.1	Low	33.2
166	W24	10000.0	55	41	25	26	29		5	0.01	35.2	12.77	90.33	2.57	1.33	119.85	3.40	5.71	47.4	60.1	High	60.1
167	X24	10000.0	31	29	32				3	0.01	30.7	1.53	10.80	0.35	1.13	12.17	0.40	0.88	33.2	34.5	Low	33.2
168	Y24	10000.0	26	25	27				3	0.01	26.0	1.00	7.07	0.27	1.13	7.97	0.31	0.58	27.7	28.5	Low	27.7
169	Z24	10000.0	36	40	39				3	0.01	38.3	2.08	14.72	0.38	1.13	16.60	0.43	1.20	41.8	43.6	Low	41.8
	Sum:	1734193	--	--	--	--	--	--	509	1.00	29.4	0.01	0.10	0.00	NA	0.12	0.00	0.01	29.4	29.4	Low	29.394

df by Welch-Satterthwaite approximation:	3.8

Recommended UCL: **29.4** **mg/kg** >> Student's t 95% UCL

Note: Student's-t or Chebychev 95% UCL may be appropriate.

*Student's t UCL is acceptable if adj'd CV for DU is "Low" (e.g., CV ≤ 1.5). The User should consult the instructions for additional guidance on which 95% UCL is recommended for specific data sets.

Notes

adj'd	= adjusted	df	= degrees of freedom	SD	= arithmetic standard deviation
calc'd	= calculated	DU	= decision unit	SE	= standard error
CV	= coefficient of variation	RSD	= relative standard deviation	95% UCL	= 95% upper confidence limit for arithmetic mean